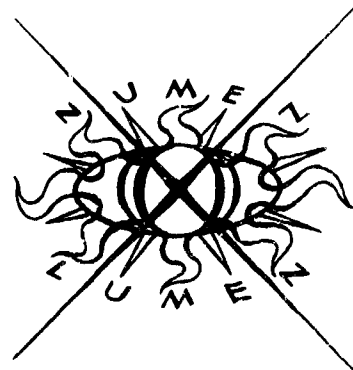


THE UNIVERSITY
OF WISCONSIN

BIBLIOGRAPHY OF EXPERIMENT DESIGN
1950-1967

W. T. Federer and L. N. Balaam

This document has been approved for public release and sale; its distribution is unlimited.

MRC Technical Summary Report # 1080
October 1971

REC'D
MAR 1 1972

MATHEMATICS RESEARCH CENTER

Reproduced by
**NATIONAL TECHNICAL
INFORMATION SERVICE**
Springfield, Va. 22151

Address:

Mathematics Research
Center
The University of Wisconsin
Madison, Wisconsin 53706
U.S.A.

48

154

THE UNIVERSITY OF WISCONSIN
MATHEMATICS RESEARCH CENTER

Contract No.: DA-31-124-ARO-D-462

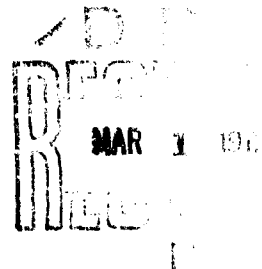
BIBLIOGRAPHY OF EXPERIMENT DESIGN
1950-1967

W. T. Federer and L. N. Balaam

This document has been approved for public
release and sale; its distribution is unlimited.

MRC Technical Summary Report # 1080
October 1971

Received July 10, 1970



Madison, Wisconsin 53706

DOCUMENT CONTROL DATA - R & D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Complete to author)		2a. REPORT SECURITY CLASSIFICATION
Mathematics Research Center, University of Wisconsin, Madison, Wis. 53706		Unclassified
		2b. GROUP
		None
3. REPORT TITLE		
BIBLIOGRAPHY OF EXPERIMENT DESIGN, 1950-1967		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
Summary Report: no specific reporting period.		
5. AUTHOR(S) (First name, middle initial, last name)		
W. T. Federer and L. N. Balaam		
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
October 1971	100 / 54	
8a. CONTRACT OR GRANT NO.	8b. ORIGINATOR'S REPORT NUMBER	
Contract No. DA-31-124-ARO-D-462	1080	
9. PROJECT NO.	9a. OTHER REPORT NUM (Any other num have that may be assigned this report)	
None	None	
10. DISTRIBUTION STATEMENT		
Distribution of this document is unlimited.		
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY
None		Army Research Office-Durham, N.C.
13. ABSTRACT		
A classification system for publications on the design and analysis of experiment and treatment designs has been devised. Publications on experiment design, the arrangement of the treatments in the experiment, have been classified accordingly and cover the period 1950-1967 inclusively.		

ABSTRACT

A bibliography consisting of approximately 1700 literature citations on the various aspects of experiment design (the arrangement of treatments in the experiment) is presented for the years 1950 to 1967, inclusive. A classification system for experiment designs, for treatment designs (the selection of treatments included in the experiment), and for topics on the philosophy, technique, conduct, and analyses of experiments, is described. Each literature citation in the bibliography is coded in the manner indicated by the classification system. Papers on the theoretical, applied, and practical aspects of experiment design are included.

BIBLIOGRAPHY OF EXPERIMENT DESIGN, 1950-1967

by

W. T. Federer, Cornell University

and

L. N. Balaam, University of Sydney

I. INTRODUCTION

Publications on the various aspects of experiment design (the arrangement of the treatments in a comparative experiment) and the treatment design (the selection of the treatments included in the experiment) have become numerous during recent years. Thus, searching the literature for papers on a particular topic is a difficult task which can be considerably alleviated by a comprehensive bibliography, especially if a classification is included. The general statistics bibliographies by Kendall and Doig [1962, 1965, 1968] are helpful in this connection. However, bibliographies on specific topics are even more useful. This was the reason for the previous bibliography prepared by Federer [1964]; this work covered published literature on the design, conduct, and statistical analyses of experimental investigations prior to 1950; no classification of citations was presented although a partial classification was presented in the textual part of the report.

The present bibliography contains about 1700 literature citations on experiment design for the years 1950 to 1967, inclusive. A classification of experiment designs is given in the second section of the paper. Since many of the publications are concerned with topics in addition to experiment design, they are further classified

Sponsored by the United States Army under Contract No: DA-31-124-ARO-D-462.

into the categories described in sections III and IV. In section III a classification of treatment designs is presented, and in section IV a classification of various statistical analyses and of other aspects of experiment and treatment designs is given. Bibliographies on the subjects of sections III and IV have been prepared and are to be published in a book, together with the present bibliography and a revised version of the pre-1950 bibliography prepared by Federer [1964].

The classification system utilized was to first classify a paper as to whether it was chiefly on experiment (experimental) design as E, on treatment design as T, on analyses of experiments as A, on the general conduct of experiments or on special topics as C, on bibliographies as related to the design and analysis of experiments as B, and on sequential and fixed sample size procedures as S.

Under each of the main categories of classification as listed above, numbers 1, 2, ..., ≤ 15 were used to divide a category into subclasses. A third category of classification was to classify a paper as to whether it was on the general conduct, on the application, or on the analysis for an experiment or a treatment design, which was coded a, whether it was on the construction procedure for an experiment or a treatment design, which was coded c, or whether the paper contained a numerical example of an experiment or treatment design which was coded e; this sub-subclassification was utilized for the E and T classifications but not for the A, B, C and S classifications.

As with all bibliographies some references have been omitted accidentally and some publications containing articles on the design and analysis of experiments did not come to the author's attention. Also, the searching was done mostly by title with some searching being done from summaries or abstracts. In the latter case the reference and the checking of the citation came from the abstract. The references at the end

of an article were scanned to determine if any should be included. Quite often an entire volume was scanned if it contained one or more appropriate articles for the bibliography. The following journals were searched in their entirety for references to be included. The abbreviation listed on the right is used in the bibliography. The listing is in alphabetical order, omitting articles and prepositions from the title. (Several additional journals were partially or completely searched. Some of those completely scanned were omitted from the following list because they did not include papers on experiment and treatment design.):

Agronomy Journal, Vol.42 (1950) to Vol.59 (1967) (U.S.)	Agron. J
American Society for Quality Control, Technical Conference Transactions, ninth (1955) to twenty-first (1967) (U.S.)	ASQC, Tech. Conf. Trans.
The American Statistician, Vol.4 (1950) to Vol.21 (1967) (U.S.)	Amer. Stat.
Annals of the Institute of Statistical Mathematics, Vol.2 (1950) to Vol.19 (1967) (Tokyo, Japan)	Ann. Inst. Stat. Math.
The Annals of Mathematical Statistics, Vol.21 (1950) to Vol.38 (1967) (U.S.)	AMS
Applied Statistics, Vol.1 (1952) to Vol.16 (1967) (Great Britain)	Appl. Stat.
Australian Journal of Agricultural Research, Vol.1 (1950) to Vol.18 (1967) (Australia)	Australian J. Agri. Res.
The Australian Journal of Statistics, Vol.1 (1959) to Vol.9 (1967) (Australia)	Australian J. Stat.
Biometrics, Vol.6 (1950) to Vol.23 (1967) (International)	Biometrics
Biométrie-Praximétrie, Vol.1 (1960) to Vol.3 (1967) (Belgium)	Biométrie-Praximétrie
Biometrika, Vol.39 (1950) to Vol.54 (1967) (Great Britain)	Biometrika
Biometrische Zeitschrift, Vol.1 (1959) to Vol.9 (1967) (Germany)	Blom. Zeit.
Bragantia, Vol.10 (1950) to Vol.26 (1967) (Brazil)	Bragantia

The British Journal of Statistical Psychology, Vol.1 (1950) to Vol.19 (1966) (Great Britain)	British J. Stat. Psychology
Bulletin of the Calcutta Mathematical Society, Vol.42 (1950) to Vol.57 (1965) (India)	Buil. Calcutta Math. Soc.
Bulletin de l'Institut International de Statistique, Vol.32 (1950) to Vol.41 (1966)	Bull. ISI
Bulletin of Mathematical Statistics, Vol.4 (1950) to Vol.12 (1967) (Fukuoka, Japan)	Bull. Math. Stat.
Calcutta Statistical Association Bulletin, Vol.2 (1950) to Vol.16 (1967) (India)	Calcutta Stat. Assoc. Bull.
Canadian Journal of Mathematics, Vol.2 (1950) to Vol.19 (1967) (Canada)	Canadian J. Math.
Comptes Rendus, Des Séances de l'Académie des Sciences, Paris, Vol.230 (1950) to Vol.265 (1967) (France)	Comptes Rendus
Crop Science, Vol.1 (1961) to Vol.7 (1967) (U.S.)	Crop Sci.
Current Science, Vol.19 (1950) to Vol.36 (1967) (India)	Current Sci.
Der Züchter, Zeitschrift für theoretische und angewandte Genetik, Vol.20 (1950) to Vol.37 (1967) (Germany)	Der Züchter
Estadística, Journal of the Inter-American Statistical Institute, Vol.8 (1950) to Vol.25 (1967)	Estadística
Euphytica, Journal of Plant Breeding, Vol.1 (1952) to Vol.16 (1967) (Netherlands)	Euphytica
Dissertation Abstracts, Vol.10 (1950) to Vol.27 (1967) (U.S.)	Dissertation Abs.
Genetical Research, Vol.1 (1960) to Vol.10 (1967) (Great Britain)	Genetical Res.
Heredity, Vol.4 (1950) to Vol.14 (1960) (Great Britain)	Heredity
Industrial and Engineering Chemistry, Vol.42 (1950) to Vol.59 (1967) (U.S.)	Ind. Eng. Chemistry
Industrial Quality Control, Vol.6 (1950) to Vol.24 (1967) (U.S.)	IQC
Journal of the American Statistical Association, Vol.45 (1950) to Vol.62 (1967) (U.S.)	JASA

Journal of Combinatorial Theory, Vol.1 (1966) to Vol.3 (1967) (U.S.)	J. Combinatorial Theory
Journal of the Indian Society for Agricultural Statistics, Vol.2 (1950) to Vol.19 (1967) (India)	JISAS
Journal of the Indian Statistical Association, Vol.1 (1963) to Vol.5 (1967) (India)	JISA
Journal of Research of the National Bureau of Standards, Mathematics and Mathematical Physics, Series B, Vol.44 (1950) to Vol.71 (1967) (U.S.)	J. Res. NBS
Journal of the Royal Statistical Society, Series A, (General), Vol.113 (1950) to Vol.130 (1967) (Great Britain)	JRSSA
Journal of the Royal Statistical Society, Series B, (Methodological), Vol.12 (1950) to Vol.29 (1967) (Great Britain)	JRSSB
Journal of Science of the Hiroshima University, Series A-I (Mathematics), Vol.17 (1953) to Vol.31 (1967) (Japan)	J. Sci. Hiroshima Univ. Ser. A-I
Journal of the Society for Industrial and Applied Mathematics, Vol.1 (1953) to Vol.15 (1967) (U.S.)	J. Soc. Ind. Appl. Math.
Mathematics of Computation from 1960, formerly was Mathematical Tables and Aids to Computation, Vol.4 (1950) to Vol.21 (1967) (U.S.)	Math. Tables Aids Comp. or Math. Comp.
Melhoramento, Estudos da Estação de Melhoramento de Plantas, Vol.4 (1950) to Vol.16 (1963) (Portugal)	Melhoramento
Memoirs of the Faculty of Science, Series A (Mathematics), Kyushu University, Vol.6 (1951) to Vol.21 (1967) (Fukuoka, Japan)	Mem. Faculty Sci.
Methods of Information in Medicine, Methodik der Information in der Medizin, Vol.1 (1962) to Vol.5 (1966) (Germany)	Meth. Inf. Med.
Metrika, International Journal for Theoretical and Applied Statistics, Vol.1 (1958) to Vol.12 (1967) (Germany)	Metrika
Metron, International Review of Statistics, Vol.13 (1950) to Vol.26 (1967) (France)	Metron
Mitteilungsblatt für Mathematische Statistik (became Metrika), Vol.4 (1952) to Vol.9 (1957) (Germany)	Mitteilungsblatt Math. Stat.

Plant Breeding Abstracts, Vol.20 (1950) to Vol.37 (1967) (U.S.)	Pl. Br. Abs.
Proceedings of the American Mathematical Society, Vol.1 (1950) to Vol.18 (1967) (U.S.)	Proc. Amer. Math. Soc.
Proceedings of the American Society for Horticultural Science, Vol.55 (1950) to Vol.91 (1967) (U.S.)	Proc. Amer. Soc. Hort. Sci.
Proceedings of the nth Conference on the Design of Experi- ments in Army Research Development and Testing, Vol.1 (1957) to Vol.12 (1967) (U.S.)	Proc. Conf. Design Expt. Army Res. Dev. Testing
Proceedings of the kth Berkeley Symposium on Mathematical Statistics and Probability	Proc. kth Berkeley Symp. Math. Stat. Prob.
Psychometrika, Vol.15 (1950) to Vol.32 (1967) (U.S.)	Psychometrika
Publications de l'Institut de Statistique de l'Universite de Paris, Vol.1 (1952) to Vol.16 (1967) (France)	Pub. Inst. Stat. Univ. Paris
Quality Control and Applied Statistics (Abstracts) Vol.11 (1966) to Vol.12 (1967) (U.S.)	QC Appl. Stat.
Reports of Statistical Application Research, Union of Japanese Scientists and Engineers, Vol.1 (1951-2) to Vol.14 (1967) (Japan)	Reports Stat. Appl. Res.
Revue de l'Institut International de Statistique, Vol.18 (1950) to Vol.35 (1967) (International)	Rev. ISI
Revue de Statistique Appliquée, Institut de Statistique Université de Paris, Vol.1 (1953) to Vol.15 (1967) (France)	Rev. Stat. Appl.
Sankhyā, The Indian Journal of Statistics, Vol.10 (1950) to Vol.29 (1967) (India)	Sankhyā
Statistica Neerlandica (named Statistica prior to Vol.9 1955) Vol.4 (1950) to Vol.21 (1967) (Netherlands)	Statistica or Stat. Neerlandica
Suid-Afrikaanse Tydskrif vir Landbouwetenskap, Vol.1 (1958) to Vol.10 (1967) (South Africa)	Suid-Afri. Tydskrif Landbouwetenskap
Technometrics, Vol.1 (1959) to Vol.9 (1967) (U.S.)	Technometrics

Trabajos de Estadística, Vol.1 (1950) to Vol.15 (1964)

Trabajos
Estad.

Zeitschrift für Pflanzenzüchtung, Vol.29 (1950) to Vol.58
(1967) (Germany)

Z. Pflanzen-
züchtung

In addition to the above journals the following books and special publications containing a series of papers represent some of the other sources scanned for papers on experiment design:

Biometrical Genetics

Bulletin de l'Institut Agronomique et des Stations de Recherches de Gembloux
(Hors Serie) 1960, Volume 1.

Cold Spring Harbor Symposia on Quantitative Biology, Proceedings.

Colloques Internationaux du Centre National de la Recherche Scientifique,
No. 10. Le Plan d'Experience.

Contributions to Probability and Statistics: Essays in Honor of Harold Hotelling.

Contributions to Statistics: Presented to Professor P. C. Mahalanobis on the
Occasion of his 70th Birthday.

Economic and Technical Analysis of Fertilizer Innovations and Resource Use.

Experimental Designs in Industry.

Heterosis.

Mathematics and Computer Science in Biology and Medicine.

Statistical Genetics and Plant Breeding, NAS.

Statistical Theory of Reliability.

Statistics and Mathematics in Biology.

Stochastic Models in Medicine and Biology.

II. EXPERIMENT OR EXPERIMENTAL DESIGN

In the published literature two terms, experimental design and experiment design, have been utilized to refer to the arrangement of treatments in a comparative experiment. Perhaps the term experiment design is better grammatical form in comparison with the term treatment design. Also, published literature is highly confused on the use of the term experimental design in that this term has been used for almost all statistical aspects of experimentation from the selection or sample size and of treatments to the conduct and analyses of experiments. This would be one reason for discarding the term experimental design and for using the term experiment design.

In general, experiment designs are classified into designs with zero-way, one-way, two-way, etc. elimination of heterogeneity in experimentation. (As may be noted from published literature, e.g. reference 2194, one alternate form of classification is to denote these designs as one-dimensional, two-dimensional, three-dimensional, etc., respectively; other classifications have been devised.) This refers to the type of blocking in an experiment. The categorization can result in some confusion for such designs as the split plot (or the split block) experiment designs and the lattice square experiment design. The latter experiment design is classified as having three-way elimination of heterogeneity, i.e., complete blocks and rows and columns within each complete block. In the split-block design analyses using only one-way blocking are possible. Similarly in a resolvable balanced incomplete block design, an intrablock analysis on treatments and residual is possible without considering the fact that complete blocks were designed into the experiment.

The various subclassifications of experiment designs are listed below as

E1, E2, ..., E14.

- | | |
|--|----|
| 1. Zero-way elimination of heterogeneity | E1 |
| i) completely randomized design including experiments for which the treatments may be grouped in various ways. | |
| 2. One-way elimination of heterogeneity | E2 |
| i) balanced | |
| -randomized complete block | |
| -balanced incomplete block, both resolvable and nonresolvable. | |
| ii) partially balanced | E3 |
| -circular | |
| -cyclic | |
| -group divisible | |
| -rectangular lattices | |
| -right angular | |
| -triangular | |
| -2, 3, ..., n associate class | |
| iii) other incomplete block designs | E4 |
| -augmented | |
| -calibration | |
| -chain block | |
| -direct product | |
| -extended incomplete block | |
| -linked block | |
| -reinforced | |
| -repetitions of designs with same treatments | |
| -slipped block | |
| -staircase | |
| -star | |
| -unequal block sizes | |
| -unequal replication on treatments | |
| iv) others | E5 |
| -blocking on a trend or gradient | |
| -constrained randomization | |
| -n-ary | |
| -rotation and other serially correlated | |
| -simple changeover | |
| -simple multiresponse | |
| -split plot (whole plots in a completely randomized design) | |
| -supercomplete | |
| -systematic | |

- v) missing, mixed-up, or damaged experimental units (plots) E6
- 3. Two-way elimination of heterogeneity
 - i) row-column designs E7
 - gradients within blocks for designs with one-way elimination of heterogeneity
 - latin square and generalized latin square
 - simple change-over
 - tied-latin squares
 - Youden square and extended Youden square
 - other latin rectangle or row-column
 - ii) row-column designs to measure residual effects E8
 - double change-over
 - rotation
 - tied double change-over
 - iii) others E9
 - augmented
 - balancing in two groups
 - direct product
 - multivariate hierarchical
 - nested balance
 - plaid and half-plaid latin square
 - quasi-latin square
 - Trojan square
 - iv) missing, mixed-up, or damaged plots E10
- 4. Three-way elimination of heterogeneity
 - i) lattice square, lattice rectangle, and latin cube (including missing, mixed-up, and damaged plots) E11
 - ii) others E12
 - augmented
 - graeco-latin square
 - latin cube
 - magic latin square
 - quasi-latin square
 - split block (or criss-cross)
 - split and split-split plot
 - U:VW and U:VW:XYZ plans for two sets of treatments

5. Four and higher-way elimination of heterogeneity E13

- hyper-grae -latin square and cube
- lattice square with split plots
- ~~t~~-restrictional lattice
- multidimensional
- split, split, split... plot

6. Properties of experiment designs E14

- balance and partial balance
- blocking
- efficiency
- orthogonality
- randomization
- replication
- sensitivity
- others

Each of the above categories (except for E14) were further classified as a, c, and/or e. The a refers to application and/or analysis, the c refers to construction, and the e refers to a numerical example (mostly nonfictitious) for a particular experiment design.

III. TREATMENT DESIGN

Treatment design refers to the selection of treatments in an experiment.

Many writers in statistical literature have used the term experimental design or design of experiments in their discussion of treatment designs. This has lead to some confusion. This usage has been especially prevalent in connection with factorial and fractional factorial treatment designs and sample size determinations.

The following classification of treatment designs has been utilized to classify statistical publications:

1. Selection of X values and of the X variables in regression studies.	T1
2. Factorial	T2
-complete factorial	
-confounding in factorial experiments	
-mixed and fixed effects excluding variance component analysis	
-quantity x quality interaction	
3. Fractional replication	
i) regular fractions (only complete confounding of effects in aliasing structure)	T3
ii) other fractions	T4
-response surface, rotatable, central composite, steepest ascent, EVOP, response curves, PARTAN	
-simplex, vertices, mixtures, constrained	T5
-weighing	T6
-others (additional or missing combinations, group testing, random balance, randomized factorials, complementation, screening X-variables)	T7
iii) Dosage response (sequential and fixed)	T8
iv) Genetic (diallel crossing systems, parents and crosses, other genetic treatment designs)	T9

v) Paired, tripled, ..., k comparisons

T11

4. Properties

T10

- aliasing
- balance
- invariance
- minimum variance, trace, determinant, etc.
- orthogonality
- rotatability
- unbiased

As with experiment designs, the treatment design categories (except T10) were further subdivided into the a, c, and e, where these symbols have the same meaning as for experiment designs.

IV. TOPICS RELATED TO THE CONDUCT OF EXPERIMENTS AND ON THE ANALYSIS OF EXPERIMENT AND TREATMENT DESIGNS

A complete coverage was attempted for statistical publications, including special mimeograph series and theses on experiment and treatment design. The coverage of statistical literature for the A, B, C, and S categories was not complete; publications relating solely to properties of statistical procedures were omitted. The selection of topics was arbitrary, with variance component analyses, properties of statistical procedures, time series and regression analyses in economics, sample survey design, and chi-square analyses being excluded. The topics included were those considered to be of most importance in the analysis of experiments. The topics included and the classification symbols follow:

1. Analysis and some aspects of experimentation

- | | |
|--|-----|
| i) error rates | A1 |
| ii) ranking procedures (ordering of treatment means, tournaments, picking a winner, screening; see also S2.) | A2 |
| iii) multiple range and simultaneous confidence interval procedures | A3 |
| iv) nonadditivity of effects | A4 |
| v) randomization and permutation tests | A5 |
| vi) outliers, extreme values, stragglers, runs, residual analyses | A6 |
| vii) covariance and multivariate analyses including growth curves and nonlinear regression | A7 |
| viii) calculus of factorials and direct products | A8 |
| ix) transformation of data | A9 |
| x) unequal numbers procedures | A10 |

- xi) heterogeneity, pooling, and combining variances, Behrens-Fisher procedures, and random sample size A11
- xii) distribution free procedures A12
- xiii) summarization of results from groups of experiments, allocation of resources and units to various categories, long term experiments A13
- xiv) miscellaneous topics (plot size and shape, uniformity trials, Kronecker products in statistical analysis, cumulants and poly-kays, plant density, competition, border effect, experimental controls, subsampling, random versus systematic arrangements, vector analysis) A14
- xv) computer programs for analyses of experiments A15
- 2. Sample size
 - i) fixed S1
 - ii) sequential sampling and sequential experimentation S2
- 3. Conduct and philosophy of experimentation and special procedures (general conduct, grouping experiments, clinical trials, survey of experimentation, measurement of tastes and thresholds, data analyses including jackknife procedures) C
- 4. Bibliography (main purpose of paper was to present a bibliography or if a good bibliography was attached) B

No further subdivision of the above categories was made.

It should be noted that some categories have much in common;

for example, many papers listed under A2 are concerned with determining sample size, some papers in A7 are concerned with long term experiments, and some papers in A13 are concerned with allocation of samples within various strata.

V. FORM OF THE BIBLIOGRAPHY

References on experiment design are listed first in alphabetical and then in chronological order. Each reference carries a code, such as for example E3c; T2a; A12, which classifies the article in regard to its main content; the references are numbered from 2001 to 3683. Publications with no code or an incomplete code were those cited in another paper but for which the original paper or an abstract could not be found to verify the citation or the classification and were those which were considered to be important to list in the bibliography either because of the importance of the paper or because of the journal or language in which it was published. All doctoral theses are listed as "Ph.D. Thesis"; it should be noted that some of these are doctor of science theses.

The entire bibliography, which is to be published elsewhere, is divided into five parts with one part being devoted to literature citations relating to experiment design. This part is given here. Theses and mimeographed, multilithed or photo-offset series are included. A second part of the bibliography will be devoted to literature citations on treatment design including theses and special series. Some of the references in the part on experiment design will be duplicated in the part on treatment design.

A third part will contain references related to the analysis of experiment and treatment designs, to the conduct of experiments, to the general philosophy of experimentation, to sample size considerations, or to other special topics. No references with an E or a T classification will be duplicated in the third part of the bibliography. The reason for this is that the emphasis is on a bibliography for experiment design and for treatment design. The third part is considered to be supplementary to the first two parts.

The fourth category or part of the bibliography will be concerned with books devoted mainly to experiment and/or treatment design. The books in this category could be considered as texts for a course or series of lectures on experiment and treatment designs. Such a requirement eliminates a large number of textbooks on statistical methods which contain some material on these topics. An attempt will be made to determine the dates of printings and editions of a particular book. In addition an attempt will be made to ascertain all reprintings of a book and the language in which the reprinting was made.

A fifth part will include pre-1950 literature citations on the design, conduct, and analyses of experiments; this will be a revised version of Federer [1964]. At the end of each part a list of co-authors is given.

VI. REFERENCES

1. Federer, W. T. [1964], Literature review of experimental design through 1949. Mathematics Research Center Technical Summary Report #405, University of Wisconsin, February.
2. Kendall, M. G. and Doig, A. G. [1962], Bibliography of Statistical Literature, 1950-1958. Oliver and Boyd, Edinburgh and London.
3. Kendall, M. G. and Doig, A. G. [1965], Bibliography of Statistical Literature, 1940-1949. Oliver and Boyd, Edinburgh and London and Hafner Publishing Company, New York.
4. Kendall, M. G. and Doig, A. G. [1968], Bibliography of Statistical Literature, Pre-1940. Oliver and Boyd, Edinburgh and London.

BIBLIOGRAPHY ON EXPERIMENT DESIGN

- Abifarrah, A. [1966], Carrés latins incomplet. Ph. D. Thesis, Univ. Paris. E7c (2001)
- Abraham, J. K. [1960], On an alternative method of computing Tukey's statistic for the latin square model. Biometrics 16:686-691 (correction 17:669). E7a;A4 (2002)
- Adair, C. R., Cralley, E. M., and Johnston, T. H. [1958], Long-time trends in grain yields of five rice varieties. Agron. J. 50:233-235. E5e (2003)
- Adams, R. W. [1963], Estimating missing values by a regression method in time-trend experiments. M. S. Thesis, Iowa State Univ. E6a (2004)
- Adams, R. W. [1963], Estimating missing values by a regression method in time-trend experiments (abstract). Biometrics 19:656. E5,6a (2005)
- Addelman, S. [1965], Proportional frequency squares (abstract). Technometrics 7:267. E7c (2006)
- Addelman, S. [1967], Equal and proportional frequency squares. JASA 62:226-240. E7ace;T7ace (2007)
- Addelman, S. and Bush, S. [1964], A procedure for constructing incomplete block designs. Technometrics 6:389-403. E2,3c (2008)
- Adhikary, B. [1965], On the properties and construction of balanced block designs with variable replications. Calcutta Stat. Assoc. Bull. 14:36-64. E4ac (2009)
- Adhikary, B. [1965], A difference theorem for the construction of balanced block designs with variable replications. Calcutta Stat. Assoc. Bull. 14:167-170. E4c (2010)
- Adhikary, B. [1966], Contribution to incomplete block designs. Ph. D. Thesis, Calcutta Univ. E2,3c (2011)
- Adhikary, B. [1966], Some types of m-associate P.B.I.B. association schemes. Calcutta Stat. Assoc. Bull. 15:47-74. E3c (2012)
- Adhikary, B. [1966], Various types of m-associate P.B.I.B. association schemes (abstract). JISAS 18(2):105-106. E3c (2013)
- Adhikary, B. [1967], A new type of higher associate cyclical association schemes. Calcutta Stat. Assoc. Bull. 16:40-44. E3c (2014)
- Adhikary, B. [1967], On the symmetric differences of pairs of blocks of incomplete block designs. Calcutta Stat. Assoc. Bull. 16:45-48. E2,3,4c (2015)

- Adhikary, B. [1967], Group divisible designs with variable replications. Calcutta Stat. Assoc. Bull. 16:73-92. E3,4c (2016)
- Agarwal, K. N. [1961], Analysis of crop rotation experiments with unequal periods (abstract). JISAS 13:241-242. E5,8a;A13 (2017)
- Agarwal, K. N. [1965], Analysis of crop rotation - comparison of a three-crop rotation with and without legume (abstract). JISAS 17:125. E5,8a;A13 (2018)
- Agarwal, K. N. [1966], Analysis of crop rotations when cycle is incomplete and design augmented (abstract). JISAS 18(2):102. E5,8a;A13 (2019)
- Agrawal, H. [1953], On the dual of BIB designs. Calcutta Stat. Assoc. Bull. 12: 104-105. E3c (2020)
- Agrawal, H. [1963], Solution of problem 3. JISA 1:115-116. E2a (2021)
- Agrawal, H. [1963], On balanced block designs with two different number of replications. JISA 1:145-151. E4ac (2022)
- Agrawal, H. [1964], On the bounds of the number of common treatments between blocks of certain two associate P.B.I.B. designs. Calcutta Stat. Assoc. Bull. 13:76-79 (errata 14:88). E3c (2023)
- Agrawal, H. [1964], On the bounds of the number of common treatments between blocks of semi-regular group divisible designs. JASA 59:867-871. E3c (2024)
- Agrawal, H. [1965], A note on incomplete block designs. Calcutta Stat. Assoc. Bull. 14:80-83. E2,3c (2025)
- Agrawal, H. [1966], A method of construction of three factor balanced designs. JISA 4:10-13. E9c (2026)
- Agrawal, H. [1966], Some generalizations of distinct representatives with applications to statistical designs. AMS 37:525-528. E2,3c (2027)
- Agrawal, H. [1966], Comparison of the bounds of the number of common treatments between blocks of certain partially balanced incomplete block designs. AMS 37:739-740. E2c (2028)
- Agrawal, H. [1966], Some methods of construction of designs for two-way elimination of heterogeneity-1. JASA 61:1153-1171. E7ac (2029)
- Agrawal, H. [1966], Two-way elimination of heterogeneity. Calcutta Stat. Assoc. Bull. 15:32-38. E7,10,14a (2030)
- Agrawal, H. [1966], Some systematic methods of construction of designs for two-way elimination of heterogeneity. Calcutta Stat. Assoc. Bull. 15:93-108. E7ac (2031)

- Agrawal, H. and Raghavachari, R. [1964], On balanced block designs with three different numbers of replications. *Calcutta Stat. Assoc. Bull.* 13:80-86.
E4ac (2032)
- Aird, P. L. [1956], Fertilizers in forestry and their use in hardwood population establishment. *Pulp Paper Mag. Canada, Convention Issue.* E2ae;T2a (2033)
- Aitchison, J. [1961], The construction of optimal designs for the one-way classification analysis of variance. *JRSSB* 23:352-367. E1,14c;S1 (2034)
- Alanen, J. D. [1961], Tables of minimum functions for generating Galois fields $GF(p^n)$ (abstract). *AMS* 32:621. E2,3,7c (2035)
- Aliev, J. S. O. [1967], Symmetric algebras and Steiner systems (in Russian). *Doklady Akademii Nauk, S.S.S.R.* 174:511-513. E2c (2036)
- Alimena, B. S. [1962], A method of determining unbiased distribution in the Latin square. *Psychometrika* 27:315-317. E8c (2037)
- Allard, R. W. [1952], The precision of lattice designs with a small number of entries in lima bean yield trials. *Agron. J.* 44:200-202. E3,14a (2038)
- Allen, R. S., Homeyer, P. G., and Jacobson, N. L. [1955], Use of activated glycerol dichlorohydrin for estimating vitamin A in dairy calf blood plasma. *Iowa State College J. Sci.* 29:721-734. E2ae;T2ae (2039)
- Alltop, W. O. [1966], On the construction of block designs. *J. Combinatorial Theory* 1:501-502. E2c (2040)
- Amaral, A. Z., Verdade, F. C., Schmidt, N. C., Wutke, A. C. P., and Igue, K. [1965], Parcelamento e intervalo da aplicação de calcário. (Application of parcelled lime in different intervals.) *Bragantia* 24:83-96. E2e (2041)
- Anderson, D. A. [1966], Multidimensional partially balanced designs (abstract). *AMS* 37:1858. E4,13c (2042)
- Anderson, K. E. [1961], Computation of t by analysis of variance. *Amer. Stat.* 15(2): 18-19. E1,2a (2043)
- Anderson, R. L. [1953], Query 105. *Biometrics* 9:533-534. E5,12a (2044)
- Anscombe, F. J. [1961], Examination of residuals. *Proc. Sixth Conf. Design Expt. Army Res. Dev. Testing.* pp.7-19. E7ae;A6,14 (2045)
- Archbold, J. W. [1960], A combinatorial problem of T. G. Room. *Mathematika* 7: 50-55. E5,7c (2046)
- Archbold, J. W. and Johnson, N. L. [1956], A method of constructing partially balanced incomplete block designs. *AMS* 27:624-632. E3c (2047)

- Archbold, J. W. and Johnson, N. L. [1958], A construction for Room's squares and an application in experimental design. AMS 29:219-225. E5ac (2048)
- Archer, E. J. [1952], Some Greco-Latin analysis of variance designs for learning studies. Psychological Bull. 49:521-537. E12ae (2049)
- Assmus, E. F. and Mattson, H. F. [1966], On the number of inequivalent Steiner triple systems. J. Combinatorial Theory 1:301-305. E2c (2050)
- Assmus, E. F. and Mattson, H. F. [1967], On tactical configurations and error-correcting codes. J. Combinatorial Theory 2:243-257. E2c;B (2051)
- Astrachan, M. [1958], Significance tests II - Small samples. ASQC Nat. Conv. Trans. 12:491-501. E1,2ae;All (2052)
- Astrachan, M. [1959], Experimental designs and analysis of variance. II. Analysis of the data. ASQC, Nat. Conv. Trans. 13:523-540. E1,2ae (2053)
- Atanasiu, N. [1951], Die Auswertung der landwirtschaftlichen Feldversuche. Z. Pflanzenzüchtung 30:112-121. E2e (2054)
- Atanasiu, N. [1953], Über die statistischen Auswertungsmethoden der Feldversuche. Z. Pflanzenernährung Düngung Bodenkunde 61:229-235. E5a (2055)
- Atanasiu, N. [1954], Zum Aufsatz von K. H. Müller Kristische Bemerkungen zu der Arbeit von N. Atanasiu "Über....". Z. Pflanzenernährung Düngung Bodenkunde 64:135-138. E5a (2056)
- Atanasiu, N. [1954], Zur Frage der Anlage und Auswertung der Feldversuche. Z. Pflanzenzüchtung 33:151-156. E2ae (2057)
- Atanasiu, N. [1955], Statistische Auswertung von Versuchsergebnissen. Z. Landw. Vers.-Untersuch Wes. 1:88-94. E5a (2058)
- Atanasiu, N. [1955], Stellungnahme zu den „Bemerkungen zu der Arbeit von N. Atanasiu: Zur Frage der Anlage und Auswertung der Feldversuche“. Z. Pflanzenzüchtung 34:206-208. E2a (2059)
- Atiqullah, M. [1958], Some new solutions of the symmetrical balanced incomplete block design with $\lambda=2$ and $k=9$. Bull. Calcutta Math. Soc. 50:23-28. E2c (2060)
- Atiqullah, M. [1958], On configurations and non-isomorphism of some incomplete block designs. Sankhyā 20:227-248. E2,3c (2061)
- Atiqullah, M. [1961], On a property of balanced designs. Biometrika 48:215-218. E2,14c (2062)
- Atiqullah, M. [1963], On the randomization distribution and power of the variance ratio test. JRSSB 25:334-347. E1,2a;A5 (2063)

Atiquilian, M. and Cox, D. R. [1962], The use of control observations as an alternative to incomplete block designs. *JRSSB* 24:464-471. E4.7a (2064)

Atkinson, G. F. [1959], Components of the third cumulant in a two-way classification with n observations per cell. *Biometrics Unit Mimeo. Ser. BU-98-M*, Cornell Univ. E2a:A14 (2065)

Atkinson, G. F. [1963], Designs for sequences of treatments with carry-over effects. Ph. D. Thesis, Cornell Univ. E8ace (2066)

Atkinson, G. F. [1966], Designs for sequences of treatments with carry-over effects. *Biometrics* 22:292-309. E8ace (2067)

- Bahn, E. [1959], Betrachtungen zum faktoriellen Versuch vom Typ 2². Z. Landw. Vers. Untersuch Wes. 5:232-254. E12a;T2a (2068)
- Bahn, E., Bannelick, A., Möbius, H., Müller, K.-H., and Ortlepp, H. [1957], Anlageschemata für Feldversuche (2-16 Prüfglieder) erarbeitet nach den Prinzipien einer gelenkten, gerechten Verteilung der Teilstücke. Z. Landw. Vers. Untersuch Wes. 3:151-205. E2,5,7ac;C (2069)
- Bainbridge, J. R. [1951], Factorial experiments in pilot plant studies. Ind. Eng. Chemistry 43:1300-1306. E2e;T2ae (2070)
- Bainbridge, T. R. [1963], Staggered, nested designs for estimating variance components. ASQC, Ann. Conv. Trans. 17:93-103. Elace (2071)
- Bainbridge, T. R. [1965], Staggered, nested designs for estimating variance components. IQC 22:12-20. Elae (2072)
- Baird, H. R. and Kramer, C. Y. [1960], Analysis of variance of a balanced incomplete block design with missing observations. Appl. Stat. 9:189-198. E2,6ae (2073)
- Baker, F. B. and Collier, R. O. [1966], Some empirical results on variance ratios under permutation in the completely randomized design. JASA 61:813-820. Ela (2074)
- Baker, G. A. [1952], Uniformity field trials when differences in fertility levels of subplots are not included in experimental error. AMS 23:289-293. E2a (2075)
- Baker, G. A. and Briggs, F. N. [1950], Yield trials with backcross derived lines of wheat. Ann. Inst. Stat. Math. 2:61-67. E7a;A6 (2076)
- Baker, G. A. and Hoyle, B. J. [1964], Significant differences on the basis of stable rankings by the SD technique. Hilgardia 35:627-646. E7a;A14 (2077)
- Baker, G. A. and Johnson, J. P. [1964], Uniformity field trials and Monte Carlo simulations. Hilgardia 35:615-625. E2,7a;A14 (2078)
- Baker, G. A. and Roessler, E. B. [1957], Implications of a uniformity trial with small plots of wheat. Hilgardia 27:183-188. E2,7a;A14;C (2079)
- Balaam, L. N. [1965], A two-period design for the estimation of treatment $\times$ periods interaction. Biometrics Unit Mimeo. Ser. BU-177-M, Cornell Univ. E7ac (2080)

- Balasubramanyan, R., Kannian, K., and Ramachandran, C. K. [1953], The efficiency of lattice square design in cotton. *Indian Cotton Growing Rev.* 7:143-148.
E11,14a (2081)
- Ballas, J. A. and Webster, J. T. [1966], On dependent tests from a non-orthogonal design. *JASA* 61:803-812 (corrigenda 61:1246).
E2a;A10 (2082)
- Balmer, E. et. al [1965], Contribuição ao estudo da influência dos fatores físicos do solo, sobre a incidência da murcha do algodoeiro, causada por Fusarium oxysporum f. vasinfectum (Atk.) Snyder and Hansen *Anais Escola Superior Agri. "Luiz de Queiroz"* 22:247-258.
E2ae;T2ae (2083)
- Banerjee, K. S. [1951], Incomplete block designs. *Current Sci.* 20:229.
E2c (2084)
- Banerjee, K. S. [1951], Some observations on the practical aspects of weighing designs. *Biometrika* 38:248-251.
E2ace;T6ace (2085)
- Bang, T. [1957], On the sequence $[n\alpha]$, $n = 1, 2, \dots$. Supplementary note to the preceding paper by Th. Skolem. *Mathematica Scandinavica* 5:69-76.
E2c (2086)
- Bangdiwala, I. S. [1957], A general formula for the t test. *Amer. Stat.* 11(4):21.
E1a (2087)
- Baptista, J. G. [1954], Estudos de estadística aplicada I Quadrado Latino com dois talhões falhados. *Melhoramento* 7:5-27.
E10ae (2088)
- Barra, J. R. [1963], A propos d'un théorème de R. C. Bose. *Comptes Rendus (First Part)* 256:5502-5507.
E7,12c (2089)
- Barra, J. R. [1965], Carres latins et Euleriens (with discussion). *Rev. ISI* 33:16-23.
E7,12,12c;B (2090)
- Barra, J. R. J. and Guérin, R. [1963], Extension des carres gréco-latins cycliques. *Publ. l'Inst. Stat. Univ. Paris* 12:67-82.
E7,12,13c (2091)
- Barra, J. R. and Guérin, R. [1963], Utilisation pratique de la méthode de Yamamoto pour la construction systématique de carrés gréco-latins. *Publ. l'Inst. Stat. Univ. Paris* 12:131-136.
E7,12,13c (2092)
- Basson, R. P. [1959], Incomplete block designs augmented with a repeated control. *M. S. Thesis. Iowa State Univ.*
E4ac (2093)
- Baten, W. D. [1952], Variances of differences between means when there are two missing values in randomized block designs. *Biometrics* 8:42-50.
E2,6ae;A10 (2094)
- Baten, W. D., Tack, P. I. and Baeder, H. A. [1958], Testing for differences between methods of preparing fish by use of a discriminant function. *IQC* 14(7):7-10.
E1e;A7 (2095)

- Beal, S. R., Carmer, S. G. and Seif, R. D. [1965], Computer program for analyzing augmented randomized complete block designs. *Agron. J.* 57:316.
E4a;A15 (2096)
- Becker, W. A. and Bearnse, G. E. [1964], All-or-none traits and the sensitivity of experiments (abstract). *Biometrics* 20:378.
E14 (2097)
- Beeler, F. A. [1957], Some useful nonparametric significance tests. *ASQC, Nat. Conv. Trans.* 11:343-350.
E2e;A12 (2098)
- Behari, V. [1961], Analysis of some experimental designs when groups of treatments have different variances (abstract). *JISAS* 13:238.
E2a;A11 (2099)
- Behari, V. [1963], Testing for equality of treatment means in a R.B.D. trial with heterogenous error variances (abstract). *JISAS* 15:265-266.
E2a;A11 (2100)
- Behrens, W. U. [1955], Der Durchschnitt der Prüfgliedmittelwerte als Bezugsgrösse. *Z. Acker.- Pflanzenbau*, 99:397-402.
E1,2ae (2101)
- Behrens, W. U. [1956], Die Eignung verschiedener Feldversuchs-Anordnungen zum Ausgleich der Bodenunterschiede. *Z. Acker- Pflanzenbau*, 101:243-278.
E2,5,7a;A14 (2102)
- Behrens, W. U. [1956], Feldversuchsanordnungen mit verbessertem Ausgleich der Bodenunterschiede. *Zeitschrift landw. Vers.- Unter.* 2:176-193, illus.
E7,12ac (2103)
- Behrens, W. U. [1958], Die Auswertung von nichtorthogonalen Versuchsserien, insbesondere im Sortenprüfwesen. *Z. Acker- Pflanzenbau* 105:1-18.
E4ae;A10 (2104)
- Behrens, W. U. [1959], Die Auswertung von Feldversuchen nach Mitscherlich. *Z. Acker.- Pflanzenbau* 109:255-290.
E2,5a;C (2105)
- Bejar, J. [1957], Diseño de experimentos. *Trabajos Estad.* 8:91-108.
E,1,2,7ae;T2a;C (2106)
- Beni, G. [1963], Elaborazione dei dati ottenuti in esperimenti impostati con piani a reticolato, con l'ausilio di calcolatrici scriventi a più totalizzatori e della meccanografia a schede perforate. (Calculation of data obtained in lattice experiments, by the use of tabulating calculating machines with several totalizers and of mechanical reproduction from punched cards.) *Genetica Agraria, Roma* 16:97-110.
E3a;A15 (2107)
- Bennett, B. M. [1966], Use and estimating efficiency of rank-order tests in randomized block, latin square, and split-plot designs. *Biométrie - Fraximétrie*, 7:79-87.
E2,5,7,12ae;A12 (2108)
- Bennett, C. A. [1954], Effect of measurement error on chemical process control. *IQC* 10(4):17-20.
F1e (2109)

- Bennett, L. T. [1966], On a method of constructing partially balanced incomplete block design. Ph. D. Thesis, Oklahoma State Univ. E3c (2110)
- Benson, C. T. [1966], A partial geometry ($q^2+1, q^2+1, 1$) and corresponding PBIB design. Proc. Amer. Math Soc. 17:747-749. E3c (2111)
- Berenblut, I. I. [1964], Change-over designs with complete balance for first residual effects. Biometrics 20:707-712. E8ac (2112)
- Berenblut, I. I. [1967], The analysis of changeover designs with complete balance for first residual effects. Biometrics 23:578-580. E8ac (2113)
- Berenblut, I. I. [1967], A change-over design for testing a treatment factor at four equally spaced levels. JRSSB 29:370-373 (corrigendum 29:586). E8ac (2114)
- Berman, G. [1955], A three parameter family of partially balanced incomplete block designs with two associate classes. Proc. Amer. Math. Soc. 6:490-493. E3c (2115)
- Bhagwandas, [1965], A note on balanced incomplete block designs. JASA 3:41-45. E2c (2116)
- Bhapkar, V. P. [1959], A note on confidence bounds connected with ANOVA and MANOVA for balanced and partially balanced incomplete block designs (abstract). AMS 30:618 (Inst. Stat. Mimeo. Ser. No. 216, N. Carolina). E2,3a:A7 (2117)
- Bhapkar, V. P. [1959], Contributions to the statistical analysis of experiments with one or more responses (not necessarily normal). Ph. D. Thesis, Univ. N. Carolina. (Inst. Stat. Mimeo. Ser. No. 229, N. Carolina). E2a:A12 (2118)
- Bhapkar, V. P. [1960], Confidence bounds connected with ANOVA and MANOVA for balanced and partially balanced incomplete block designs. AMS 31:741-748. E2,3a (2119)
- Bhargava, P. N. [1959], Latin Square with orthogonal partitioning (abstract). Proc. Forty-Sixth Indian Sci. Congress, Part III, p. 19. E7ac (2120)
- Bhargava, P. N. [1960], Analysis of the (r^2-r, r) orthogonal portion of a Latin Square. JISAS 12:95-99. E7a (2121)
- Bhargava, P. N. and Das, M. N. [1961], On Rectangular Lattice Designs (abstract). Proc. Forty-Eighth Indian Sci. Congress, Part III, p.24. E3a (2122)
- Bhargava, R. P. [1967], Analysis of variance for Scheffe's mixed model for stair-case design. Sankhyā A 29:391-398. E4a (2123)
- Bhaskar Rao, M. [1967], Partially balanced designs with unequal block sizes. JISA 5:90-103. E4ac (2124)

- Bhattacharya, N. [1957], A note on the construction of orthogonal latin squares. *Sankhyā* 17:351-352. E7,12,13c (2125)
- Bhattacharyya, K. N. [1950], Problems in partially balanced incomplete block designs. *Calcutta Stat. Assoc. Bull.* 2:177-182. E3c (2126)
- Biggers, J. D. [1959], The estimation of missing and mixed-up observations in several experimental designs. *Biometrika* 46:91-105. E2,6,7,10ae (2127)
- Biggers, J. D. [1961], Estimation of missing observations in split-plot experiments where whole-plots are missing or mixed-up. *Biometrika* 48:468-472. E5,6a (2128)
- Bingham, R. S. [1959], Design of experiments from a statistical viewpoint, part II. *IQC* 15(12):12-15. E7ae;T2ae (2129)
- Birtwistle, R. [1955], The Hyper-Graeco-Latin square. C.S.I.R.O. Div. of Math. Stat. Technical paper No. 2, pp. 1-12. E9,12,13ace (2130)
- Bishop, R. F., MacLeod, L. B., Jackson, L. P., MacEachern, C. R., and Goring, E. T. [1962], A long-term field experiment with commercial fertilizers and manure. II. Fertility levels and crop yields in a rotation of potatoes, oats and hay. *Canadian J. Soil Sci.* 42:49-60. E5,8a (2131)
- Blackith, R. E. [1950], Bio-assay systems for the pyrethrins. III. Application of the twin cross-over design to crawling insect assays. *Ann. Appl. Biol.*, 37:508-515. E8ace;T8ae (2132)
- Blackwelder, W. C. [1966], Construction of balanced incomplete block designs from association matrices. M. S. Thesis, Univ. N. Carolina. E2,3ac (2133)
- Blackwelder, W. C. [1966], On constructing balanced incomplete block designs from association matrices with special reference to association schemes of two and three classes. *Inst. Stat. Mimeo. Ser. No. 496*, Univ. N. Carolina, 15 pp. E2,3c (2134)
- Blackwell, D. [1951], Comparison of experiments. *Proc. Second Berkeley Symp. Math. Stat. Prob.* pp. 93-102. E14 (2135)
- Blenk, H. [1951], Grundsätzliche Betrachtungen zur Varianzanalyse. *Z. Pflanzenzüchtung* 30:122-142. E1,2,7,12ae (2136)
- Bliss, C. I. [1952], The clinical assay of diuretic agents II. Estimation of the error in a clinical assay. *Biometrics* 8:237-248. F2ae;T8ae (2137)
- Bliss, C. I. [1956], The analysis of insect counts as negative binomial distributions. (with discussion). *Proc. Tenth Int'l. Congress Entomology* 2:1015-1032. E2ae;T2ae;A9 (2138)
- Bliss, C. I., Greenwood, M. L., and McKendrick, M. H. [1953], A comparison of scoring methods for taste tests with mealiness of potatoes. *Food Tech.* 7:491-495. E7ac;C (2139)

- Bloch, D. [1966], A Bayesian approach to some missing value problems in ANOVA and contingency tables. Dept. Stat., Johns Hopkins Univ., Tech. Report No. 62, pp. 1-19. E2,6a (2140)
- Blomquist, M. O. [1966], Rank analysis of complete block factorial designs. Ph. D. Thesis, Univ. Minnesota. E2a;T2a;A12 (2141)
- Boguslawski, E. v. [1958], Der Feldversuch mit polyfaktorieller Fragestellung. Z. Landw. Vers.-Untersuch Wes. 4:316-342. E2,3,5ac;T2a (2142)
- Bohun-Chudyniv, V. [1954], On a general method for constructing completely orthogonal $2^k \times 2^k$ squares ($k \geq 1$) by using closed orthogonal systems of K-nions (abstract). Proc. Int'l. Congress Math. 2:281-282. E7,12,13c (2143)
- Bohun-Chudyniv, V. [1955], On determining all possible orthogonalizable sets of Latin $2^k \times 2^k$ squares and pertaining to them completely orthogonal Latin squares (abstract). Bull. Amer. Math. Soc. 61:175. E7,12,13c (2144)
- Bohun-Chudyniv, V. [1955], On a new method of constructing canonical sets of Latin $2^k \times 2^k$ squares ($k \geq 2$) (abstract). Bull. Amer. Math. Soc. 61:174-175. E7,12,13c (2145)
- Boogaerdt, J. [1959], De oorsprong van de naam "Latijns vierkant". (Origin of the name "Latin Square".) Stat. Neerlandica 13:465-466. E7a (2146)
- Bose, R. C. [1950], A note on orthogonal arrays (abstract). Biometrika 37:179-180. E2,7c (2147)
- Bose, R. C. [1950], A note on orthogonal arrays (abstract). AMS 21:304-305. E2,7c (2148)
- Bose, R. C. [1951], Partially balanced incomplete block designs with two associate classes involving only two replications. Calcutta Stat. Assoc. Bull. 3:120-125. E3c (2149)
- Bose, R. C. [1951], Group divisible incomplete block designs (abstract). AMS 22:311-312. E3c (2150)
- Bose, R. C. [1952], A note on Nair's condition for partially balanced incomplete block designs with $k > r$. Calcutta Stat. Assoc. Bull. 4:123-126. E3c (2151)
- Bose, R. C. [1952], Partially balanced designs with two plots per block (abstract). AMS 23:639. E3c (2152)
- Bose, R. C. [1956], Paired comparison designs for testing concordance between judges. Biometrika 43:113-121. E2c;T11c (2153)

- Bose, R. C. [1959], Note on Parker's method of constructing pairwise orthogonal sets of Latin squares (preliminary report) (abstract 357-11). Notices Amer. Math. Soc. 6:179. E7,12c (2154)
- Bose, R. C. [1959], On the application of finite projective geometry for deriving a certain series of balanced Kirkman arrangements. Calcutta Math. Soc. Golden Jubilee Commemoration Vol. (1958-1959), pp. 341-354. E2c (2155)
- Bose, R. C. [1960], On a method of comparing Steiner's triple systems. Contributions to Probability and Statistics, pp. 133-141. E2c (2156)
- Bose, R. C. [1952], Partial geometries and partially balanced designs (abstract). AMS 33:1206. E3c (2157)
- Bose, R. C. [1963], Combinatorial properties of partially balanced designs and association schemes. Sankhyā A 25:109-136 (also published in Contributions to Statistics, pp. 21-48). E3c (2158)
- Bose, R. C. [1963], Strongly regular graphs, partial geometries and partially balanced designs. Pacific J. Math. 13:329-419 (also, Inst. Stat. Mimeo. Ser. No. 359, Univ. N. Carolina). E3c (2159)
- Bose, R. C. [1965], Session chairman's prepared remarks. Proc. of the IBM Scientific Symp. Stat. pp. 55-57. E12c;T4c (2160)
- Bose, R. C. and Bush, K. A. [1952], Orthogonal arrays of strength two and three. AMS 23:508-514 (abstract 22:312). E3,7c (2161)
- Bose, R. C. and Cameron, J. M. [1965], The bridge tournament problem and calibration designs for comparing pairs of objects. J. Res. NBS 69B:323-332. E4ac;A2 (2162)
- Bose, R. C. and Cameron, J. M. [1967], Calibration designs based on solutions to tournament problem. J. Res. NBS 71B:149-160. E4ace;A2 (2163)
- Bose, R. C. and Chakravarti, I. M. [1966], Hermitian varieties in a finite projective space $PG(N, q^2)$. Canadian J. Math. 18:1161-1182. E2c (2164)
- Bose, R. C., Chakravarti, I. M., and Knuth, D. E. [1960], On methods of constructing sets of mutually orthogonal Latin squares using a computer (abstract). AMS 31:813-814. E7,12,13c (2165)
- Bose, R. C., Chakravarti, I. M., and Knuth, D. E. [1960], On methods of constructing sets of mutually orthogonal latin squares using a computer. I. Technometrics 2:507-516. E7,12,13c (2166)

- Bose, R. C., Chakravarti, I. M., and Knuth, D. E. [1961], On methods of constructing sets of mutually orthogonal Latin squares using a computer. II. Technometrics 3:111-117. E7,12,13c (2167)
- Bose, R. C., Chakravarti, I. M., and Knuth, D. E. [1961], On methods of constructing sets of mutually orthogonal Latin squares using a computer (summary). JASA 56:393. E7c (2168)
- Bose, R. C. and Clatworthy, W. H. [1952], Partially balanced designs with $k > r = 3$, $\lambda_1 = 1$, $\lambda_2 = 0$ (abstract). AMS 23:138. E3c (2169)
- Bose, R. C. and Clatworthy, W. H. [1955], Some classes of partially balanced designs. AMS 26:212-232. E3c (2170)
- Bose, R. C., Clatworthy, W. H., and Shrikhande, S. S. [1954], Tables of partially balanced designs with two associate classes. N. Carolina Agrl. Expt. Sta. Tech. Bull. No. 107, pp. 1-iv, 1-255. E3c (2171)
- Bose, R. C. and Connor, W. S. [1951], Necessary conditions for the existence of a symmetrical group divisible design (abstract). AMS 22:611. E3c (2172)
- Bose, R. C. and Connor, W. S. [1952], Combinatorial properties of group divisible incomplete block designs. AMS 23:367-385. E3c (2173)
- Bose, R. C. and Kuebler, R. R. [1958], On the construction of a class of error-correcting binary signalling codes. Inst. Stat. Mimeo. Ser. No. 199, Univ. N. Carolina. E2,3,4c (2174)
- Bose, R. C. and Laskar, R. [1967], A characterization of tetrahedral graphs. J. Combinatorial Theory 3:366-385. E3c (2175)
- Bose, R. C. and Mesner, D. M. [1959], On linear associative algebras corresponding to association schemes of partially balanced designs. AMS 30:21-38 (also Inst. Stat. Mimeo. Ser. No. 188, Univ. N. Carolina). E3c (2176)
- Bose, R. C. and Nair, K. R. [1952], Resolvable incomplete block designs with two replications (abstract). Biometrics 8:94-95. E3ac (2177)
- Bose, R. C. and Nair, K. R. [1952], Resolvable incomplete block designs with two replications (abstract). AMS 23:299. E3ac (2178)
- Bose, R. C. and Nair, K. R. [1962], Resolvable incomplete block designs with two replications. Sankhyā A 24:9-24 (also Inst. Stat. Mimeo. Ser. No. 65, Univ. N. Carolina). E3ac (2179)
- Bose, R. C. and Ray-Chaudhuri, D. K. [1959], Application of the geometry of quadrics in finite projective space to the construction of PBIB designs (abstract). AMS 30:614. E3c (2180)
- Bose, R. C. and Ray-Chaudhuri, D. K. [1960], On a class of error correcting binary group codes. Information Control 3:68-79 (also, Inst. Stat. Mimeo. Ser. No. 240, Univ. N. Carolina). E2c (2181)

- Bose, R. C. and Shimamoto, T. [1952], Classification and analysis of partially balanced incomplete block designs with two associate classes. JASA 47:151-184. E3ace (2182)
- Bose, R. C. and Shrikhande, S. S. [1959], A theorem on the construction of orthogonal Latin squares and the falsity of Euler's conjecture (preliminary report) (abstract 558-26). Notices Amer. Math. Soc. 6:378-379. E7,12c (2183)
- Bose, R. C. and Shrikhande, S. S. [1959], On the falsity of Euler's conjecture about the non-existence of two orthogonal Latin squares of order $4t+2$. Proc. Nat. Academy Sci. (USA) 45:734-737. E7,12c (2184)
- Bose, R. C. and Shrikhande, S. S. [1959], On the falsity of Euler's conjecture for all orders exceeding 26 (abstract 558-27). Notices Amer. Math. Soc. 6:379. E7,12c (2185)
- Bose, R. C. and Shrikhande, S. S. [1959], On the composition of balanced incomplete block designs of index unity (abstract 559-18). Notices Amer. Math. Soc. 6:404. E2c (2186)
- Bose, R. C. and Shrikhande, S. S. [1959], On the construction of pairwise orthogonal sets of latin squares and the falsity of the conjecture of Euler: II. Inst. Stat. Mimeo. Ser. No. 225, Univ. N. Carolina. E7,12c (2187)
- Bose, R. C. and Shrikhande, S. S. [1959], A note on a result in the theory of code construction. Information Control 2:183-194. E2c;T7c (2188)
- Bose, R. C. and Shrikhande, S. S. [1960], On the construction of sets of mutually orthogonal Latin squares and the falsity of a conjecture of Euler. Trans. Amer. Math. Soc. 95:191-209. E7,12c (2189)
- Bose, R. C. and Shrikhande, S. S. [1960], On the composition of balanced incomplete block designs. Canadian J. Math. 12:177-188 (also Inst. Stat. Mimeo. Ser. No. 239, Univ. N. Carolina). E2c (2190)
- Bose, R. C., Shrikhande, S. S., and Bhattacharya, K. N. [1953], On the construction of group divisible incomplete block designs. AMS 24:167-195 (also Inst. Stat. Mimeo. Ser. No. 60, Univ. N. Carolina). E3c (2191)
- Bose, R. C., Shrikhande, S. S., and Parker, E. T. [1960], Further results on the construction of mutually orthogonal Latin squares and the falsity of Euler's conjecture. Canadian J. Math. 12:189-203. E7,12c (2192)
- Bose, R. C., Shrikhande, S. S., and Parker, E. T. [1963], Orthogonal Latin squares and Euler's conjecture (discussion). Colloque Internationaux du Centre National de la Recherche Scientifique, No. 110 Le Plan d'Experiences, pp. 233-255 (also Inst. Stat. Mimeo. Ser. No. 245, Univ. N. Carolina). E7,12c (2193)
- Bose, R. C. and Srivastava, J. N. [1964], Multidimensional partially balanced designs and their analysis, with applications to partially balanced factorial fractions. Sankhyā A 26:145-168 (also Inst. Stat. Mimeo. Ser. No. 376, Univ. N. Carolina). E3,7,13a;T7ac (2194)

- Box, G. E. P. [1954], Some theorems on quadratic forms applied in the study of analysis of variance problems. I. Effect of inequality of variance in the one-way classification. AMS 25:290-302. E1a;A11 (2195)
- Box, G. E. P. [1954], Some theorems on quadratic forms applied in the study of analysis of variance problems. II. Effects of inequality of variance and of correlation between errors in the two-way classification. AMS 25:484-498. E2a;A11 (2196)
- Box, G. E. P. and Guttman, I. [1966], Some aspects of randomization. JRSSB 28:543-558 (also Dept. Stat. Tech. Report No. 64, Univ. Wisconsin). E2a;T4a;C (2197)
- Box, G. E. P. and Mueller, M. E. [1959], Randomization and least squares estimates (summary). JASA 54:489. E2a (2198)
- Bowles, R. [1951], Accuracy of certain approximate solutions in predicting the correct model for experiments with unequal frequencies in subclasses. M. S. Thesis, Iowa State Univ. E2a;A10 (2199)
- Bozovich, H., Bancroft, T. A., and Hartley, H. O. [1956], Analysis of variance: Preliminary tests, pooling and linear models. Preliminary tests of significance and pooling procedures for certain incompletely specified models. Iowa State Univ. WADC Tech. Report 55-244, 1:1-118. E2a;A11 (2200)
- Bradley, J. V. [1958], Complete counterbalancing of immediate sequential effects in a Latin Square design. JASA 53:525-528 (corrigenda, 53:1030-1031). E8c (2201)
- Bradley, R. A. [1951], Rank analysis of incomplete block designs I (Preliminary report) (abstract). Biometrics 7:125. E2a;A12 (2202)
- Bradley, R. A. [1952], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va. BI-Annual Report No. 5, 119 pp. (Mimeo.). E2,3a;T11a;C (2203)
- Bradley, R. A. [1953], Some further extensions of the rank analysis of incomplete block designs (abstract). Virginia J. Sci. 4:289-290. E2a;A12 (2204)
- Bradley, R. A. [1954], Incomplete block rank analysis: On the appropriateness of the model for a method of paired comparisons. Biometrics 10:375-390. E2ae;T11a;A12 (2205)
- Bradley, R. A. [1954], Rank analysis of incomplete block designs, II. Additional tables for the method of paired comparisons. Biometrika 41:502-537 (corrigendum 51:288). E2a;T11a;A12 (2206)
- Bradley, R. A. [1955], Rank analysis of incomplete block designs III. Some large-sample results on estimation and power for a method of paired comparisons. Biometrika 42:450-470. E2a;T11a (2207)
- Bradley, R. A. [1955], Some notes on the theory and application of rank order statistics. Part I. IQC 11(5):12-16. E1ae;A12 (2208)

- Bradley, R. A. [1955], Some notes on the theory and application of rank order statistics. Part II. IQC 11(6):5-9. E1.2ae;A12 (2209)
- Bradley, R. A. [1958], Recent research on statistical problems in subjective testing. ASQC, Nat. Conv. Trans. 12:143-152. E3ae;T2ae:C (2210)
- Bradley, R. A. [1958], Recent research in statistical problems in subjective testing. Proc. Second Conf. Design Expt. Army Res. Dev. Testing. pp. 5-38. E3ae;T2ae:C (2211)
- Bradley, R. A. [1963], Some relationships among sensory difference tests. Biometrics 19:385-397. E14;T1a,C (2212)
- Bradley, R. A. and Duncan, D. S. [1951], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va. Bi-Annual Report No. 1, (Mimeo.). C (2213)
- Bradley, R. A. and Kramer, C. Y. [1958], Addenda to "Intra block analysis for factorials in two-associate class group divisible designs". AMS 29:933-935. E3a;T2a (2214)
- Bradley, R. A. and Schumann, D. E. W. [1957], The comparison of the sensitivities of similar experiments: Applications. Biometrics 13:496-510. E14;C (2215)
- Bradley, R. A. and Somerville, P. N. [1953], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va. Bi-Annual Report No. 7 (Mimeo.). E2a;T1a;A2 (2216)
- Bradley, R. A. and Somerville, P. N. [1954], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va., Bi-Annual Report No. 5 (Mimeo.). E2a;T1a;A3 (2217)
- Bradley, R. A. and Terry, M. E. [1951], Rank analysis of incomplete block designs. Virginia J. Sci. 2:379. E2a;A12 (2218)
- Bradley, R. A. and Terry, M. E. [1951], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va., Bi-Annual Report No. 2 (Mimeo.). E2.3a;T1a;C (2219)
- Bradley, R. A. and Terry, M. E. [1951], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va., Bi-Annual Report No. 3 (Mimeo.). E2.3a;T1a;C (2220)
- Bradley, R. A. and Terry, M. E. [1952], New designs and techniques for organoleptic testing - the rank analysis of incomplete block designs - I. (abstract). Virginia J. Sci. 3:360. E2.3a;A12 (2221)
- Bradley, R. A. and Terry, M. E. [1952], Rank analysis of incomplete block designs I - The method paired comparisons (abstract). Biometrics 8:95. E2a;T1a;A12 (2222)

- Bradley, R. A. and Terry, M. E. [1952], Rank analysis of incomplete block designs. I. The method of paired comparisons (abstract). AMS 23:299-300.
E2a;T1a;A12 (2223)
- Bradley, R. A. and Terry, M. E. [1952], Rank analysis of incomplete block designs II. The method for blocks of three (Preliminary report) (abstract). Biometrics 9:96.
E2a;A12 (2224)
- Bradley, R. A. and Terry, M. E. [1952], Rank analysis of incomplete block designs. II. The method for blocks of three (Preliminary report) (abstract). AMS 23:300.
E2a;A12 (2225)
- Bradley, R. A. and Terry, M. E. [1952], Rank analysis of incomplete block designs. I. The method of paired comparisons. Biometrika 39:324-345.
E2ae;T1ae;A12 (2226)
- Bradley, R. A. and Terry, M. E. [1952], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va., BI-Annual Report No. 4 (Mimeo.).
E2,3a;T1a;C (2227)
- Bradley, R. A. and Terry, M. E. [1953], Statistical methods for sensory difference tests of food quality. Va. Agri. Expt. Sta., Blacksburg, Va., BI-Annual Report No. 6 (Mimeo.).
E2,3a;T1a;C (2228)
- Bradley, R. A., Walpole, R. E., and Kramer, C. Y. [1960], Intra- and inter-block analysis for factorials in incomplete block designs. Biometrics 16:555-581.
E3a;T2a (2229)
- Brenna, L. S. [1958], Factorial treatments in lattice designs. Ph. D. Thesis, Virginia Polytechnic Inst.
E3a;T2a (2230)
- Brenna, L. S. and Kramer, C. Y. [1959], Factorial treatment combinations in lattices (abstract). 15:633-634.
E3a;T2a (2231)
- Brenna, L. S. and Kramer, C. Y. [1961], Factorial treatments in rectangular lattice designs. JASA 56:368-378.
E3ac;T2ac (2232)
- Brougham, R. W. [1955], A study in rate of pasture growth. Australian J. Agri. Res. 6:804-812.
E5e (2233)
- Brown, J. W. [1966], Enumeration of latin squares and isomorphism detection in finite planes. Ph. D. Thesis, Univ. California, Los Angeles.
E7,12,13c (2234)
- Brown, W. A. and Krane, S. A. [1963], Design and analysis of entomological field experiments. Proc. Eight Conf. Design Expt. Army Res. Dev. Testing. pp. 99-118.
E5a;C (2235)

- Brownlee, K. A. [1957], The principles of experimental design. IQC 13(8):12-20.
E1,2,6,7,12ae;
T2ae;C (2236)
- Bruck, R. H. [1951], Finite nets, I. Numerical invariants. Canadian J. Math.
3:94-107. E7,12c (2237)
- Bruck, R. H. [1963], Finite nets II. Uniqueness and imbedding. Pacific J. Math.
13:421-457. E3,7,12c (2238)
- Bruck, R. H. [1963], What is a loop? Studies in Modern Algebra, pp. 59-99.
E2,3,7,13c (2239)
- Brunk, M. E. [1955], Sample surveys and experimental designs (abstract). Econo-
metrica 23:346. E8a (2240)
- Brunk, M. E. and Federer, W. T. [1953], How marketing problems of the apple
industry were attacked and the research results applied. Biometrics Unit Mimeo.
Ser. BU-40-M. Cornell Univ. E7,8a;T3,7c (2241)
- Brunk, M. E. and Federer, W. T. [1953], Experimental designs and probability sampling
in marketing research. JASA 48:440-452. E7a;T7a;A13 (2242)
- Bruno, O. P. [1959], Effects of ballistics and meteorological variables on accuracy
of artillery fire. Proc. Fourth Conf. Design Expt. Army Res. Dev. Testing.
pp. 127-135. E7a (2243)
- Bryant, E. C. [1955], An analysis of some two-way stratifications. Ph. D. Thesis,
Iowa State Univ. E2a;A10 (2244)
- Sucher, B. [1957], The recovery of intervariety information (abstract). AMS 28:530.
E2,3a (2245)
- Bucher, B. D. [1957], The recovery of intervariety information in incomplete block
designs. Ph. D. Thesis, Princeton Univ. E2,3a (2246)
- Bucher, B. [1957], The recovery of intervariety information (abstract). Biometrics
13:412. E2,3a (2247)
- Burghausen, R. [1963], Die Bedeutung der Vegetationsbeobachtungen in Kartoffelver-
suchen. European Potato J. 6:168-177. E2ae;A9;C (2248)
- Burton, G. W. and Fortson, J. C. [1965], Lattice-square designs increase precision
of pearl millet forage yield trials. Crop Sci. 5:595. E11,14a (2249)
- Bush, H. L. and Oldemeyer, R. K. [1961], Comparison of statistical designs for a
large number of entries of sugar beet strains. J. Amer. Soc. Sugar Beet Tech.
11:306-308. E3,5a (2250)

- Bush, K. A. [1950], Orthogonal arrays. Ph. D. Thesis, Univ. N. Carolina.
E2,3c (2251)
- Bush, K. A. [1952], Orthogonal arrays of index unity. AMS 23:426-434.
E7,12c (2252)
- Bush, K. A. [1952], A generalization of a theorem due to MacNeish (note). AMS
23:293-295. E7,12c (2253)
- Bush, K. A. [1960], Euler squares. Contributions to Probability and Statistics
pp. 150-152. E7,12c (2254)
- Butcher, J. C. [1956], Treatment variances for experimental designs with serially
correlated observations. Biometrika 43:208-212. E5a (2255)

- Cady, F. B. and Mason, D. D. [1961], Statistical analysis of a short-term crop rotation (abstract). Agron. Abstracts p. 67. E5.8a (2256)
- Cady, F. B. and Mason, D. D. [1964], Comparison of fertility treatments in a crop rotation experiment. Agron. J. 56:475-479. E5.9ace (2257)
- Calvin, L. D. [1953], Doubly balanced incomplete block designs for experiments in which the treatment effects are correlated. Ph. D. Thesis, Univ. N. Carolina. E.4,5ac (2258)
- Calvin, L. D. [1954], Doubly balanced incomplete block designs for experiments in which the treatment effects are correlated. Biometrics 10:61-88. E4,5ace (2259)
- Cameron, J. M. [1965], Calibration designs (abstract). Technometrics 7:269. E4c;T6c (2260)
- Carlitz, L. [1953], Congruences connected with three-line Latin rectangles. Proc. Amer. Math. Soc. 4:9-11. E7c (2261)
- Carmer, S. G. [1965], Computer programs for the construction of experimental layouts. Agron. J. 57:312-313. E3,11c;A15 (2262)
- Cassady, J. C. [1962], Individual degrees of freedom for non-additivity in two- and higher-way designs. M. S. Thesis, Cornell Univ. (also Biometrics Unit Mimeo. Ser. BU-136-M, Cornell Univ.). E2a;T2a;A4 (2263)
- Castellano, V. [1963], Sur l'emploi des méthodes d'élimination et d'autres procédés discutables dans l'élaboration probabiliste des données expérimentales. Colloques Internationaux de Centre National de la Recherche Scientifique No. 110, Le Plan d'Experiences pp. 165-179. E7,12ae (2264)
- Chacko, V. J. [1951], Generalized incomplete block designs (abstract). Proc. Thirty-Eighth Indian Sci. Congress, Part III, p. 10. E4ac (2265)
- Chacko, V. J. [1966], Designs for forestry spacing and thinning experiments. International Advisory Group of Forest Statisticians, Second Conf. Institutionen För Skoglig Matematisk Statistik pp. 23-35. E5ac;C (2266)
- Chakrabarti, M. C. [1950], A note on balanced incomplete block designs. Bull. Calcutta Math. Soc. 42:14-16. E2c (2267)
- Chakrabarti, M. C. [1963], On the C matrix in design of experiments. JISA 1:8-23. E14 (2268)
- Chakrabarti, M. C. [1963], Query. JISA 1:50-52. E6a;A7 (2269)
- Chakrabarti, M. C. [1963], Solution of problem 7. JISA 1:180. E2c (2270)

- Chakrabarti, M. C. [1963], Query. JISA 1:230-234. E2c (2271)
- Chakrabarti, M. C. [1963], Solution to problem 14. JISA 1:237-238. E2a (2272)
- Chakrabarti, M. C. [1964], Query 2. JISA 2:184-186. E2c (2273)
- Chakrabarti, M. C. [1964], Solution of problem 25. JISA 2:191. E2c (2274)
- Chakrabarti, M. C. [1965], Solution to problem 39. JISA 3:61. E2c (2275)
- Chakravarti, I. M. [1958], Simplified proofs of some results in the theory of optimal designs. Sankhyā 19:189-194. E14 (2276)
- Chakravarti, I. M. [1963], Orthogonal and partially balanced arrays and their application in design of experiments. Metrika 7:231-243. E7c;T3,7c (2277)
- Chakravarti, I. M. [1964], Combinatorial problems in design of experiments. Aerospace Res. Lab. ARL 64-102, U. S. Air Force, pp. 1-23. E2,3,7c (2278)
- Chakravarti, I. M. [1965], Difference sets, orthogonal mappings and orthogonal Latin squares (abstract). AMS 36:353-354. E7c (2279)
- Chakravarti, I. M. [1966], On the construction of difference sets and their use in the search for orthogonal Latin squares and error correcting codes (with discussion). Bull. ISI 41:957-958 (also Inst. Stat. Mimeo No. 427, Univ. N. Carolina.). E7,12,13c (2280)
- Chakravarty, M. C. [1964], Design of experiments. Res. Training School Publication No. SM 64-3, Indian Stat. Inst. E;T (2281)
- Chan, M. W. [1964], A multivariate analysis of an experimental design involving a complete set of Latin squares. Psychometrika 29:233-240. E8,12,13a (2282)
- Chand, U. [1953], Experiments on tree crops (abstract). Biometrics 9:429-430. E2a;T2a;C (2283)
- Chand, U. and Abraham, T. P. [1957], Some considerations in the planning and analysis of fertilizer experiments in cultivators' fields. JISAS 9:101-134. A13;C (2284)
- Chandrasekhararao, K. [1964], On further constructions of cubic designs. Calcutta Stat. Assoc. Bull. 13:71-75. E3c (2285)
- Chang, L. C. [1959], The uniqueness and nonuniqueness of the triangular association schemes. Sci. Record New Series 3:604-613. E3c (2286)

- Chang, L. C. [1960], Association schemes of partially balanced designs with parameters $v=28$, $n_1=12$, $n_2=15$, $p_{11}^0=4$. *Sci. Record, New Series* 4:12-18.
E3c (2287)
- Chang, L.-C. [1961], On the estimator of relative efficiency of the randomized complete block design (in Chinese). *Taiwan Tahsueh Nunghsuehyuan Yenchiu Paokao/Mem. College Agri. Nat. Taiwan Univ.* 6(1):31-42. E2,14a (2288)
- Chang, L.-C. and Liu, W. R. [1964], Incomplete block designs with square parameters for which $k \leq 10$ and $r \leq 10$. *Scientia Sinica* 13:1493-1495.
E3c (2289)
- Chassan, J. B. [1964], On the analysis of simple cross-overs with unequal numbers of replicates. *Biometrics* 20:206-208.
E7a (2290)
- Chew, V. [1958], Basic experimental designs. Experimental Designs in Industry. pp. 3-57.
E1,2,6,7,12ae;
T2a;B (2291)
- Chilton, N. W., Fertig, J. W., and Kutscher, A. H. [1961], Studies in the design and analysis of dental experiments. III. Sequential analysis (double dichotomy). *J. Dental Res.* 40:331-340.
E5ac;S2 (2292)
- Chilton, N. W., Fertig, J. W. and Varma, A. A. O. [1964], Studies in the design and analysis of dental experiments. 10. Sequential analysis (t-test). *J. Oral Therapeutics Pharmacology* 1:175-182.
E7ae;S2 (2293)
- Chopra, A. S. [1960], On circular designs (abstract). *JISAS* 12:211-212.
E3a (2294)
- Chopra, A. S. [1961], Circular designs and designs developable from initial blocks (abstract). *Proc. Forty-Eighth Indian Sci. Congress, Part III*, p. 25.
E3c (2295)
- Chopra, A. S. [1964], Circular designs and designs developable from initial blocks. Ph. D. Thesis, I.A.R.S., New Delhi.
E3c (2296)
- Chopra, A. S. and Das, M. N. [1962], A note on fractional replicate of balanced incomplete block designs. *JISAS* 14:145-150.
E3c (2297)
- Chopra, A. S. and Das, M. N. [1964], On circular design with 3 and 4 plot blocks. *JISAS* 16:212-237.
E3ac (2298)
- Chowla, S., Erdős, P., Straus, E. G. [1960], On the maximal number of pairwise orthogonal Latin squares. *Canadian J. Math.* 12:204-208. E7,12,13c (2299)
- Chowla, S. and Ryser, H. J. [1950], Combinatorial problems. *Canadian J. Math.* 2:93-99.
E2c (2300)

- Christidis, B. G. [1955], Rotation experiments with cotton. *Empire J. Expt. Agri.* 23:49-54. E5,8a (2301)
- Ciminera, J. L. and Wolfe, E. K. [1953], An example of the use of extended cross-over designs in the comparison of NPH insulin mixtures. *Biometrics* 9:431-446. 9 (2302)
- Clarke, G. M. [1955], A design for testing several treatments under controlled environmental conditions. *Appl. Stat.* 4:199-206. E12ac (2303)
- Clarke, G. M. [1963], A second set of treatments in a Youden square design. *Biometrics* 19:98-104. E12,13ace (2304)
- Clarke, G. M. [1967], Four-way balanced designs based on Youden squares with 5,6, or 7 treatments. *Biometrics* 23:803-812. E12c (2305)
- Clarke, P. M. [1951], An analysis of rectangular lattices with unequal block sizes, using inter-block information. *Biometrics* 7:287-294. E3,4a (2306)
- Clarke, P. M. [1955], A note on the estimation of error in slope-ratio assays arranged in randomized blocks. *Analyst* 80:396-397. E2a;T8a (2307)
- Clarke, R. T. and Smith, C. W. R. [1964], The residual effects of potassium fertilizers on yields of arable crops: preliminary results of five rotation experiments. *Expt. Husbandry* No. 12, pp. 15-23. E5,8a (2308)
- Clatworthy, W. H. [1952], Partially balanced incomplete block designs with two associate classes and three replications. Ph. D. Thesis, Univ. N. Carolina (also *Inst. Stat. Mimeo Ser. No. 54*, Univ. N. Carolina). E3ac (2309)
- Clatworthy, W. H. [1954], A geometrical configuration which is a partially balanced incomplete block design. *Proc. Amer. Math. Soc.* 5:47-55. E3c (2310)
- Clatworthy, W. H. [1955], Partially balanced incomplete block designs with two associate classes and two treatments per block. *J. Res. NBS* 54:177-190. E3c (2311)
- Clatworthy, W. H. [1956], Contributions on partially balanced incomplete block designs with two associate classes. NBS Appl. Math. Ser. 47 (U.S. Government Printing Office, Washington 25, D. C.) E3ac (2312)
- Clatworthy, W. H. [1965], Some new families of partially balanced designs of the Latin square type (abstract). *AMS* 36:1080-1081. E7c (2313)
- Clatworthy, W. H. [1967], On John's cyclic incomplete block designs. *JRSSB* 29: 243-247. E2,3c (2314)

- Clatworthy, W. H. [1967], Some new families of partially balanced designs of the Latin square type and related designs. *Technometrics* 9:229-244 (abstract 8:294). E2,7c (2314)
- Clen, M. A. and Federer, W. T. [1950], Random arrangements for lattice designs. *Agr. Expt. Sta. Special Report No. 5*, Iowa State Univ. E2,3,11ac (2316)
- Cléroux, R. [1965], On the F-test in the intrablock analysis of two associate partially balanced incomplete block designs (Preliminary report) (abstract). *AMS* 36:1611. E3a (2317)
- Cléroux, R. [1966], Sur la robustesse du Test F dans l'analyse intrabloc du schéma à blocs incomplets partiellement équilibré et à deux classes associées. Ph. D. Thesis, Univ. Montreal. E3a (2318)
- Clysters, H., Grossmann, B., Gilbert, P., and Lenger, A. [1962], Etude biométrique des effets secondaires de quelques fongicides sur pommier au cours de trois années consécutives. *Biométrie-Praximétrie* 3:194-218. E5e (2319)
- Cochran, W. G. [1954], Query 106. *Statistics* 10:155-157. E7a (2320)
- Cochran, W. G. [1960], The design of experiments. *Operations Research and Systems Engineering*, pp. 508-553. E2,3,7a;72a:C (2321)
- Cole, J. W. L. and Grizzle, J. E. [1965], Applications of multivariate analysis of variance to repeated measurements experiments (abstract). *Biometrics* 21:1022-1023. E5ac:A7 (2322)
- Cole, J. W. L. and Grizzle, J. E. [1966], Applications of multivariate analysis of variance to repeated measurements experiments. *Biometrics* 22:819-828. E5ac:A7 (2323)
- Cole, L. C. [1959], On simplified computations. *Amer. Stat.* 13(1):0. E1,2a:A7 (2324)
- Collier, R. O. [1956], Experimental designs in which the observations are assumed to be correlated. Ph. D. Thesis, Univ. Minnesota. E2,5,6a (2325)
- Collier, R. O. [1956], Analysis of variance of correlated observations. *Psychometrika* 23:223-236. E5,12a (2326)
- Collier, R. O. and Baker, F. B. [1963], The randomization distribution of F-ratios for the split-plot design - an empirical investigation. *Biometrika* 50:431-438. E5,12a:A5 (2327)
- Collier, R. O. and Baker, F. B. [1966], Some Monte Carlo results on the power of the F-test under permutation in the simple randomized block design. *Biometrika* 53:199-203. E2a:A5 (2328)

- Conagin, A. [1954]. Látices retangulares. (Rectangular lattices.) *Bragantia* 13: 187-197. E2e:2329
- Conagin, A. [1954]. Análise da covariância em um látice retangular simples. (Covariance analysis in rectangular lattices.) *Bragantia* 14:35-59. E2ae:A2 (2330)
- Conagin, A. [1955]. Transformações dos dados experimentais. (Transformations of experimental data.) *Bragantia* 14:141-147. E2e:A9 (2331)
- Connor, W. S. [1951]. On the structure of incomplete block designs and the impossibility of certain unsymmetrical cases. Ph. D. Thesis, Univ. N. Carolina. E2,3ac (2332)
- Connor, W. S. [1951]. On the structure of incomplete block designs. *Inst. Stat. Mimeo. Ser. No. 44*, Univ. N. Carolina. E2,3c (2333)
- Connor, W. S. [1951]. The structure of balanced incomplete block designs, and the impossibility of certain unsymmetrical cases (abstract). *AMS* 22:312-313. E2c (2334)
- Connor, W. S. [1952]. On the structure of balanced incomplete block designs. *AMS* 23:57-71 (correction, 24:155). E2c (2335)
- Connor, W. S. [1952]. Some relations among the blocks of symmetrical group divisible designs. *AMS* 23:602-609. E3c (2336)
- Connor, W. S. [1953]. The correspondence between two classes of balanced incomplete block designs (abstract). *AMS* 24:490. E2c (2337)
- Connor, W. S. [1954]. New experimental designs for paired observations (summary of paper). *ASA* 49:350. E2a:T11a (2338)
- Connor, W. S. [1958]. Experiences with incomplete block designs. Experimental Designs in Industry pp. 193-206. E2,3ace (2339)
- Connor, W. S. [1958]. The uniqueness of the triangular association scheme. *AMS* 29:262-266. E3c (2340)
- Connor, W. S. [1960]. Precision in interlaboratory tests. *Ind. Eng. Chemistry* 52(10): 77A-78A & 80A. E7c:A14 (2341)
- Connor, W. S. [1960]. Factorial experiments in incomplete block designs. *Ind. Eng. Chemistry* 52(12):83A-84A. E4ace;T2ace (2342)
- Connor, W. S. and Clatworthy, W. H. [1953]. Necessary conditions for the existence of partially balanced incomplete block designs with two associate classes (abstract). *Biometrics* 9:261. E3c (2343)

- Connor, W. S. and Clatworthy, W. H. [1953], Necessary conditions for the existence of partially balanced incomplete block designs with two associate classes (abstract). AMS 24:497. E1c (2344)
- Connor, W. S. and Clatworthy, W. H. [1954], Some theorems for partially balanced designs. AMS 25:100-112. E3c (2345)
- Connor, W. S. and Rupp, M. K. [1952], The complete solutions of the balanced incomplete block designs with ten or fewer replications. Nat. Bur. Standards NBS Report 1696. E2c (2346)
- Connor, W. S. and Savage, I. R. [1952], Question 34: Randomized blocks versus balanced incomplete blocks. Amer. Stat. 6(4):28. E2a (2347)
- Connor, W. S. and Youden, W. J. [1952], Analysis of chain block designs (Preliminary report) (abstract). AMS 23:136. E4a (2348)
- Cox, D. [1957], The analysis of covariance as a missing plot technique. Biometrics 13:327-405. E6,10a:A7 (2349)
- Cornish, E. A. [1956], The recovery of interblock information in quasi-factorial designs with incomplete data. 1. Balanced incomplete blocks. C.S.I.R.O. Div. Math. Stat. Tech. Paper No. 3, pp. 1-21. E6,11ac (2350)
- Corsten, L. C. A. [1957], Een algemene methode tot leemtevuiling. (General missing plot technique.) Stat. Neerlandica 11:141-151. E6,10a (2351)
- Corsten, L. C. A. [1958], Vectors, a tool in statistical regression theory. Mededelingen Landbouwhogeschool 58(1):1-92. E2,3,6,7ac:A7,C (2352)
- Corsten, L. C. A. [1958], General missing plot technique. (In Dutch with Eng. summary.) Wageningen Rijksinst. v. Rassenonderz. van Landbouwgewassen. Meded. 34:141-151. E6 (2353)
- Corsten, L. C. A. [1958], Incomplete block designs in which the number of replicates is not the same for all treatments. Inst. Stat. Mimeo. Ser. No. 226, Univ. N. Carolina. E4ac (2354)
- Corsten, L. C. A. [1958], Note on triangular partially balanced incomplete block designs. Inst. Stat. Mimeo. Ser. No. 242, Univ. N. Carolina. E3c (2355)
- Corsten, L. C. A. [1959], On triangular partially balanced incomplete block designs (abstract). Biometrics 15:635-636. E3ac (2356)
- Corsten, L. C. A. [1960], Proper spaces related to triangular partially balanced incomplete block designs. AMS 31:498-501. E3c (2357)

- Coxson, L. C. A. [1962], Balanced block designs with two different numbers of replicates. *Biometrics* 18:499-519. E4ace (2358)
- Costa Pires, A. J. and Baptista, J. G. [1955], Análise do delineamento em blocos casualizados quando existem dois e três talhões perdidos. *Melhoramento* 8: 61-77. E2.6ae (2359)
- Coury, T. et al [1953], Estudos sobre o "vermelhão" do algodoeiro (III). *Anais Escola Superior Agri. "Luiz de Queiroz"* 10:83-94. E2ae (2360)
- Coury, T., Torres, A. P., and Ranzani, G. [1955-1956], Experiências de adubação mineral e orgânica com Capim Kikuyu (Pennisetum clandestinum Hochst.) *Anais Escola Superior Agri. "Luiz de Queiroz"* 12-13:19-35. E2ae (2361)
- Cox, C. P. [1956], Latin-square designs with individual gradients in one direction. *Nature* 177:1092. E7a (2362)
- Cox, C. P. [1959], The analysis of Latin square designs with individual curvatures in one direction. *JRSSB* 20:193-204. E7ae (2362)
- Cox, C. P. [1958], Experiments with two treatments per experimental unit in the presence of an individual covariate. *Biometrics* 14:499-512. E7,8ae (2364)
- Cox, C. P. [1961], A practical application of a theoretically inefficient design. *Biometrics* 17:646-649. E7ac;T2ac (2365)
- Cox, C. P. [1962], The relation between covariance and individual curvature analyses of experiments with background trends. *Biometrics* 18:13-21. E7a;A7.14 (2366)
- Cox, D. R. [1951], Some systematic experimental designs. *Biometrika* 38:312-323. E5ac (2367)
- Cox, D. R. [1952], Some recent work on systematic experimental designs. *JRSSB* 14:211-219. E5ace (2368)
- Cox, D. R. [1956], A note on weighted randomization. *AMS* 27:1144-1151. E5,7a;AS;C (2369)
- Cox, D. R. [1957], The use of a concomitant variable in selecting an experimental design. *Biometrika* 44:150-158 (correction 44:534). E5ac;A7 (2370)
- Cox, D. R. [1958], The interpretation of the effects of non-additivity in the Latin square. *Biometrika* 45:69-73. E7a;A4 (2371)
- Cox, G. M. [1951], The value and usefulness of statistics in research. Committee Expt. Design Agri. Res. Administration Mimeo, U.S. Dept. Agri. pp. 1-11. E2a;S1 (2372)

- Crews, J. W., Jones, G. I., and Mason, D. D. [1964]. Field plot technique studies with flue-cured tobacco. II. Experimental designs and replications. Agron. J. 56:435-438. E3,14a:A14 (2373)
- Crouse, C. F. [1967]. A class of distribution-free analysis of variance tests. S. African Stat. J. 1:75-90. E1,2a:A12 (2374)
- Cunningham, E. P. and Henderson, C. R. [1965]. Analytical techniques for incomplete block experiments. Biometrics 22:829-842. E2,3ae (2375)
- Cureton, E. E. [1957]. Further note on the two-group t test. Amer. Stat. 11(4):21. E1a (2376)
- Curnow, R. N. [1957]. Heterogeneous error variances in split-plot experiments. Biometrika 44:378-382. E5,12a:A11 (2377)
- Curnow, R. N. [1959]. The analysis of a two phase experiment. Biometrics 15:60-73. E12ae (2378)
- Curnow, R. N. and Sharpe, E. [1962]. The analysis of covariance as a means of reducing standard errors in certain experiments involving sequences of treatments. Biometrics 18:412-413. E7,8oe:A7 (2379)

- Dagnelle, P. [1959], Le carré latin magique: Technique d'analyse de la variance. Rev. l'Agriculture 12(3):1-12. E2ace (2380)
- Dai, Z. D. and Feng, X. N. [1964], Notes on finite geometries and the construction of PBD designs. IV. Some "Anzahl" Theorems in orthogonal geometry over finite fields of characteristic not 2. Scientia Sinica 13:2001-2004. E3c (2381)
- Dalebroux, M. [1966], Blocs randomisés et interactions. Biométrie-Praximétrie 1(2):35-44. E5a (2382)
- Dalebroux, M. [1951], Exemple d'analyse d'un plan factoriel $3^2 \times 2$ en parcelles découpées (split-plot). Biométrie-Praximétrie 2:121-129. E12ae;T2ae (2383)
- Dall'Aglio, G. [1963], Blocs incomplets équilibrés orthogonaux (discussion). Colloques Internationaux du Centre de la Recherche Scientifique, No. 110 Le Plan d'Expériences, pp. 195-214. E7ac (2384)
- Danford, M. B., Hughes, H. M., and McNee, R. C. [1963], On the analysis of repeated-measurements experiments. Biometrics 16:547-555 (abstract 15:145). E5a;A7 (2385)
- Daniel, C. and Wilcoxon, F. [1965], Factorial 2^{F-G} plans robust against linear and quadratic trends. Technometrics 8:259-278. E5ace;T3ace (2386)
- Dar, S. N. [1962], On the comparison of the sensitivities of experiments. JRSSB 24:447-453. E14 (2387)
- Dar, S. N. [1964], Comparison of the sensitivities of dependent experiments. Biometrics 20:209-212. E14 (2388)
- Darby, L. A. and Gilbert, N. [1958], The Trojan square. Euphytica 7:183-188. E9ace (2389)
- Darroch, J. G. [1950], Statistical methods in the selection and evaluation of sugar cane. Proc. Tenth Congress Int. Soc. Sugar Cane Tech. pp. 836-841. E4a (2390)
- Das, B. [1967], Tactical configurations and graph theory. Calcutta Stat. Assoc. Bull. 16:136-138. E2c (2391)
- Das, M. N. [1954], Missing plots and a randomised block design with balanced incompleteness. JISAS 5:56-76. E2,6ae (2392)
- Das, M. N. [1954], On parametric relations in a balanced incomplete block design. JISAS 6:147-152. E2c (2393)
- Das, M. N. [1955], Missing plots in partially balanced and other incomplete block designs. JISAS 7:111-126. E3,6ae (2394)

- Das, M. N. [1955], Latin Squares with several missing plots. JISAS 7:46-56.
E7,10ae (2395)
- Das, M. N. [1956], Analysis of covariance in incomplete block designs with or without missing plots. JISAS 8:76-83.
E3,6ae:A7 (2396)
- Das, M. N. [1957], A generalised balanced design. JISAS 9:18-30.
E4ace (2397)
- Das, M. N. [1957], Bio-assays with non-orthogonal data. JISAS 9:67-81.
E4ace:T8a;A10 (2398)
- Das, M. N. [1958], On reinforced incomplete block designs (abstract). Proc. Forty-Fifth Indian Sci. Congress, Part III, p. 19.
E4c (2399)
- Das, M. N. [1958], A balanced design with unequal replications within block (abstract). JISAS 10:160.
E2,4ac (2400)
- Das, M. N. [1958], On reinforced incomplete block designs. JISAS 10:73-77.
E4ac (2401)
- Das, M. N. [1959], Circular designs (abstract): Proc. Forty-Sixth Indian Sci. Congress, part III, p. 18-19.
E3ac (2402)
- Das, M. N. [1959], A new type of design (abstract). JISAS 11:195.
E4c (2403)
- Das, M. N. [1959], Augmented fields and factorial designs in general (abstract). JISAS 12:152.
E7c;T2c (2404)
- Das, M. N. [1960], Circular designs. JISAS 12:45-56.
E3ac (2405)
- Das, M. N. [1960], A class of P.B.I.B. designs (abstract). JISAS 12:151.
E3c (2406)
- Das, M. N. and Bhargava, P. N. [1958], On problems of analysis of experiments having missing or mixed up plots (abstract). Proc. Forty-Fifth Indian Sci. Congress, part III, p. 19.
E6a (2407)
- Das, M. N. and Bhargava, P. N. [1958], On missing and mixed up plot techniques. JISAS 10:78-82.
E2,3,6,7,10a;A7 (2408)
- Das, M. N. and Bhargava, P. N. [1960], Applications of the type of designs based on constant frequency differences (abstract). JISAS 12:210. E4c (2409)
- Das, M. N. and Kulkarni, G. A. [1959], On the accuracy of current approximate variances of treatment differences in randomized block designs with missing observations (abstract). Proc. Forty-Sixth Indian Sci. Congress, part III, p. 18.
E2,6a (2410)

- Das, M. N. and Kulkarni, G. A. [1958]. On the accuracy of current approximate variances of treatment differences in randomised block designs with missing observations. *JISAS* 19:83-89. E2.5a (2411)
- Das, M. N. and Kulkarni, G. A. [1960]. A series of designs for parallel line bio-assays with two or more replications (abstract). *JISAS* 12:209-210. E3a;T8a (2412)
- Das, M. N. and Kulkarni, G. A. [1966]. Incomplete block designs for bio-assays. *Biometrics* 22:726-729. E3ace;T8a (2413)
- Das, M. N. and Kulshreshtna, A. C. [1966]. Construction of balanced incomplete block designs by using confounded factorial designs (abstract). *JISAS* 18(2): 104-105. E2c (2414)
- Das, M. N. and Rao, S. V. S. P. [1966]. Balanced n-ary designs and their alternative uses (abstract). *JISAS* 18(2):105 E5c (2415)
- David, H. A. [1962]. Special problems in testing hypotheses. Contributions to Order Statistics, Chapter 7A, pp. 94-128. E1.2ae;A11;B (2416)
- David, H. A. [1963]. The Method of Paired Comparisons. No. 12 Griffins Statistical Monographs and Courses. Chas. Griffin & Co. Ltd., London, and Hafner Publishing Co., New York. E2.3ac;T11ac,A2;B (2417)
- David, H. A. [1963]. The structure of cyclic paired-comparison designs. *J. Australian Math. Soc.* 3:117-127. E2.3c;T11c (2418)
- David, H. A. [1965]. Enumeration of cyclic paired-comparison designs. *Amer. Math. Monthly* 72:241-248. E3c;T11c (2419)
- David, H. A. [1967]. Resolvable cyclic designs. *Sankhyā A* 29:191-192. E3ac (2420)
- David, H. A. and Wolock, F. W. [1965]. Cyclic designs. *Proc. Tenth Conf. Design Expt. Army Res. Dev. Testing*. pp. 283-297. E4ac;T11ac (2421)
- David, H. A. and Wolock, F. W. [1965]. Cyclic designs. *AMS* 36:1526-1534. E3c (2422)
- Day, J. B. and Del Priore, F. R. [1953]. The statistics in a gear-test program. *IQC* 9(5):16-20. E7.10ae (2423)
- de Almeida Leme, H. [1955-1956]. Contribuição para o estudo da influência da profundidade de trabalho do arado na produção agrícola. *Anais Escola Superior Agri. "Luiz de Queiroz"* 12-13:95-111. E1ae (2424)
- DeGroot, M. H. [1966]. Optimal allocation of observations. *Ann. Inst. Stat. Math.* 18:13-28. E14;T1c (2425)

- de la Puente, J. [1962], Analysis of a randomized complete block design in the event that data is missing. *Estadística* 20:307-314. E6ae (2426)
- Delate, E. J. and Walz, R. N. [1958], Evaluating alternative ingredients in the manufacture of a product. *Ind. Eng. Chemistry* 50:309-312. E3ace (2427)
- DeLury, D. B. [1954], On the design of experiments. *IQC* 10(4):24-29. E1a;T2a;C (2429)
- de Oliveira, A. J. [1958], Analysis of a group of experiments on oats. II. Incomplete data. *Agronomia Lusitana* 20:155-176. E6,10a;A13 (2429)
- d'Herbemont, G. [1960], Quelques remarques à propos d'un plan d'expérience. *Rev. Stat. Appl.* 8(2):41-52. E12ae (2430)
- d'Herbemont, G. [1962], Considérations géométriques sur les plans d'expérimentation. *Bull. ISI* 39(3):145-154. E14;A14 (2430)
- Dick, J. D. and Whittle, P. [1951], Contributions to the statistical design of identical twin experiments. *New Zealand J. Sci. Tech.* B 33:145-172. E5ac;A10 (2432)
- Di Paola, J. W. [1966], Block designs and graph theory. *J. Combinatorial Theory* 1:132-148. E2c (2433)
- Di Paola, J. W. [1966], On a restricted class of block design games. *Canadian J. Math.* 18:225-236. E2c (2434)
- Divers, C. K. [1961], Statistical aids to visual inspection. *ASQC Ann. Conv. Trans.* 15:525-531. E2ae;A12 (2435)
- Djokoto, R. K. and Stephens, D. [1961], Thirty long-term fertilizer experiments under continuous cropping in Ghana. I. Crop yields and responses to fertilizers and manures. *Empire J. Expt. Agri.* 29:181-195. E5a;T2a (2436)
- Djokoto, R. K. and Stephens, D. [1961], Thirty long-term fertilizer experiments under continuous cropping in Ghana. II. Soil studies in relation to the effects of fertilizers and manures on crop yields. *Empire J. Expt. Agri.* 29:245-258. E5a;T2a (2437)
- Doehlert, D. H. [1965], Balanced sets of balanced incomplete block designs of block size three. *Technometrics* 7:561-577. E2c (2438)
- Doksum, K. [1967], Robust procedures for some linear models with one observation per cell. *AMS* 38:878-883. E2a (2439)

- Dominick, B. A. [1952], Methods of research in marketing. An illustration of the use of the latin square in measuring the effectiveness of retail merchandising practices. Dept. Agri. Economics Paper No. 2, Cornell Univ.
E7e (2440)
- Dossett, W. F. [1957], A further note on the t test. Amer. Stat. 11(4):21.
E1,2a (2441)
- Douglas, A. W. [1961], Some multiple comparison tests for two-way classifications. M. S. Thesis, Cornell Univ.
E2a;A12 (2442)
- Douglas, A. W. [1964], Tests of homogeneity of variance for the latin square and a class of balanced incomplete block designs. Ph. D. Thesis, Cornell Univ.
E2.7a;A11 (2443)
- Draper, N. R. and Guttman, I. [1966], Unequal group variances in the fixed-effects one-way analysis of variance: a Bayesian sidelight. Biometrika 53:27-35.
E1a;A11 (2444)
- Draper, N. R. and Stoneman, D. M. [1966], Factor changes and linear trends in eight-run two-level factorial designs. Dept. Stat. Tech. Report No. 82, Univ. Wisconsin pp. 1-14.
E5c;T3c (2445)
- Dubetz, S., Russell, G. C., and Hill, K. W. [1955], Crop sequence studies on irrigated land in southern Alberta. Canadian J. Agri. Sci. 35:564-567.
E5.8a (2446)
- Dudeney, H. E. and Bose, R. C. [1965], Magic squares. Encyclopaedia Britannica 14:573-575.
E12c (2447)
- Dugue, D. [1964], Un mélange d'algebre et de statistique: le plan d'experiences (with discussion). Rev. Stat. Appl. 12(1):7-15.
E12ac (2448)
- Dulmage, A. L., Johnson, D., and Mendelsohn, N. S. [1959], Orthogonal latin squares. Canadian Math. Bull. 2:211-216.
E7,12,13c (2449)
- Duncan, D. B. and Waizer, M. [1966], Multiple regression combining within- and between-plot information. Biometrics 22:26-43.
E12a (2450)
- Durbin, J. [1951], Incomplete blocks in ranking experiments. British J. Psychology, Stat. Sec. 4:85-90.
E2a;A12 (2451)
- Dutton, A. M. [1951], Statistical analysis of long-term agricultural experiments. Ph. D. Thesis, Iowa State Univ.
E5a (2452)
- Dutton, A. M. [1952], Statistical analysis of long-term agricultural experiments (abstract). Iowa State College J. Sci. 26:198-199.
E5a (2453)
- Dwyer, P. S. [1958], Computational formulas for t^2 . Amer. Stat. 12(3):18-19.
E1,2a (2454)

Dykstra, O. [1956], Incomplete block rank analysis: 2^{p-q} fractional factorials using a method of paired comparisons (abstract). AMS 27:871. E2a;T3,11a;A12 (2455)

Dykstra, O. [1956], A note on the rank analysis of incomplete block designs - Applications beyond the scope of existing tables. Biometrics 12:301-306. E3a;A12 (2456)

Dykstra, O. [1950], Rank analysis of incomplete block designs: A method of paired comparisons employing unequal repetitions on pairs. Biometrics 16:176-188. E2a;T11a;A12 (2457)

- Eaton, H. D., Gosslee, D. G., and Lucas, H. L. [1959], Effect of duration of experiment on experimental errors in calf nutrition growth studies. J. Dairy Sci. 42:1398-1400. E5a;A14 (2458)
- Ebner, A. R. [1954], Cumulant component estimation in the balanced one-way nested classification. M. S. Thesis, Cornell Univ. E1a;A14 (2459)
- Ebner, A. R. and Federer, W. T. [1954], An incomplete block design in a nutrition experiment. Biometrics Unit Mimeo. Ser. BU-100-M, Cornell Univ. E3,6ac (2460)
- Edwards, A. L. [1950], Homogeneity of variance and the Latin square design. Psychological Bull. 47:118-129. E7ae;A11 (2461)
- Edwards, M. V. [1956], The design, layout and control of provenance experiments. Z. Forstgenetik Forstpflanzenzüchtung 5:169-180. E2a;A14;C (2462)
- Ehrenfeld, S. [1955], On the efficiency of experimental designs. AMS 26:247-255. E14 (2463)
- Ehrenfeld, S. [1956], Complete class theorems in experimental design. Proc. Third Berkeley Symp. Math. Stat. Prob. 1:57-67. E14;T10 (2464)
- Ehrenfeld, S. [1961], Some experimental design problems in attribute life testing. Stat. Eng. Group Tech. Report No. 15, Columbia Univ. E5a (2465)
- Eisenhart, C. [1951], On the statistical analysis of linked-block experiments (abstract). Biometrics 7:125. E4c (2466)
- Eisler, S. L. [1957], Determining the effectiveness of cutting oils in reducing machine tool wear. Proc. First Conf. Design Expt. Army Res. Dev. Testing. pp. 235-239. E12c (2467)
- Essner, R. M. [1958], The use of a special systematic design for surveillance testing. Proc. Second Conf. Design Expt. Army Res. Dev. Testing. pp. 103-109. E5a (2468)
- Elandt, R. [1957], O możliwościach stosowania testów nieparametrycznych w zagadnieniach doświadczalnictwa rolniczego. (The possibility of applying nonparametric tests to problems of agricultural experimentation.). Roczniki Nauk Rolniczych 75(A-2):161-197. E2a;A12 (2469)
- Elandt, R. C. [1962], Eliminacja dwukierunkowej zmienności glebowej za pomocą krzywych parabolicznych w układzie długich pasów. (Elimination of two-directional soil variability by the method of parabolic curves in long strip experiment.) Roczniki Nauk Rolniczych 87(A-1):117-134. E7ac (2470)
- Elandt, R. C. [1964], Applicability of the extended method of parabolic curves in the analysis of agricultural data. Sankhyā B 26:201-216. E2,5a;A7 (2471)

- Elandt-Johnson, R. C. [1967], Application of certain systematic designs in planning of factorial experiments (in Polish). *Roczniki Nauk Rolniczych* 94(A):665-678.
E5ac;T2a (2472)
- Elandt, R. C. and Andrew, G. M. [1964], Tables for application of the method of parabolic curves to a certain systematic arrangement. *Sankhyā B* 26:17-28.
E2,5ac;A7 (2473)
- Elliot, F. C., Darroch, J. G., and Wang, H. L. [1952], Uniformity trials with spring wheat. *Agron. J.* 44:524-528.
E2,14a;A14 (2474)

- Federer, W. T. [1950], The general theory of prime power lattice designs. IV. Analysis for p^4 treatments in blocks of p plots with four or more replicates. Cornell Univ. Agri. Expt. Sta. Memoir 299:1-29. E3ae (2475)
- Federer, W. T. [1950], The general theory of prime-power lattice designs V. The analysis for a 6×6 incomplete lattice square illustrated with an example. Biometrics 6:34-58. Ellace (2476)
- Federer, W. T. [1951], Evaluation of variance components from a group of experiments with multiple classifications. Iowa Agri. Expt. Sta. Res. Bull. 380:241-310. E2,6a;T9a;A13 (2477)
- Federer, W. T. [1951], Application of Rao's general method of analysis to a simple or double lattice design. Biometrics Unit Mimeo. Ser. BU-16-M, Cornell Univ. E3ae (2479)
- Federer, W. T. [1951], Application of Rao's general method of analysis to a cubic lattice design. Biometrics Unit Mimeo. Ser. BU-17-M, Cornell Univ. E3ae (2479)
- Federer, W. T. [1951], A note on error (b) in the split plot design. Biometrics Unit Mimeo. Ser. BU-19-M, Cornell Univ. E5,12a (2480)
- Federer, W. T. [1951], A note on degrees of freedom for the average effective error variance in two-dimensional one-restrictional lattices. Biometrics Unit Mimeo. Ser. BU-20-M, Cornell Univ. E2,3a (2481)
- Federer, W. T. [1952], Analysis for a 5×5 lattice square in 2 replicates and in 4 replicates. Biometrics Unit Mimeo. Ser. BU-27-M, Cornell Univ. Ellac (2482)
- Federer, W. T. [1953], Random arrangements for some three-dimensional lattice designs. Cornell Univ. Agri. Expt. Sta. Miscellaneous Bull. 19:1-178. E3c (2483)
- Federer, W. T. [1954], Principles of experimentation. Biometrics Unit. Mimeo. Ser. BU-72-M, Cornell Univ. E1,2,7ac;C (2484)
- Federer, W. T. [1954], Covariance analysis in a two-way classification with unequal numbers in the subclasses. Biometrics Unit Mimeo. Ser. BU-51-M, Cornell Univ. E2a;T2a;A7 (2485)
- Federer, W. T. [1954], A bivariate analysis for Snedecor's sugar beet example on covariance. Biometrics Unit Mimeo. Ser. BU-52-M, Cornell Univ. E2a;A7 (2486)
- Federer, W. T. [1955], Query 116. Biometrics 11:239. E7ae;A7 (2487)

- Federer, W. T. [1955], Covariance versus the method of fitting constants. Biometrics Unit Mimeo. Ser. BU-60-M, Cornell Univ. E7a (2488)
- Federer, W. T. [1956], Augmented (or hoonuiaku) designs. Hawaiian Planters' Record 55:191-208 (also Biometrics Unit Mimeo. Ser. BU-74-M, Cornell Univ.) E4ace (2489)
- Federer, W. T. [1956], Least squares estimates and sums of squares for a double change-over design. Biometrics Unit Mimeo. Ser. BU-70-M, Cornell Univ. E8a (2490)
- Federer, W. T. [1956], Analysis for a 4×4 balanced lattice square with an additional replicate. Biometrics Unit Mimeo. Ser. BU-79-M, Cornell Univ. Ellac (2491)
- Federer, W. T. [1957], Restrictions on the linear model. Biometrics Unit Mimeo. Ser. BU-83-M, Cornell Univ. E2a (2492)
- Federer, W. T. [1957], Covariance analyses for unbalanced two-way classifications (summary). JASA 52:369. E2a;T2a;A7,10 (2493)
- Federer, W. T. [1957], Variance and covariance analyses for unbalanced classifications. Biometrics 13:333-362. E2a;T2a;A7,10 (2494)
- Federer, W. T. [1958], Balanced incomplete block designs for v treatments in $b=v(v-1)$ incomplete blocks of size $k=2$. Biometrics Unit Mimeo Ser. BU-91-M, Cornell Univ. E2,7ace (2495)
- Federer, W. T. [1958], Augmented designs (abstract). Biometrics 14:134. E4ac (2496)
- Federer, W. T. [1959], Covariance analyses for unbalanced two-way classifications. Cornell Univ. Agri. Expt. Sta. Memoir 360:1-60. E2a;T2a;A7,10 (2497)
- Federer, W. T. [1959], Rectangular lattice designs for $v=pk^n$ in incomplete blocks of size k (abstract). Biometrics 15:333-334. E3ac (2498)
- Federer, W. T. [1959], A note on additivity. Biometrics Unit Mimeo. Ser. BU-101-M, Cornell Univ. E2a;A4 (2499)
- Federer, W. T. [1960], Designs with one-way elimination of heterogeneity. Biometrics Unit Mimeo. Ser. BU-117-M, Cornell Univ. E3a (2500)
- Federer, W. T. [1961], Augmented designs with one-way elimination of heterogeneity. Biometrics 17:447-473. E4ace (2501)
- Federer, W. T. [1961], Augmented designs with two-, three- and higher-way elimination of heterogeneity (abstract). Biometrics 17:166. E9,12,13ac (2502)

- Federer, W. T. [1961], Procedures and designs useful for screening material in selection work with particular reference to plants. Biometrics Unit Mimeo. Ser. BU-131-M, Cornell Univ. E4c;A2 (2503)
- Federer, W. T. [1961], Design and analysis for a 2x4x4 nitrogen, potash, and phosphorous fertilizer trial on spinach. Biometrics Unit Mimeo. Ser. BU-132-M, Cornell Univ. E7c;T2a (2504)
- Federer, W. T. [1962], Gradients within blocked experiments. Biometrics Unit Mimeo. Ser. BU-146-M, Cornell Univ. E7ace (2505)
- Federer, W. T. [1963], Additional analyses for two-way layouts. Biometrics Unit Mimeo. Ser. BU-157-M, Cornell Univ. E7ae (2506)
- Federer, W. T. [1963], Relationships between a three-way classification disproportionate numbers analysis of variance and several two-way classification and nested analyses. Biometrics 19:629-637 (also Biometrics Unit Mimeo. Ser. BU-152-M, Cornell Univ.) E2a;T2a;A10 (2507)
- Federer, W. T. [1963], Procedures and designs useful for screening material in selection and allocation, with a bibliography. Biometrics 19:553-587 (also MRC Tech. Summary Report No. 368, U.S. Army Univ. Wisconsin). E4c;A2;B (2508)
- Federer, W. T. [1964], Lecture notes on the "Design and Analysis of Experiments" for the Advanced Science Seminar in Mathematical Statistics at Colorado State Univ., 7/13/64 - 8/7/64. Biometrics Unit Mimeo., Cornell Univ., 14 Chapters. E1-12;T2-7;C (2509)
- Federer, W. T. [1965], Incomplete data in split-plot, split-block, and other similar designs. Biometrics Unit Mimeo. Ser. BU-178-M, Cornell Univ. E10,12a (2510)
- Federer, W. T. [1965], Research designs: Experimental and statistical controls. Proc. AHEA - Cornell Univ. Res. Conf. (also Biometrics Unit Mimeo. Ser. BU-198-M, Cornell Univ.). E7ac;A12 (2511)
- Federer, W. T. [1966], Data collection and interpretation. Biometrics Unit Mimeo., Cornell Univ., 10 Chapters. E1,2,5,7,12,14ace; T2,3,4,8,9ac;C (2512)
- Federer, W. T. [1967], Sequential design of experiments. Conf. Handbook, VI Inter. Biometric Conf., Sydney 5:80-116 (also Biometrics Unit Mimeo. Ser. BU-237-M, Cornell Univ.). E1,2,7a;S2 (2513)
- Federer, W. T. and Atkinson, G. F. [1964], Tied-double-change-over designs. Biometrics 20:168-181 (also MRC Tech. Summary Report No. 391, U.S. Army Univ. Wisconsin). E8ace (2514)

- Federer, W. T. and Brunk, M. E. [1960], Analysis for a balanced design in a marketing experiment. Biometrics Unit Mimeo. Ser. BU-127-M, Cornell Univ. Ellac;T7ac (2515)
- Federer, W. T. and Farden, C. A. [1955], Analysis of variance set-up for Joint Project 69. Biometrics Unit Mimeo. Ser. BU-67-M, Cornell Univ. E13a;T2a (2516)
- Federer, W. T. and Ferris, G. E. [1956], Least squares estimates of effects and sums of squares for a tied double change-over design. Biometrics Unit Mimeo. Ser. BU-73-M, Cornell Univ. E3ac (2517)
- Federer, W. T. and Lowe, C. C. [1951], Expectation of mean squares from an experiment for perennial crops. Biometrics Mimeo. Ser. BU-25-M, Cornell Univ. E5,12,13a (2518)
- Federer, W. T. and Moyer, J. C. [1965], Analyses of taste panel scores for grape juice samples. Biometrics Unit Mimeo. Ser. BU-203-M, Cornell Univ. E2ace;C (2519)
- Federer, W. T. and Nissen, O. [1958], Means and variances of treatments from a randomized complete block design with missing plots. Biometrics Unit Mimeo. Ser. BU-99-M, Cornell Univ. E2,6a (2520)
- Federer, W. T. and Plaisted, R. L. [1958], A rectangular lattice design for potato breeding experiments. Biometrics Unit Mimeo. Ser. BU-105-M, Cornell Univ. E3,4ace (2521)
- Federer, W. T. and Plaisted, R. L. [1960], Estimates of specific and general combining ability from potato breeding experiments. Biometrics Unit Mimeo. Ser. BU-118-M, Cornell Univ. E3,4a;T9ac (2522)
- Federer, W. T. and Plaisted, R. L. [1962], A method for estimating combining ability components of variance in incomplete block designs. American Potato J. 39:197-206. E3,4a;T9a (2523)
- Federer, W. T. and Raktoe, B. L. [1966], Generalized lattice square designs. JASA 61:821-832 (also Biometrics Unit Mimeo. Ser. BU-168-M, Cornell Univ.) Ellace (2524)
- Federer, W. T. and Raktoe, B. L. [1965], General theory of prime-power lattice designs. Lattice rectangles for $v=s^m$ treatments in s^r rows and s^c columns for $r+c=m$, $r \neq c$, and $v < 1000$. JASA 60:891-904. Ellace (2525)
- Federer, W. T. and Robson, D. S. [1952], General theory of prime-power lattice designs VI. Incomplete block design and analysis for p^5 varieties in blocks of p^2 plots. Cornell Univ. Agrl. Expt. Sta. Memoir No. 309, pp. 1-37. E3ace (2526)
- Federer, W. T., Robson, D. S., and Tukey, J. W. [1962], Tests for non-additivity. Biometrics Unit Mimeo. Ser. BU-147-M, Cornell Univ. E7ace;A4,11 (2527)

- Federer, W. T. and Schlottfeldt, C. S. [1954], The use of covariance to control gradients in experiments. *Biometrics* 10:282-290 (errata 11:251).
E7ac;A7 (2528)
- Federer, W. T. and Tyler, E. A. [1954], Covariance analysis for an incomplete lattice square. *Biometrics Unit Mimeo. Ser. BU-53-M, Cornell Univ.*
Ella;A7 (2529)
- Federer, W. T. and Zelen, M. [1964], A catalogue of k-row by b-column latin rectangle designs for $2 \leq k \leq 10$ with $2 \leq b \leq 10$ replicates. *Biometrics Unit Mimeo. Ser. BU-167-M, Cornell Univ.*
E7ac (2530)
- Federer, W. T. and Zelen, M. [1964], Applications of the calculus for factorials arrangements. II.A. Designs with two-way elimination of heterogeneity. *Biometrics Unit Mimeo. Ser. BU-197-M, Cornell Univ.*
E7ac (2531)
- Federer, W. T. and Zelen, M. [1965], Design for two-way elimination of heterogeneity (abstract). *Technometrics* 7:270-271.
E9c (2532)
- Feng, X. N. and Dai, Z. D. [1964], Notes on finite geometries and the construction on PBIB designs. V. Some "Anzahl" Theorems in orthogonal geometry over finite fields of characteristic 2. *Scientia Sinica* 13:2005-2008.
E3c (2533)
- Ferguson, J. H. A. [1962], Nomogram voor het onderscheidingsvermogen van de F-toets gemodificeerd naar Keuls. (Nomographs for the power of the F-test, modified after Keuls.) *Stat. Neerlandica* 16:177-180.
E2a;A3;S1 (2534)
- Ferris, G. E. [1956], Three useful designs in taste-testing (abstract). *Biometrics* 12:234.
E8a (2535)
- Ferris, G. E. [1957], A modified Latin square design for taste-testing. *Food Res.* 22:251-258.
E7ace (2536)
- Ferris, G. E. [1957], The k-visit method of consumer testing (abstract). *AMS* 28:816.
E5ac (2537)
- Ferris, G. E. [1958], The k-visit method of consumer testing. *Biometrics* 14:39-49.
E5ac;A2 (2538)
- Finney, D. J. [1957], Stratification, balance and covariance. *Biometrics* 13:373-386.
E1,2a;A7 (2539)
- Finney, D. J. [1962], An unusual salvage operation. *Biometrics* 18:247-250.
E2,6a (2540)
- Finney, D. J. and Cope, F. W. [1956], The statistical analysis of a complex experiment involving unintentional constraints. *Biometrics* 12:345-368.
E7ae (2541)

- Finney, D. J. and Outhwaite, A. D. [1955], Serially balanced sequences. *Nature* 176:748. E8c (2542)
- Fischbeck, G. [1955], Ein Beitrag zur anlage und Auswertung von Feldversuchen. *Z. Pflanzenzüchtung* 34:197-205. E2ae (2543)
- Fleming, A. A. [1952], Field plot technique with hybrid corn under Alabama conditions (abstract). *Proc. Assoc. Southern Agri. Workers* 49:53. E3a;A14;S1 (2544)
- Folks, J. L. [1959], Analysis of quadruple rectangular lattice designs. *Biometrics* 15:74-86 (acknowledgement 16:695). E3ace (2545)
- Folks, J. L. and Graybill, F. A. [1957], Heterogeneity of error variances in a randomized block design. *Biometrika* 44:275-277. E2a;A1i (2546)
- Folks, J. L. and Kempthorne, O. [1960], The efficiency of blocking in incomplete block designs. *Biometrika* 47:273-283. E3,14a;A5 (2547)
- Folks, J. L. and West, D. L. [1959], On the exactness of the missing plot procedure in a randomized block design (abstract). *AMS* 30:1273-1274. E2,6a;A5 (2548)
- Folks, J. L. and West, D. L. [1961], Note on the missing plot procedure in a randomized block design. *JASA* 56:933-941. E2,6a;A5 (2549)
- Folsom, R. E. [1966], Balancing lot means as contrasted to covariance or constrained randomization for evaluating treatment differences in completely randomized designs. M. S. Thesis, Iowa State Univ. E2,4a;A7 (2550)
- Fraga, C. G. and Costa, A. S. [1950], Análise de um experimento para combate de vira-cabeça do tomateiro. (The analyses of an experiment to control tomato spotted wilt.) *Bragantia* 10:305-316. E2e;A9 (2551)
- Fraser, D. A. S. [1957], On the combining of interblock and intrablock estimates. *AMS* 28:814-816. E3a (2552)
- Frazier, D. and Dacker, R. [1954], Gasoline mileage in winter day-to-day use (summary). *JASA* 49:354-355. E7c (2553)
- Freeman, G. H. [1957], Some experimental designs of use in changing from one set of treatments to another, Part I. *JRSSB* 19:154-162. E12ac (2554)
- Freeman, G. H. [1957], Some experimental designs of use in changing from one set of treatments to another. Part II. Existence of the designs. *JRSSB* 19:163-165. E9,12c (2555)
- Freeman, G. H. [1958], Some aspects of experimental designs of use in changing from one set of treatments to another. Ph. D. Thesis, London Univ. East Malling Res. Sta. E9,12ac (2556)

- Freeman, G. H. [1957], Some further methods of constructing regular group divisible incomplete block designs. AMS 28:479-487. E3c (2557)
- Freeman, G. H. [1958], Families of designs for two successive experiments. AMS 29:1063-1078. E5,12c (2558)
- Freeman, G. H. [1959], The use of the same experimental material for more than one set of treatments. Appl. Stat. 8:13-20. E12ae (2559)
- Freeman, G. H. [1961], Some further designs of type O:PP. AMS 32:1186-1190. E12c (2560)
- Freeman, G. H. [1964], The addition of further treatments to Latin square designs. Biometrics 20:713-729 (abstract 20:383). E12ace (2561)
- Freeman, G. H. [1964], The use of a systematic design for a spacing trial with a tropical tree crop. Biometrics 20:200-203. E5c (2562)
- Freeman, G. H. [1966], Some non-orthogonal partitions of 4×4 , 5×5 and 6×6 Latin squares. AMS 37:666-681. E7c (2563)
- Freeman, G. H. [1967], The use of cyclic balanced incomplete block designs for directional seed orchards. Biometrics 23:761-778. E2,3c (2564)
- Freeman, G. H. and Jeffers, J. N. R. [1962], Estimation of means and standard errors in the analysis of non-orthogonal experiments by electronic computer. JRSSB 24:435-446. E7,10ae;A10,15 (2565)
- Fry, P. R. and Taylor, W. B. [1954], Analysis of virus local lesion experiments. Ann.. Appl. Biology 41:664-674. E2,14a (2565)
- Fulkerson, D. R. and Ryser, H. J. [1963], Width sequences for special classes of $(0,1)$ -matrices. Canadian J. Math. 15:371-396. E2c (2567)
- Fuller, W. A. and Cady, F. B. [1965], Estimation of asymptotic rotation and nitrogen effects. Agron. J. 57:299-302. E5,8a;A13 (2568)

- Galto, J. [1958], The single Latin square design in psychological research. *Psychometrika* 23:369-378. E7a (2569)
- Gardner, C. O. [1951], Design and analysis of Bose's triangular singly linked block designs. *Inst. Stat. Mimeo. Ser. No. 55*, Univ. N. Carolina. E3ac (2570)
- Gardner, M. [1959], How three modern mathematicians disproved a celebrated conjecture of Leonhard Euler. *Sci. Amer.* 201(Nov.):181-192, 184, 186, 188. E12c (2571)
- Gassner, B. J. [1965], Equal-difference BIB designs. *Proc. Amer. Math. Soc.* 16:378-380. E2c (2572)
- Gatty, R. [1960], Factorial designs for store sales experiments. *Dept. Agri. Economics Tech. A. E. No. 1* Rutgers Univ. E7a;T2a (2573)
- Gatty, R. [1965], Statistical models for experiments in merchandising. *Proc. Business Economic Stat. Section, Amer. Stat. Assoc.* pp. 227-235. E7a (2574)
- Geldel, H. [1953], Vereinfachte Verrechnung eines "ausgewogenen Versuches in unvollständigen Blöcken", erläutert an einem Beispiel von A. Linder. *Mitteilungsblatt Mathematische Statistik* 5:64-69. E2ac (2575)
- Geldel, H. [1953], Ein Beitrag zur Auswertung von Versuchsergebnissen mit der Varianzanalyse. *Z. Pflanzenzüchtung* 32:373-380. E2ae (2576)
- Geldel, H. [1957], Zum Ausgleich von Bodenunterschieden bei Blockanlagen. *Z. Acker- Pflanzenbau* 103:71-82. E2,7ae (2577)
- Geldel, H. and Schuster, W. [1961], Zur Verrechnung von Feldversuchsergebnissen nach dem lateinischen Quadrat und dem lateinischen Rechteck. *Z. Acker- Pflanzenbau* 113:425-432. F7,14a (2578)
- Geisser, S. [1959], A method for testing treatment effects in the presence of learning. *Biometrics* 15:389-395. E7a;A7 (2579)
- Geisser, S. [1961], The latin square as a repeated measurements design. *Proc. Fourth Berkeley Symp. Math. Stat. Prob.* 4:241-250. E7,8a (2580)
- Ghosh, M. N. and Behari, V. [1965], Analysis of randomized block experiments when treatments have different errors. *Calcutta Stat. Assoc. Bull.* 14:93-105. E2a;A11 (2581)
- Ghosh, S. P. [1967], On the construction of BIB designs using non-degenerated quadratics in finite Euclidean space (abstract). *AMS* 38:955. E2c (2582)
- Gilbert, E. N. [1961], Design of mixed doubles tournament. *American Math. Monthly* 68:124-131. E2c;T11a (2583)

- Gilbert, P. and Grossman, B. [1961], Comparison de deux méthodes d'analyse de données non orthogonales dans le cas d'expériences à deux facteurs. *Biométrie-Praximétrie* 2:19-36. E6ae (2584)
- Girault, M. [1963], Rapport de synthèse (discussion). *Colloques Inter. Centre Nat. Recherche Sci. No. 110, Le Plan d'Expériences* pp. 275-288. E2,7,12ac;C (2585)
- Giri, N. C. [1957], On a reinforced partially balanced incomplete block design. *JISAS* 9:41-51. E4ae (2586)
- Giri, N. C. [1957], On row-balance in P.B.I.B. designs. *JISAS* 9:168-178. E7ac (2587)
- Giri, N. C. [1958], Row balance P.B.I.B. design (abstract). *Proc. Forty-Fifth Indian Sci. Congress, Part III*, p. 19. E7ac (2588)
- Giri, N. C. [1959], On inter-block analysis of some p.b.i.b. designs having a missing block (abstract). *JISAS* 11:196. E3,6a (2589)
- Giri, N. C. [1963], On the combined analysis of Youden squares and of latin square designs with some common treatments. *Biometrics* 19:171-174. E4,9a;A13 (2590)
- Giri, N. C. [1965], On the F-test in the intrablock analysis of a class of two associate PBIB designs. *JASA* 60:285-293. E3a;A5 (2591)
- Glass, S. and Kramer, C. Y. [1958], Analysis of variance of a Latin square design with missing observations (abstract). *Virginia J. Sci.* 9:452. E7,10a (2592)
- Glenday, A. C. [1955], The mathematical separation of plant and weather effects in field growth studies. *Australian J. Agr. Res.* 6:813-822. E5ace (2593)
- Glenn, W. A. [1960], A comparison of the effectiveness of tournaments. *Biometrika* 47:253-262 (also, Dept. Stat. Tech. Report No. 42, Virginia Polytechnic Inst.) E14;A2 (2594)
- Glenn, W. A. and Kramer, C. Y. [1958], Analysis of variance of a randomized block design with missing observations. *Appl. Stat.* 7:173-185. E2,6a (2595)
- Glenn, W. A. and Kramer, C. Y. [1958], Analysis of variance of a randomized block design with missing observations (abstract). *Biometrics* 14:570. E2,6a (2596)
- Glenn, W. A. and Kramer, C. Y. [1958], Analysis of variance of a randomized block design with missing observations (abstract). *Virginia J. Sci.* 9:451-452. E2,6a (2597)

- Goch, D. C. [1958], Examination of residuals in the analysis of variants. South African J. Sci. 54:67-69. E2a;A6 (2598)
- Goebel, J. B. [1962], On the algebra of orthogonal Latin squares. Ph. D. Thesis, Oregon State Univ. E7,12,13c (2599)
- Goff, M. M. [1960], Efficiency factors for balanced incomplete block designs under loss of experimental units. M. S. Thesis, Univ. N. Carolina. E2,6a (2600)
- Golomb, S. W. and Posner, E. C. [1964], Rook domains, Latin squares, affine planes, and error-distributing codes. IEEE Trans. Information Theory IT-10:196-208. E7,12c (2601)
- Gomes, F. P. [1951], A lei de Mitscherlich e a análise da variância em experiências de adubação. Anais Escola Superior Agri. "Luiz de Queiroz" 8:355-368. E1,2ae;A7 (2602)
- Gomes, F. P. [1951], The interpolation of Mitscherlich's first approach law and the analysis of variance in experiments with fertilizers. Anais Escola Superior Agri. "Luiz de Queiroz" 8:195-204 (Spanish version 8:185-194). E7ae;A7 (2603)
- Gomes, F. P. [1954], General method of analysis for lattice designs. Seminários Estatística (10^o):33-54. E2,3a (2604)
- Gomes, F. P. [1955], As geometrias finitas e sua aplicação nos delineamentos experimentais. (Finite geometries and their application in experimental designs.) An. I. Congr. Brasil, Estad, Agron. pp. 123-126. E2,3c (2605)
- Gomes, F. P. [1955], A estimacão do efeito residual de fertilizantes por meio da Lei de Mitscherlich. Anais Escola Superior Agri. "Luiz de Queiroz" 12-13:69-75. E8a;A7 (2606)
- Gomes, F. P. [1957], The analysis of factorial experiments in balanced incomplete blocks (abstract). Biometrics 13:239-240. E2a;T2a (2607)
- Gomes, F. P. [1963], Diseño experimental en frutales. (Experimental design for fruit trees.) Revistade Agricultura São Paulo 38:207-224. E2,7,13a;C;S1 (2608)
- Gomes, F. P. and de Abreu, C. P. [1959], Novas variedades de cana-de-açúcar. Anais Escola Superior Agri. "Luiz de Queiroz" 16:199-210. E2ae;A13 (2609)
- Gomes, F. P. and Guimarães, R. F. [1958], Joint analysis of experiments in complete randomised blocks with some common treatments. Biometrics 14:521-526. E4ae;A13 (2610)
- Gomes, F. P. and Malavolta, E. [1951], Pesquisas sobre a análise estatística de experiências de adubação com o auxílio da Lei de Mitscherlich. Anais de Escola Superior de Agri. "Luiz de Queiroz" 8:1-14. E2ae;A7 (2611)

- Goodchild, N. A. [1966], Applications of nonorthogonal designs to situations where treatments or blocks are of unequal status or size. *Biometrics* 22:629-631.
E4c (2612)
- Gosslee, D. [1952], The use of finite fields in design of experiments (abstract). *American Math. Monthly* 59:440.
E7c;T2c (2613)
- Goswami, R. P. [1967], Efficiency of change over design in animal experimentation (abstract). *JISAS* 19(1):141-142.
E8a (2614)
- Gourlay, N. [1955], F-test bias for experimental designs in educational research. *Psychometrika* 20:227-248.
E7a;T2a;A10 (2615)
- Gourlay, N. [1955], F-test bias for experimental designs of the Latin square type. *Psychometrika* 20:273-287.
E7a (2616)
- Govinda Iyer, T. A. [1957], Quicker methods in the analysis of variance. *Madras Agri. J.* 44:326-336.
E1,2a;A12 (2617)
- Graybill, F. [1954], Variance heterogeneity in a randomized block design. *Biometrics* 10:516-520.
E2ae;A7,11 (2618)
- Graybill, F. [1955], Variance heterogeneity in a randomized block design (summary). *JASA* 50:577.
E2a;A11 (2619)
- Graybill, F. A. and Deal, R. B. [1959], Combining unbiased estimators. *Biometrics* 15:543-550.
E2,3a (2620)
- Graybill, F. A. and Pruitt, W. E. [1958], The staircase design: Theory. *AMS* 29:523-533.
E4ac (2621)
- Graybill, F. A. and Seshadri, V. [1960], On the unbiasedness of Yates' method of estimation using interblock information. *AMS* 31:786-787 (abstract 31:815).
E2a (2622)
- Graybill, F. A. and Weeks, D. L. [1959], Combining inter-block and intra-block information in balanced incomplete blocks. *AMS* 30:799-805 (abstract 30:624).
E2a (2623)
- Greenberg, B. G. and Sarhan, A. E. [1958], Some applications of order statistics. *Bull. ISI* 36(3):172-183.
E2ae;A12 (2624)
- Greenberg, V. L. [1964], Robust inference in some experimental designs. Ph. D. Thesis, Univ. California.
E3a (2625)
- Greenberg, V. L. [1966], Robust estimation in incomplete blocks designs. *AMS* 37:1331-1337.
E3a (2626)
- Grizzle, J. E. [1965], The two-period change-over design and its use in clinical trials (abstract). *Technometrics* 7:272.
E8c (2627)

- Grizzle, J. E. [1965], The two-period change-over design and its use in clinical trials. *Biometrics* 21:467-480. E8ae (2628)
- Gronow, D. G. C. [1961], Limitations of "square" experimental designs. Ph. D. Thesis, London Univ. E7ac (2629)
- Grundy, P. M. [1950], The estimation of error in rectangular lattices. *Biometrics* 6:25-33. E3a (2630)
- Grundy, P. M. [1951], A general technique for the analysis of experiments with incorrectly treated plots. *JRSSB* 13:272-283. E6,10,11ae (2631)
- Grundy, P. M. and Healy, M. J. R. [1950], Restricted randomization and Quasi-Latin squares. *JRSSB* 12:286-291. E7ac;T2ac (2632)
- Guérin, R. [1963], Aspects algébriques du problème de Yamamoto. *Comptes Rendus (premier semestre)* 256:583-586. E7,12,13c (2633)
- Guérin, R. [1963], Sur une généralisation de la méthode de Yamamoto pour la construction de carrés latin orthogonaux. *Comptes Rendus (premier semestre)* 256:2097-2100. E7,12,13c (2634)
- Guérin, R. [1965], Vue d'ensemble sur les plans en blocs incomplets équilibrés et partiellement équilibrés. *Rev. ISI* 33:24-58. E2,3c;B (2635)
- Guérin, R. [1966], Existence et propriétés des carrés latins orthogonaux. Ph. D. Thesis, Univ. Paris. E7,12,13c (2636)
- Guérin, R. [1966], Existence et propriétés des carrés latins orthogonaux. *Publications l'Inst. Stat. Univ. Paris* 15:113-293. E7,12,13c;B (2637)
- Guimarães, R. F., Pimentel Gomes, F., and Malavolta, E. [1959], Adubação em "torrão paulista" de Eucalyptus Saligna SM. *Anais Escola Superior Agri. "Luiz de Queiroz"*. 16:211-218. E2ae;T2ae (2638)
- Gurgel, J. T. A. and Mitidieri, J. [1955-1956], Estudos sobre o quiabeiro II-Efeitos da autofecundação e do cruzamento. *Anais Escola Superior Agri. "Luiz de Queiroz"* 12-13:30-51. E2ae (2639)

- Hader, R. J. [1956], Some experimental designs applicable to problems with wood (discussion). *Forest Products J.* 6:425-427. E2,3a (2640)
- Haines, W. B., Crowther, E. M., and Thornton, G. J. [1954], Manuring hevea V: some long-term effects in the Dunlop (Malaya) experiments. *Empire J. Expt. Agri.* 22:203-210. E5a (2641)
- Hall, M. [1952], A combinatorial problem on abelian groups. *Proc. American Math. Soc.* 3:584-587. E7,12c (2642)
- Hall, M. [1956], A survey of difference sets. *Proc. American Math. Soc.* 7:975-986. E2c (2643)
- Hall, M. [1958], A survey of combinatorial analysis, chapter 4, in "Some Aspects of Analysis and Probability" pp. 76-104. E2,3,12c (2644)
- Hall, M. [1962], Automorphisms of Steiner triple systems. *Bull. Symp. Pure Math., American Math. Soc.* 6:47-66. E2c (2645)
- Hall, M. [1964], Block designs, chapter 13, in "Applied Combinatorial Mathematics" pp. 369-405. E2,3,12,13c (2646)
- Hall, M. [1965], Combinatorial analysis. *Encyclopaedia Britannica* pp. 120-123. E2,12,13c (2647)
- Hall, M. [1966], Numerical analysis of finite geometries (with discussion). *Proc. IBM Sci. Computing Symp. Combinatorial Problems.* pp. 11-30. E7,12,13c (2648)
- Hall, M. [1967], Combinatorial Theory, chapters 10, 11, 12, 13, 15, 16, and appendix I. Blaisdell Publishing Co., Waltham, Mass., Toronto, and London. E2,3,7,12,13,14c (2649)
- Hall, M. and Connor, W. S. [1954], An embedding theorem for balanced incomplete block designs. *Canadian J. Math.* 6:35-41. E2c (2650)
- Hall, M. and Ryser, H. J. [1951], Cyclic incidence matrices. *Canadian J. Math.* 3:495-502. E2c (2651)
- Hall, M. and Swift, J. D. [1955], Determination of Steiner triple systems of order 15. *Math. Tables Other Aids Computation* 9:146-152. E2c (2652)
- Hall, M., Swift, J. D., and Walker, R. J. [1956], Uniqueness of the projective plane of order eight. *Math. Tables Other Aids Computation* 10:186-194. E7,12c (2653)
- Hamaker, H. C. [1955], Experimental design in industry. *Biometrics* 11:257-286 (abstract 10:187-188). E2a;C (2654)

- Hamaker, H. C. [1955], Naar efficiënte experimenten. (Towards efficient experiments. Stat. Neerlandica 9:7-25. E5,7ae;C (2655)
- Hamaker, H. C. [1959], A note on ANOVA in the transistor industry. IQC 16(1):12-14. E12ae (2656)
- Hamming, G. [1952], Interactie-problemen. Landbouwkundig Tijdschrift (Wageningen) 64:162-173. E6,10a (2657)
- Hanani, H. [1960], Tactical configurations, I incomplete balanced block designs. Math. Res. Center Tech. Summary Report No. 137, U.S. Army Univ. Wisconsin. E2c (2658)
- Hanani, H. [1960], Construction of balanced incomplete block designs. Math. Res. Center Tech. Summary Report No. 165, U.S. Army Univ. Wisconsin. E2c (2659)
- Hanani, H. [1961], The existence and construction of balanced incomplete block designs. AMS 32:361-386. E2ac (2660)
- Hanani, H. [1963], On some tactical configurations. Canadian J. Math. 15:702-722. E2c (2661)
- Hanani, H. [1964], On covering of balanced incomplete block designs. Canadian J. Math. 16:615-625. E2c (2662)
- Hanani, H. [1965], A balanced incomplete block design. AMS 36:711. E2c (2663)
- Hancock, J. and McMeekan, C. P. [1954], Studies of grazing behaviour in relation to grassland management. III. Rotational compared with continuous grazing. J. Agri. Sci. 45:96-103. E5a (2664)
- Hänsel, H. [1959], Die Vermeidung der Variationsbreite beider Schätzung der Standardabweichung und bei der Varianzanalyse ungeordneter Blockanlagen, sowie eine Weitere Vereinfachung des Hartley'schen Verfahrens durch direkte Bestimmung von Grenzdifferenzen. Bodenkultur 10:148-158. E2a;A12 (2665)
- Hanson, H. L., Kline, L. and Lineweaver, H. [1951], Application of balanced incomplete block design to scoring of ten dried egg samples. Food Tech. 5:9-13. E2e (2666)
- Harshbarger, B. [1951], Near balance rectangular lattices. Virginia J. Sci. (New Series) 2:13-27. E3ace (2667)
- Harshbarger, B. [1951], Latinized rectangular lattice designs (abstract). Virginia J. Sci. 2:377. E1a (2668)

- Harshbarger, B. [1953], Some lattice designs. Committee on Experimental Design, U.S. Dept. Agri., USDA Lecture Series, 9 pp. (Mimeo). E3ac (2669)
- Harshbarger, B. [1953], Paired comparisons in a lattice design (abstract). Virginia J. Sci. 4:287. Ella;Tlla (2670)
- Harshbarger, B. [1955], The 2^3 factorial in a Latinized rectangular lattice design (summary). JASA 50:577 (also, Dept. Stat. Tech. Report No. 1, OOR Project No. 1166, Virginia Polytechnic Inst.). Ellac;T2a (2671)
- Harshbarger, B. [1964], Triangular designs (abstract). Biometrics 20:385. E3a (2672)
- Harshbarger, B. and Davis, L. L. [1952], Latinized rectangular lattices. Biometrics 8:73-84 (also, in Bi-Annual Report No. 3, Stat. Methods Sensory Differences Tests Food Quality, Va. Agri. Expt. Sta.). Ellace (2673)
- Harter, H. L. [1960], On the analysis of split-plot experiments (abstract). AMS 31:525. E5a (2671)
- Harter, H. L. [1961], On the analysis of split-plot experiments. Biometrics 17: 144-149. E5a (2675)
- Harter, H. L. and Lum, M. D. [1962], An interpretation and extension of Tukey's one degree of freedom for non-additivity. Aeronautical Res. Laboratory, ARL 62-313, U.S. Air Force. E2a;T2a;A4 (2676)
- Hartigan, J. A. [1967], Distribution of the residual sum of squares in fitting inequalities. Biometrika 54:69-84. E2ae (2677)
- Hartley, H. O. [1950], The use of range in analysis of variance. Biometrika 37: 271-280. E2ae;A12 (2678)
- Hartley, H. O. [1951], Double balancing of incomplete block designs (abstract). Biometrics 7:117-118. E7c (2679)
- Hartley, H. O. [1958], Estimation from incomplete data in industrial research. Proc. Stat. Tech. Missile Evaluation Symp. pp. 179-198. E6a (2680)
- Hartley, H. O. [1960], Analysis of variance. Ch. 20 in Mathematical Methods for Digital Computers, pp. 221-230. E2,5,7,12a;T2a (2681)
- Hartley, H. O., Shrikhande, S. S., and Taylor, W. B. [1953], A note on incomplete block designs with row balance. AMS 24:123-126. E7c (2682)
- Hatamura, M., Okuno, T., and Sasaki, S. [1954], The design and analysis of field experiments (in Japanese). Nogyo Gijyutsu Kenkyusho Hokoku/Bull. Nat. Inst. Agri. Sci. No. 3(A):12-14. E1,2,3,7,11ae;C (2683)

- Heady, E. O. and Dillon, J. L. [1961], Agricultural Production Functions, Iowa State Univ. Press, Ames, Iowa, Chapters 2-7, 14. E2a;T2,4a (2684)
- Healy, M. J. R. [1951], Latin rectangle designs for a 2^n factorial experiments on 32 plots. J. Agri. Sci. 41:315-316. E7ac;T2a (2685)
- Healy, M. J. R. [1952], The analysis of lattice designs when a variety is missing. Empire J. Expt. Agri. 20:220-226. E2,3,6a (2686)
- Healy, M. J. R. [1959], The analysis of field experiments on an electronic computer. Biom. Zeit. 1:210-214 E2,7a;T2a;A15 (2687)
- Healy, M. J. R. [1959], Multivariate growth data (abstract). Biometrics 15:149. E5a;A7 (2688)
- Healy, M. J. R. and Leech, F. B. [1950], Statistical analysis of results for successive tests on the same organism. Nature 166:319. E5a (2689)
- Healy, M. and Westmacott, M. [1956], Missing values in experiments analysed on automatic computers, Appl. Stat. 5:203-206. E6a;A15 (2690)
- Hedlin, R. A. and Ridley, A. O. [1964], Effect of crop sequence and manure and fertilizer treatments on crop yields and soil fertility. Agron. J. 56:425-427. E5,8a (2691)
- Heinisch, O. [1958], Die Bedeutung der Biometrie für die Landwirtschaftswissenschaften im Allgemeinen und für die Pflanzenzüchtung im Besonderen. SB Deutsche Akad. Landwirtschaftswissen Berlin, 7, No. 14, 45 pp. E2a;A12 (2692)
- Heite, H. J. and Linder, A. [1962], Über die Planung und Auswertung einer Rechts-links-Behandlung bei dermato-therapeutischen Untersuchungen. Dermatologica 125:65-80. E2ae;C (2693)
- Henderson, P. L. [1952], Methods of research in marketing. Application of the double change-over design to measure carry-over effects of treatments in controlled experiments. Dept. Agri. Economics Paper No. 3, Cornell Univ. E8e (2694)
- Heuzé, G. [1964], Equivalences dans les schémas d'association, Comptes Rendus (premiere semestre) 258:5349-5351. E3c (2695)
- Heuzé, G. [1964], Critère permettant de minimiser le nombre de classes associées d'un plan en blocs incomplets partiellement équilibrés, Comptes Rendus (premiere semestre) 258:2970-2971. E3ac (2696)
- Heuzé, G. [1966], Contribution a l'étude des schémas d'association. Publications Inst. Stat. Univ. Paris 15:1-59. E3ac (2697)
- Hicks, C. R. [1955], Some applications of Hotelling's T. IQC 11(9):23-26. Elae;A7 (2698)
- Hicks, C. R. [1956], Fundamentals of analysis of variance, part I - The analysis of variance (ANOVA) model. IQC 13(2):17-20. Elae;T2ae (2699)

- Hicks, C. R. [1956], Fundamentals of analysis of variance, part II - The components of variance and the mixed model. IQC 13(3):5-8. Elae;T2ae (2700)
- Hicks, C. R. [1956], Fundamentals of analysis of variance, part III - Nested designs in analysis of variance. IQC 13(4):13-16. Elae;T2ae (2701)
- Hicks, C. R. [1959], Randomized incomplete blocks. ASQC Nat. Conv. Trans. 13:51-62. E2ae (2702)
- Hicks, C. R. [1965], The analysis of covariance. IQC 22:282-286. Elae;A7 (2703)
- Hill, B. M. [1967], Correlated errors in the random model. JASA 62:1387-1400. Ela (2704)
- Hill, H. M. [1960], Experimental designs to adjust for time trends. Technometrics 2:67-82. E5ace;T4ace (2705)
- Hill, H. M. and Wheeler, D. [1958], A designed experiment to evaluate seven yarn lubricants. ASQC Nat. Conv. Trans. 12:245-253. E3ae;T2ae (2706)
- Hill, K. W. [1954], Wheat yields and soil fertility after a half century of farming. Soil Sci. Soc. America Proc. 18:182-184. E5a (2707)
- Hinkelmann, K. [1964], Extended group divisible partially balanced incomplete block designs. AMS 35:681-695. E3ac (2708)
- Hinkelmann, K. [1967], Circulant partial triallel crosses. Biom. Zeit. 9:22-33. E3ac;T9ac (2709)
- Hirotsu, C. [1965], Research for a set of minimal sufficient statistics and Yates' combined estimator for BIBD and GDPEIBD. Reports Stat. Appl. Res. 12(3): 115-126. E2,3a (2710)
- Hirotsu, C. [1966], Types of incomplete block designs for factorials. Reports Stat. Appl. Res. 13(2):12-28. E3a;T2a (2711)
- Hirotsu, C. [1966], A note on the design with two sets of block constraints. Reports Stat. Appl. Res. 13(4):238-241. E7c (2712)
- Hoblyn, T. N. and Pearce, S. C. [1954], Some considerations in the design of successive experiments on fruit plantations. Biometrics 10:176-177. E7,12c;C (2713)
- Hoblyn, T. N., Pearce, S. C., and Freeman, G. H. [1954], Some considerations in the design of successive experiments in fruit plantations. Biometrics 10: 503-515. E7,12c;C (2714)
- Hodnett, G. E. [1956], The analysis of a 3x6 experiment arranged in a quasi-latin square. Biometrics 12:245-258. E7ae;T2ae (2715)

- Hoffman, A. J. [1960], On the uniqueness of the triangular association scheme. AMS 31:492-497. E3c (2716)
- Hoffman, A. J. [1963], On the duals of symmetric partially-balanced incomplete block designs. AMS 34:528-531. E3c (2717)
- Hoffman, A. J. and Ray-Chaudhuri, D. K. [1964], On the line graph of a symmetric balanced incomplete block design (abstract). AMS 35:1837. E2c (2718)
- Hoffman, A. J. and Richardson, M. [1961], Block design games. Canadian J. Math. 13:110-128. E2,3c (2719)
- Hogben, D. [1959], Test of difference between treatment and control with multiple replications of control and a missing plot. Biometrics 15:486-487. E6a (2720)
- Hollander, M. [1965], Rank tests for randomized blocks when the alternatives have an a priori ordering. Ph. D. Thesis, Stanford Univ. (also, Dept. Stat. Tech. Report No. 9, Stanford Univ.). E2a;A12 (2721)
- Hollander, M. [1967], Rank tests for randomized blocks when the alternatives have an a priori ordering. AMS 38:867-877 (abstract 36:1082-1083). E2a;A12 (2722)
- Holmes, J. C. [1952], The establishment of experiments. Bull. Edinburgh College Agri. No. 32:35-49. E2,5,7,12a;A14 (2723)
- Hoofnagle, W. S. [1965], Experimental designs in measuring the effectiveness of promotion. J. Marketing Res. 2:154-162. E7ae;C (2724)
- Hopkins, J. W. [1954], Incomplete block rank analysis: Some taste test results. Biometrics 10:391-399. E2ae;A12 (2725)
- Horváth, A. [1954], Az eltérés elemzés. (The analysis of difference.) Növénytermelés 3:103-114. E2,7a (2726)
- Horváth, A. and Sváb, J. [1955], A fajtakísérletek módszerel. (Methods of variety tests.) Országos Növényfajtakísérleti Intézet, Budapest, pp. 54-65. E2a (2727)
- Horváth, A. and Sváb, J. [1955], Új elgondolások a szántóföldi kísérletek értékelési módszerére. (New concepts in methods of evaluating field trials.) Növénytermelés 4:43-66. E2,7a (2728)
- Horváth, A. and Sváb, J. [1956], Megjegyzések Schnell Lászlóné "Hozzászólásához". (Comments on Mrs. László Schnell's remarks.) Növénytermelés 5:372. E2,7a (2729)

- Horváth, A. and Sváb, J. [1957], Válasz Schnell Lászlóné "Hozzászólás" - árá.
(Reply to Mrs. László Schnell's remarks.) Növénytermelés 6:181-182.
E2,7a (2730)
- Horváth, A. and Sváb, J. [1957], Fajtakísérletek módszerei. (Methods of variety
tests.) Országos Növényfajtakísérleti Intézet, Budapest, pp. 67-80.
E2a (2731)
- Houston, T. R. [1966], Sequential counterbalancing in Latin squares. AMS 37:
741-743. E7c (2732)
- Howes, D. R. [1960], Multi-dimensional staircase designs for reliability studies.
Proc. Fifth Conf. Design Expt. Army Res. Dev. Testing. pp. 191-197.
E4a;S2 (2733)
- Hoyle, B. J. and Baker, G. A. [1961], Stability of variety response to extensive
variations of environment and field plot design. Hilgardia 30:365-394E.
E2a;A14;C (2734)
- Hrubý, K. and Konvička, O. [1954], Polní pokusy, jejich základání a hodnocení.
(Field experiments, their design and computation.) Olomouc: KČS.35, 276 pp.,
68 figs., 177 tables. E1,2a;C (2735)
- Huang, C. [1955], Balanced incomplete block experiments. I. (in Chinese). Nung-
lin-hsueh Pao/J. Agr. For. Taichung 4:241-260. E2a (2736)
- Hudson, D. J. [1963], The design and analysis of experiments. Ph. D. Thesis,
London Univ. Imperial College. E (2737)
- Hughes, D. R. [1962], Combinatorial analysis, t-designs and permutation groups.
Bull. Symp. Pure Math., American Math. Soc. 6:39-41. E2c (2738)
- Hultquist, R. A. [1965], Minimal sufficient statistics for the two-way classification
mixed model design. JASA 60:182-192. E2a (2739)
- Hultquist, R. A. and Graybill, F.A. [1960], Minimal sufficient statistics for the two-
way classification mixed model design (abstract). AMS 31:816.
E2a;A10 (2740)
- Husain, Q. M. [1958], Star design. Calcutta Stat. Assoc. Bull. 8:110-118 (addenda
8:169). E4c (2741)
- Hussain, Q. M. [1961], A note on the symmetrical balanced incomplete block (S.B.I.B.)
designs with $k=9$, $\lambda=2$. Bull. ISI 38(4):11-16. E2c (2742)

Ikeda, S. [1967], A method of constructing PBIB designs of T_m type. Inst. Stat. Mimeo. Ser. No. 508, Univ. N. Carolina. E3c (2743)

Ikeda, S. [1967], On a method of construction of group divisible designs. Inst. Stat. Mimeo. Ser. No. 521, Univ. N. Carolina. E3c (2744)

Ikeda, S. and Ogawa, J. [1966], On the non-null distribution of the F-statistic for casing a partial null hypothesis in a random PBIB design with m associate classes of the Neyman model. Inst. Stat. Mimeo. Ser. No. 466, Univ. N. Carolina. E3,4a (2745)

Ikeda, S., Ogawa, J., and Ogasawara, M. [1965], On the asymptotic distribution of F-statistic under the null-hypothesis in a randomized PBIB design and M associate classes under the Neyman model. Inst. Stat. Mimeo. Ser. No. 454, Univ. N. Carolina. E3a (2746)

Iyer, T. A. C. [1957], Quicker methods in the analysis of variance. Madras Agri. J. 44:326-336. E1,2ac (2747)

- Jacob, W. C. [1953], Split-plot half-plaid squares for irrigation experiments. *Biometrics* 9:157-175. E9,12ae;T2ae (2748)
- Jacobsen, R. L. [1967], The geometric interpretation of missing observations. *Biometrics Unit Mimeo Ser. BU-243-M*, Cornell Univ. E6a (2749)
- Jaech, J. L. [1966], An alternate approach to missing value estimation. *Amer. Stat.* 20(5):27-29. E2,6,7,10a (2750)
- James, A. T. [1957], The relationship algebra of an experimental design. *AMS* 28:993-1002. E2,14a (2751)
- James, E. and Bancroft, T. A. [1951], The use of half-plants in a balanced incomplete block in investigating the effect of calcium, phosphorus, and potassium, at two levels each, on the production of hard seed in crimson clover, Trifolium incarnatum. *Agron. J.* 43:96-98. E2ae (2752)
- Jebe, E. H. [1962], A series of two-phase experiments. *Proc. Seventh Conf. Design Expt. Army Res. Dev. Testing*. pp. 739-760. E7,8ac (2753)
- Jeffers, J. N. R. [1966], General analysis of non-orthogonal experiments. *International Advisory Group Forest. Stat., Second Conf. Institutionen För Skoglig Matematisk Statistik*, Stockholm, pp. 160-169. E2ae;A10 (2754)
- Jenkins, G. M. and Chanmugam, J. [1960], Autocorrelation analysis and the design of experiments. *Dept. Math. Tech. Report No. 37*, Princeton Univ. E5a;C (2755)
- John, A. J. [1966], The design and analysis of unbalanced incomplete block designs. *Ph. D. Thesis*, London Univ. E4ac (2756)
- John, J. A. [1965], A note on the analysis of incomplete block experiments. *Biometrika* 52:633-636. E2,3a (2757)
- John, J. A. [1966], Cyclic incomplete block designs. *JRSSB* 28:345-360. E2,3c (2758)
- John, J. A. [1967], Reduced group divisible paired comparison designs. *AMS* 38:1887-1893. E3c;T11c (2759)
- John, P. W. M. [1961], An application of a balanced incomplete block design. *Technometrics* 3:51-54. E2ae (2760)
- John, P. W. M. [1962], Testing two treatments when there are three experimental units in each block. *Appl. Stat.* 11:164-169. E4ae (2761)
- John, P. W. M. [1962], Augmented block designs (abstract). *Biometrics* 18:631. E4c (2762)

- John, P. W. M. [1963], Analysis of diallel cross experiments in a split plot situation. Australian J. Biological Sci. 16:681-687. E12a;T9a (2763)
- John, P. W. M. [1963], Using a two factor analysis of variance programme for experiments with several factors. Appl. Stat. 12:129-132. E12a;T2a;A15 (2764)
- John, P. W. M. [1963], Extended complete block designs. Australian J. Stat. 5:147-152. E4ace (2765)
- John, P. W. M. [1964], Balanced designs with unequal numbers of replicates. AMS 35:897-899. E2,4ac;A10 (2766)
- John, P. W. M. [1966], An extension of the triangular association scheme to three associate classes. JRSSB 28:361-365. E3c (2767)
- John, P. W. M. [1967], On obtaining balanced incomplete block designs from partially balanced association schemes. AMS 38:618-619. E2c (2768)
- John, P. W. M. [1967], The folded cubic association scheme (preliminary report) (abstract). AMS 38:1311-1312. E3c (2769)
- Johnson, D. M., Dulmage, A. L., and Mendelsohn, N. S. [1961], Orthomorphisms of groups and orthogonal latin squares I. Canadian J. Math. 13:356-372. E7,12,13c (2770)
- Johnson, J. R. [1957], An application of the design of experiments to the surveillance of ammunition. Proc. First Conf. Design Expt. Army Res. Dev. Testing. pp. 145-155. E1,3e (2771)
- Johnson, N. L. [1953], Some notes on the application of sequential methods in the analysis of variance. AMS 24:614-623. E1a;S2 (2772)
- Jones, R. M. [1959], On a property of incomplete blocks. JRSSB 21:172-179. E2a (2773)
- Jowett, G. H. [1952], The accuracy of systematic sampling from conveyor belts. Appl. Stat. 1:50-59. E1ae (2774)
- Justesen, S. H. and Keuls, M. [1958], Note on the use of non-orthogonal designs. Bull. ISI 36(3):269-276. E4ac (2775)

- Källin, A. [1966], Versuchsanordnungen in unvollständigen Blöcken mit zusätzlichen Kontrollbehandlungen in jedem Block. *Metrika* 10:182-218. E4ace (2776)
- Kanjo, A. I. [1965], Recovery of interblock information. Ph. D. Thesis, Virginia Polytechnic Inst. E2,3a (2777)
- Kapadia, C. H. [1962], Minimal sufficient statistics for the partially balanced incomplete block (PBIB) design with two associate classes under an Eisenhart model II. *Ann. Inst. Stat. Math. Tokyo* 14:63-71. E3a (2778)
- Kapadia, C. H. [1962], Minimal sufficient statistics for the partially balanced incomplete block design with two associate classes under an Eisenhart model II. (abstract). *AMS* 33:819. E3a (2779)
- Kapadia, C. H. [1962], Variance components in two-way classification models with interaction (abstract). *AMS* 33:304. E2,3a (2780)
- Kapadia, C. H. [1964], On the block structure of singular group divisible partially balanced incomplete block (SGDPBIB) designs (abstract). *AMS* 35:1401. E3c (2781)
- Kapadia, C. H. [1966], On the block structure of singular group divisible designs. *AMS* 37:1398-1400. E3c (2782)
- Kapadia, C. H. [1966], Combining intra and inter block analysis of group divisible designs. *Technometrics* 8:189-191. E3a (2783)
- Kapadia, C. H. and Weeks, D. L. [1963], Variance components in two-way classification models with interaction. *Biometrika* 50:327-334. E2a (2784)
- Kapadia, C. H. and Weeks, D. L. [1964], On the analysis of group divisible designs. *JASA* 59:1217-1224. E3a (2785)
- Kapse, Y. S. [1953], Efficiency of different experimental designs with special reference to intra-class correlations. *JISAS* 5:179-189. E2,5,14a (2786)
- Katti, S. K. [1960], A direct method for constructing the intrablock subgroup. *Biometrics* 16:691-694. E3c (2787)
- Keller, K. R. [1951], Relative efficiency of rectangular and triple rectangular lattice designs using hop uniformity trial data. *Agron. J.* 43:93-96. E3,14a (2788)
- Kempthorne, O. [1953], A class of experimental designs using blocks of two plots. *AMS* 24:76-84. E2ac (2789)
- Kempthorne, O. [1956], The efficiency factor of an incomplete block design. *AMS* 27:846-849. E2,3,14a (2790)

- Kempthorne, O. and Barclay, W. D. [1953], The partition of error in randomized blocks. JASA 48:610-614. E2a;A5 (2791)
- Kempthorne, O., Zyskind, G., Addelman, S., Throckmorton, T. N., and White, R. F. [1961], Analysis of variance procedures. Stat. Lab. Aeronautical Res. Lab. ARL-149, Iowa State Univ. and U.S. Air Force. Ellac;T7ac;A5 (2792)
- Kenning, W. [1967], Bloques aleatorios. Instituto Nacional de Tecnologia Agropecuria Tucumán, Argentina, Publicación Miscelánea, 82 pp. E2ae;C (2793)
- Keuls, M. [1952], The use of the "studentized range" in connection with an analysis of variance. Euphytica 1:112-122. E2e;A3 (2794)
- Keuls, M. [1960], Tabellen en nomogrammen voor het onderscheidingsvermogen van de 5% en 10%-F-toets voor het gebruik bij de gewarde blokkenproef. (Tables and graphs of the power of 5% and 10%-F-tests for use in randomized block experiments.) Stat. Neerlandica 14:127-150. E2a (2795)
- Keuls, M. [1960], La puissance du critère F dans l'analyse de la variance de plans en blocs au hasard. Nomogrammes pour le choix du nombre de répétitions. Bull. Inst. Agronomique Stations Recherches Gembloux (Hors Série) 1:256-271 (also, in Biométrie-Praximétrie 1(3):65-80). E2a;S1 (2796)
- Khatri, C. G. and Shah, S. M. [1962], An inequality for balanced incomplete block design. Ann. Inst. Stat. Math. 14:95-96. E2c (2797)
- Kiefer, J. C. [1957], On the (nonrandomized) optimality of symmetrical designs (abstract). AMS 28:1058. E14 (2798)
- Kiefer, J. C. [1957], On the non-optimality of symmetrical designs among randomized designs (abstract). AMS 28:1058. E14;T10 (2799)
- Kiefer, J. [1958], On the nonrandomized optimality and randomized nonoptimality of symmetrical designs. AMS 29:675-699. E14 (2800)
- Kiefer, J. [1959], Optimum experimental designs (with discussion). JRSSB 21:272-319. E14;T1,10;C (2801)
- Kiefer, J. [1960], Optimum experimental designs (abstract). AMS 31:245. E14;T10 (2802)
- Kiefer, J. [1961], Optimum experimental designs V, with applications to systematic and rotatable designs. Proc. Fourth Berkeley Symp. Math. Stat. Prob. 1:381-405. E5c;T1,4,10c (2803)

- Kiefer, J. [1962], Two more criteria equivalent to D-optimality of designs. AMS 33:792-796. E14;T10 (2804)
- Klesselbach, T. A. and Lyness, W. E. [1952], Crop rotation experiments. Nebraska Agri. Expt. Sta. Bull. 416:1-33. E5,8ae (2805)
- Kishen, K. [1958], Presidential address. Recent developments in experimental design. Proc. Forty-Fifth Indian Sci. Congress, Part II, pp. 28-59. E2,3,4ac;T2,3,4ac; B;C (2806)
- Kishen, K. and Rao, C. R. [1952], An examination of various inequality relations among parameters of the balanced incomplete block design. JISAS 4:137-144. E2c (2807)
- Kishen, K. and Srivastava, J. N. [1960], On a class of resolvable partially balanced incomplete block designs (abstract). JISAS 12:150-151. E3ac (2808)
- Kitagawa, T. and Mitome, M. [1955], A contribution to a notation system of the confounded factorial experiments. Bull. Math. Stat. 6(1&2):1-10. E2,3,9,10c;T2c (2809)
- Knapp, R. H. [1957], A note on the t test. Amer. Stat. 11(1):17. E1a (2810)
- Knowles, E. A. G. and Roseman, C. [1950], Graphical analysis of variations as a production department tool in Statistical Method in Industrial Production. Royal Statistical Society, pp. 20-29. E7a (2811)
- Knowles, R. P. [1952], The use of lattice designs for testing forage crops. Sci. Agri. 32:614-617. E14;A14 (2812)
- Koch, G. [1966], The analysis of incomplete blocks experiments with particular emphasis on the relationship between the recovery of interblock information and generalized least squares when block effects are assumed random. Inst. Stat. Mimeo. Ser. No. 464, Univ. N. Carolina. E2,3a (2813)
- Koch, G. G. [1967], Some aspects of the statistical analysis of "split plot" experiments Part I: Completely randomized layouts. Inst. Stat. Mimeo. Ser. No. 527 Univ. N. Carolina. E5a (2814)
- Koch, G. G. [1967], Some aspects of the statistical analysis of 'split plot' experiments (abstract). Biometrics 23:381-382. E5a (2815)
- Kogan, L. S. [1953], Variance designs in psychological research. Psychological Bull. 50:1-40. E1,2,7ae;T2a;E (2816)
- Kramer, C. Y. [1956], Factorial treatments in incomplete block designs. Ph. D. Thesis, Virginia Polytechnic Inst. E3a;T2a (2817)

- Kramer, C. Y. and Bradley, R. A. [1956], Factorials in near-balanced incomplete block designs for $k(k-1)$ treatments (preliminary report) (abstract). AMS 27:545-546. E3a;T2a (2818)
- Kramer, C. Y. and Bradley, R. A. [1957], Intra-block analysis for factorials in two associate class group divisible designs. AMS 28:349-361. E3a;T2a (2819)
- Kramer, C. Y. and Bradley, R. A. [1957], Examples of intra-block analysis for factorials in group divisible, partially balanced, incomplete block designs. Biometrics 13:197-224. E3ae;T2ae (2820)
- Kramer, C. Y. and Bradley, R. A. [1957], Factorial treatments in group divisible incomplete block designs (abstract). AMS 28:816. E2ac;T2ac (2821)
- Kramer, C. Y. and Glass, S. [1960], Analysis of variance of a Latin square design with missing observations. Appl. Stat. 9:43-50. E7,10ae (2822)
- Krishnaiah, P. R. [1961], On simultaneous tests in nested designs (preliminary report) (abstract). AMS 32:628-629. E1a;A3 (2823)
- Krishnaiah, P. R. [1963], Simultaneous tests and the efficiency of generalized balanced incomplete block designs. Ph. D. Thesis, Univ. Minnesota (also, Aerospace Res. Lab. ARL 63-174, U.S. Air Force.). E2,3,5,14a;A3,7 (2824)
- Kruskal, W. [1952], A nonparametric analogue based upon ranks of one-way analysis of variance (abstract). AMS 23:140. E1a;A12 (2825)
- Kshirsagar, A. M. [1957], A note on the total relative loss of information in any design. Calcutta Stat. Assoc. Bull. 7:78-81. E14 (2826)
- Kshirsagar, A. M. [1957], On balancing in designs in which heterogeneity is eliminated in two directions. Calcutta Stat. Assoc. Bull. 7:161-166. E7c (2827)
- Kshirsagar, A. M. [1958], A note on incomplete block designs. AMS 29:907-910. E2,3a (2828)
- Kshirsagar, A. M. [1959], Distribution of the "blocks adjusted for treatments" sum of squares in incomplete block designs. AMS 30:246-249. E3a (2829)
- Kshirsagar, A. M. [1962], Distribution of the adjusted row sum of squares in two-way designs. Calcutta Stat. Assoc. Bull. 11:155-159. E7a (2830)
- Kshirsagar, A. M. [1966], Balanced factorial designs. JRSSB 28:559-567. E3,4ac;A8 (2831)
- Kuebler, R. R. [1958], On the construction of a class of error-correcting binary signalling codes. Ph. D. Thesis, Univ. N. Carolina. E3,4c (2832)

- Kuiper, N. H. [1952], Variantie-analyse. (Analysis of variance.) Statistica 6:149-194. E2,7a;T2a (2833)
- Kuiper, N. H. and Corsten, L. C. A. [1953], Open plaatsen in variantieschema's. Mededelingen van de Landbouwhogeschool te Wageningen 53:25-30. E6ae (2834)
- Kulkarni, G. A. [1960], A problem in reinforced incomplete block design. JISAS 12:143-145. E4a (2835)
- Kulkarni, G. A. [1961], Incomplete block designs for slope-ratio assays (abstract). JISAS 13:239. E2a;T8ac (2836)
- Kurkjian, B. M. [1959], Use of partially balanced block designs with three associate classes for confounded, asymmetrical factorial arrangements (abstract). AMS 30:615. E3c;T2c (2837)
- Kurkjian, B. [1960], A general theory for asymmetrical confounded factorial experiments. Ph. D. Thesis, American Univ. E2,3a;T2a;A8 (2838)
- Kurkjian, B. and Zelen, M. [1961], A general theory for analysis of asymmetrical, confounded factorial experiments (abstract). Biometrics 17:171. E3,4a;T2a (2839)
- Kurkjian, B. and Zelen, M. [1963], Applications of the calculus of factorial arrangements. I. Block and direct product designs. Biometrika 50:63-73 (also MRC Tech. Summary Report No. 330, U.S. Army Univ. Wisconsin). E3,4ac;A8 (2840)
- Kurkjian, B. and Zelen, M. [1963], Applications of the calculus of factorial arrangements I. Block and direct product designs (abstract). Proc. Eight Conf. Design Expt. Army Res. Dev. Testing. E4a (2841)
- Kurtz, T. E. [1956], An extension of a multiple comparisons procedure. Ph. D. Thesis, Princeton Univ. E1,2a;A3 (2842)
- Kurtz, T. E., Link, R. F., Tukey, J. W., and Wallace, D. L. [1965], Short-cut multiple comparisons for balanced single and double classifications: Part 1, Results (with discussion). Technometrics 7:95-169. E1,2ae;A3 (2843)
- Kurtz, T. E., Link, R. F., Tukey, J. W., and Wallace, D. L. [1965], Short-cut multiple comparisons for balanced single and double classifications. Part 2, Derivations and approximations. Biometrika 52:485-498. E1,2a;A3 (2844)
- Kurtzer, C. L. [1965], Balanced or near-balanced k row by b column designs for v treatments in r replicates with $2 \leq v, r \leq 10$. B.S. Thesis, Cornell Univ. E7ac (2845)
- Kusumoto, K. [1964], On a design for two-way elimination of heterogeneity and its analysis. J. Sci. Hiroshima Univ. Ser. A-I 28:237-258. E7ac (2846)

Kusumoto, K. [1965], A necessary condition for the existence of regular and symmetrical PBIB designs of T_3 type. Ann. Inst. Stat. Math. 17:149-165.

E3ace (2847)

Kusumoto, K. [1965], Hypercubic designs. Wakayama Medical Reports 9:123-132.

E3c (2848)

Kuzmin, W. R. [1959], Experiments to expose marginal reliability designs. Nat.

Symp. Reliability Quality Control. Proc. 5:55-64.

E7ae;T2ae (2849)

- Lafon, M. [1957], Construction de blocs incomplets partiellement équilibrés à $s+1$ classes associées. Comptes Rendus 244(premier semestre):1714-1717.
E3c (2850)
- Lafon, M. [1959], Coefficient d'efficacité d'un bloc incomplet partiellement équilibré. Comptes Rendus 248(premier semestre):3114-3115.
E3c (2851)
- Lafon, M. [1963], Recherche des plans d'expérience du type à blocs incomplets partiellement équilibrés à cinq répétitions. Comptes Rendus (deuxième semestre) 257:830-832.
E3c (2852)
- Lafon-Augé, M. [1957], Conditions d'existence d'un bloc incomplet partiellement équilibré. Comptes Rendus (deuxième semestre) 245:1774-1775.
E3c (2853)
- Lafon-Augé, M. [1960], Application de l'algèbre aux plans d'expériences: constructions de blocs incomplets partiellement équilibrés et analyse de la variance. Publications. Inst. Stat. Univ. Paris 9:193-287.
E3ac (2854)
- Lakshminarayan, [1958], The construction and combinatorial properties of Latin squares and balanced sequences. Ph. D. Thesis, Univ. Aberdeen.
E7,13c (2855)
- Langer, W. and Stern, K. [1955], Versuchstechnische Probleme bei der Anlage von Klonplantagen. Z. Forstgenetik Forstpflanzenzüchtung 4:81-88.
E2a;T9a;C (2856)
- Lashof, T. W., Mandel, J., and Worthington, V. [1956], Use of the sensitivity criterion for the comparison of the Bekk and Sheffield smoothness testers. Tappi 39:532-543.
E14 (2857)
- Lathwell, D. J. and Evans, C. E. [1951], Nitrogen uptake from solution by soybeans at successive stages of growth. Agron. J. 43:264-270.
E2e;T7e (2858)
- Leech, F. B. [1950], Statistical analysis of results for successive tests on the same organism. Nature 165:323-324.
E5,8a (2859)
- Leech, F. B. and Healy, M. J. R. [1959], The analysis of experiments on growth rate. Biometrics 15:98-106 (abstract 15:151-152; correction 15:631).
E5ae (2860)
- Lees, K. A. and Tootill, J. P. R. [1955], Microbiological assay on large plates Part I. General considerations with particular reference to routine assay. Analyst 80:95-110.
E9ae;T8a (2861)
- Lees, K. A. and Tootill, J. P. R. [1955], Microbiological assay on large plates Part II. Precise assay. Analyst 80:110-123.
E7,9ae;T8a (2862)

- Lees, K. A. and Tootill, J. P. R. [1955], Microbiological assay on large plates
Part III. High throughput, low precision assays. *Analyst* 80:531-535.
E2,7,11ae;T8a (2863)
- Lemmer, H. H. and Stoker, D. J. [1967], Distribution-free analysis of variance for
the two-way classification. *South African Stat. J.* 1:67-74.
E2a;A12 (2864)
- Lemus, F. [1960], A mixed model factorial experiment in testing electrical connectors.
IQC 17(6):12-16.
Ele;T2e (2865)
- le Roux, D. P. [1965], Intra-block estimation of a missing observation in partially
balanced incomplete block designs with two associate classes. *Suid-Afrikaanse
Tydskrif vir Landbouwetenskap* 8:479-485.
E3,6a (2866)
- le Roux, D. P. and Kramer, C. Y. [1963], Intra-block analysis of variance of a semi-
regular group divisible partially balanced incomplete block design with missing
observations. *Suid-Afrikaanse Tydskrif vir Landbouwetenskap* 6:689-700.
E3,6ae (2867)
- Le Roy, H. L. and Landis, J. [1960], Das Schätzen fehlender Werte im a.b.c- bzw.
a.b-Versuch. (The estimating of missing values in the a.b.c- or a.b-design.)
Blom. Zeit. 2:98-107.
E2,6ae;T2ae (2868)
- Lessman, K. J. and Atkins, R. E. [1963], Optimum plot size and relative efficiency
of lattice designs for grain sorghum yield tests. *Crop Sci.* 3:477-481.
E3,14a;A14 (2869)
- Levy, P. S. [1965], A new method of estimating treatment effects or treatment dif-
ferences in balanced incomplete block designs (abstract). *AMS* 36:1325.
E2a (2870)
- Li, L. [1962], Studies on the efficiency of lattice and randomized complete block
designs in horticultural station trials of sweet potatoes (in Chinese). *Chung-
hua Nung-hsueh Hui Pao/J. Agri. Assoc. China, New Series* 40:40-49.
E2,3a;A14 (2871)
- Linder, A. [1952], Ein einfacher "ausgewogener Versuch in unvollständigen Blöcken"
Mitteilungsblatt für Mathematische Statistik 4:129-138.
E2ac (2872)
- Linder, A. [1964], Design and analysis of experiments. *Inst. Stat. Mimeo. Ser.*
No. 398, Univ. N. Carolina.
E2,3a;T2,3a (2873)
- Lindley, D. V. [1956], On a measure of the information provided by an experiment.
AMS 27:986-1005.
E14 (2874)
- Lindley, D. V. [1961], An experiment in the marking of an examination. (with discussion)
JRSSA 124:285-313.
E2,7ace (2875)

- Linhart, H. [1966], Streuungszerlegung für Paar-Vergleiche. *Metrika* 10:16-38.
E2,3a;T11ace (2876)
- Linnerud, A. C., Gates, C. E., and Donker, J. D. [1962], Significance of carry-over effects with extra period Latin square change-over design (abstract).
J. Dairy Sci. 45:675. E8a (2877)
- Lintner, J. [1958], Random block and Quasi-Latin square designs used to determine fertilizer requirements of sugarcane. *South African Sugar Technologists' Assoc. Proc.* pp. 1-22.
E2,7a;T2a (2878)
- Liu, C. W. [1963], A method of constructing certain symmetrical partially balanced designs. *Scientia Sinica* 12:1935-1937. E3c (2879)
- Liu, C. W. and Chang, L. C. [1964], Some PBIB(2) designs induced by association schemes. *Scientia Sinica* 13:840-841. E3c (2880)
- Liu, W. R. and Chang, L. C. [1964], Group divisible incomplete block designs with parameters $v \leq 10$ and $r \leq 10$. *Scientia Sinica* 13:839-840. E3c (2881)
- Lochow, J. v. and Schuster, W. [1961], Anlage und Auswertung von Feldversuchen. DLG-Verlags-GmbH., Frankfurt am Main, 130 pp. E2,5,7ae;T2ae (2882)
- Lubin, A. [1960], On the repeated-measurements design in biological experiments. *Proc. Fifth Conf. Design Expt. Army Res. Dev. Testing.* pp. 123-131.
E5,8a (2883)
- Lucas, H. L. [1950], Statistics and research on pasture and grazing. Committee on Experimental Design Lecture Series I, No. 3, U.S. Dept. Agri. Agri. Res. Administration. E5,8a;C;S1 (2884)
- Lucas, H. L. [1951], Bias in estimation of error in change-over trials with dairy cattle. *J. Agri. Sci.* 41:146-148. E8a (2885)
- Lucas, H. L. [1956], Switchback trials for more than two treatments. *J. Dairy Sci.* 39:146-154. E8ace (2886)
- Lucas, H. L. [1957], Extra-period Latin-square change-over design. *J. Dairy Sci.* 40:225-239. E8ace (2887)
- Lucas, H. L. [1959], Experimental designs and analyses for feeding efficiency trials with dairy cattle. Chapter 15 in Nutritional and Economic Aspects of Feed Utilization by Dairy Cows, pp. 177-192. E8a;C (2888)
- Lucas, H. L. [1960], Planification des experiences d'alimentation des vaches laitières. *Biométrie-Praximétrie* 1(3-4):17-32. E7,8ac;C (2889)
- Lucas, H. L. [1960], Design of dairy feeding experiments. *Bull. Inst. Agronomique Stations Recherches Gembloux, (Hors série)* 1:212-224. E7,8ac;C (2890)

Lum, M. [1955], Rules for determining error terms in hierarchical and partially hierarchical models (abstract). AMS 26:151. E1a (2891)

Lynch, L. [1958], The analysis of paired ranked observations. Ph. D. Thesis, Virginia Polytechnic Inst. E2a;A12 (2892)

Lynch, P. B. [1960], Conduct of field experiments. Bull. 399, New Zealand Dept. Agri. E2,3,7,12ae;A14:C (2893)

- Maag, U. R. [1965], Contributions to the design of experiments. Ph. D. Thesis, Univ. Toronto. E (2894)
- Mack, A. R. and Cairns, R. R. [1959], Statistical procedures: A. Illustrated Sta. Div., Central Expt. Farm, Ottawa, Ontario, pp. 14+29 (mimeo.). E2,6ae;T2ae (2895)
- Mack, A. R. and Cairns, R. R. [1959], Statistical procedures: B. Illustrated Sta. Div., Central Expt. Farm, Ottawa, Ontario, pp. 26 (mimeo.). E2,3ae (2896)
- MacLean, J. A. R. and Wickens, R. [1951], Application of an incomplete block design to the assessment of quality in Cacao. Nature 168:434-435. E2,3a;T11a (2897)
- MacLeod, L. B., Bishop, R. F., Jackson, L. P., MacEachern, C. R., and Goring, E. T. [1960], A long-term field experiment with commercial fertilizers and manure. I. Fertility levels and crop yields in a rotation of swedes, oats and hay. Canadian J. Soil Sci. 40:136-145. E5,8a (2898)
- MacWilliams, F. J. and Mann, H. B. [1967], On the p-rank of the design matrix of a difference set. MRC Tech. Summary Report No. 803, U.S. Army and Univ. Wisconsin. E2c (2899)
- Majindar, K. N. [1962], On the parameters and intersection of blocks of balanced incomplete block designs. AMS 33:1200-1205. E2c (2900)
- Majindar, K. N. [1966], On integer matrices and incidence matrices of certain combinatorial configurations, I: square matrices II and III: rectangular matrices. Canadian J. Math. 18:1-17. E2c (2901)
- Majumdar, K. N. [1953], On some theorems in combinatorics relating to incomplete block designs. AMS 24:377-389. E2c (2902)
- Majumdar, K. N. [1954], On combinatorial arrangements. Proc. American Math. Soc. 5:662-664. E2c (2903)
- Majumdar, K. N. [1961], An investigation of properties of incomplete block designs. Ph. D. Thesis, Purdue Univ. E2,3,14ac (2904)
- Malavolta, E. et al. [1953], Competição entre adubos fosfatados em milho (Zea mays L.) Anais Escola Superior Agri. "Luiz de Queiroz" 10:109-120. E7,12ae (2905)
- Mallows, C. L. [1959], The information in an experiment. JRSSB 21:67-72. E14 (2906)
- Malone, M. J. [1967], Algorithms for analysis of experiments with incomplete structures. M. S. Thesis, Iowa State Univ. E3a;A15 (2907)

- Manceau, J. N. [1957], Application of the covariance analysis to the comparative study of two anthelmintics. Bull. ISI 35 (2):339-352. E2e;A7 (2908)
- Mandel, J. [1954], Chain block designs with two-way elimination of heterogeneity. Biometrics 10:251-272. E7ace (2909)
- Mandel, J. [1959], The analysis of Latin squares with a certain type of row-column interaction. Technometrics 1:379-387. E7ae (2910)
- Mandel, J. and Stiehler, K. D. [1954], Sensitivity - A criterion for the comparison of methods of test. J. Res. NBS 53:155-159. E14 (2911)
- Mandel, J. and Zelen M. [1954], New types of easily constructed partially balanced incomplete block designs (abstract). AMS 25:807. E3c (2912)
- Mann, H. B. [1960], The algebra of a linear hypothesis. AMS 31:1-15. E2,14a (2913)
- Mann, H. B. [1964], Balanced incomplete block designs and Abelian difference sets. Illinois J. Math. 8:252-261. E2c (2914)
- Mann, H. B. and Menon, M. V. [1960], Intrablock and interblock estimates. Contributions to Probability and Statistics pp. 293-298. E2,3a (2915)
- Mann, H. H. and Boyd, D. A. [1958], Some results of an experiment to compare ley and arable rotations at Woburn. J. Agri. Sci. 50:297-306. E5,8a (2916)
- Martin, L. [1952], Statistical methods in radiochemistry (with discussion). Analyst 77:892-896. E2e;C (2917)
- Martinez, A. [1965], Some considerations on combined analysis of experiments. M. S. Thesis, Iowa State Univ. E2,3,12a;A13 (2918)
- Masuyama, M. [1957], On the optimality of balanced incomplete block designs. Reports Stat. Appl. Res. 5:4-8 (correction 5:71-72). E2,14c (2919)
- Masuyama, M. [1957], On difference sets of constructing orthogonal arrays of index two and of strength two. Reports Stat. Appl. Res. 5:27-34. E2c (2920)
- Masuyama, M. [1959], On cyclic difference sets which generate orthogonal arrays. Reports Stat. Appl. Res. 6:47-53. E2,3c;T2,3,7c (2921)
- Masuyama, M. [1960], On the existence theorem of cyclic difference sets for the orthogonal arrays $(9\lambda, 3\lambda+1, 3, 2)$. Reports Stat. Appl. Res. 7:53-55. E2,3c (2922)
- Masuyama, M. [1961], Calculus of blocks and a class of partially balanced incomplete block designs. Reports Stat. Appl. Res. 8:56-69. E3c (2923)

- Masuyama, M. [1961], On cyclic difference sets which generate orthogonal arrays, Part II: Reports Stat. Appl. Res. 8:70-76. E2,3c (2924)
- Masuyama, M. [1962], Decomposition by bilateral cosets and its generalization. Sankhyā, A, 24:41-46. E3c (2925)
- Masuyama, M. [1962], La décomposition périodique dans le calcul des blocs le raffinement des décompositions. Bull. ISI 39(3):155-160. E3c (2926)
- Masuyama, M. [1962], On the classes of blocks. Reports Stat. Appl. Res. 9: 83-87. E2,3ac (2927)
- Masuyama, M. [1962], On the uniqueness of the solution of a block equation $xx^* = c$ for $s(c) = 2, 3$ and 4, elements being residues modulo v . Reports Stat. Appl. Res. 9:88-92. E2,3ac (2928)
- Masuyama, M. [1963], Calculus of non-commutative blocks and its applications to experimental designs. Reports Stat. Appl. Res. 10:237-240. E3c:A8 (2929)
- Masuyama, M. [1964], Construction of PBIB designs by fractional development. Reports Stat. Appl. Res. 11:47-54. E3c (2930)
- Masuyama, M. [1963], A geometrical problem related to cyclic designs. Contributions to Statistics pp. 239-244. E3c (2931)
- Masuyama, M. [1963], Le calcul des blocs et ses applications aux plans d'expérience. Colloques Internationaux du C.N.R.S., No. 110; Le Plan d'Expériences pp. 51-60. E2,3c (2932)
- Masuyama, M. [1964], Linear graphs of PBIB designs. Reports Stat. Appl. Res. 11:147-151. E3c (2933)
- Masuyama, M. [1965], Cyclic generation of triangular PBIB designs. Reports Stat. Appl. Res. 12:73-81 (errata 13:242). E3c (2934)
- Masuyama, M. [1965], Construction of certain PBIB designs from a BIB design. Reports Stat. Appl. Res. 12:143-145. E3c (2935)
- Masuyama, M. [1965], A class of triangular designs. Reports Stat. Appl. Res. 12:146-148. E3ac (2936)
- Masuyama, M. [1966], Construction cyclique des BIPE par développement fractionnaire. Bull. ISI 41:951-956. E3c (2937)
- Masuyama, M. [1966], Symbolic calculus of blocks applied to PBIB designs. Reports Stat. Appl. Res. 13(2):1-11. E3a:A8 (2938)

- Masuyama, M. [1966], Relation diagrams of SBIB and other designs. Reports Stat. Appl. Res. 13(2):41-42. E3,4ac (2939)
- Masuyama, M. [1966], A combinatorial proof of Bose-Connor inequality for PBIB designs of GD scheme. Reports Stat. Appl. Res. 13:236-237. E3c (2940)
- Masuyama, M. [1967], Construction cyclique de blocs incomplets partiellement equilibres. Rev. ISI 35:107-124. E3c (2941)
- Masuyama, M. and Okuno, T. [1957], On the optimality of Latin-, Youden- and Shrikhande square designs. Reports Stat. Appl. Res. 5:17-19. E7,14c (2942)
- Mathai, A. M. [1964], Missing values in statistical analysis. Ph. D. Thesis, Univ. Toronto. E6a;A10 (2943)
- Mathai, A. M. [1965], Approximate analysis for a two-way layout (abstract). AMS 36:365. E2a;A10 (2944)
- Mathai, A. M. [1965], An approximate method of analysis for a two-way layout. Biometrics 21:376-385. E2a;A10 (2945)
- Mathen, K. K. [1954], Note on the design of experiments and testing the efficiency of drugs having local healing power. Sankhyā 14:175-179. E2ae (2946)
- Maurin, F. [1964], Sur une généralisation de la méthode des différences pour la construction de tableaux orthogonaux. Comptes Rendus 259:4490-4491. E3,7c (2947)
- Maurin, F. [1965], Sur certains groupes de substitutions entraînant l'existence de tableaux orthogonaux. Comptes Rendus 260:52-55. E3,7c (2948)
- Maurin, F. [1966], Automorphismes propres de groupes et groupes abéliens finis sans-transitifs d'ordre t et d'indice unité. Application à la construction des tableaux orthogonaux. Comptes Rendus 262:1194-1197. E3,7c (2949)
- Maurin, F. [1967], Automorphismes propres de groupes abéliens finis et orthomorphismes de groupes finis. Application à la construction de tableaux orthogonaux. Comptes Rendus 264:702-704. E3,7c (2950)
- Mazumdar, S. [1965], On the construction of cyclic collineations for obtaining a balanced set of prime-powered lattice designs. Biometrics Unit Mimeo. Ser. BU-208-M, Cornell Univ. E2,3,11,13c (2951)
- Mazumdar, S. [1967], On the construction of cyclic collineations for obtaining a balanced set of L-restrictional prime-powered lattice designs. AMS 38:1293-1295. E2,3,11,13c (2952)

- Mazurak, A. P., Valassis, V. T., and Harris, L. C. [1954], Water-stability of aggregates from potato plots as affected by different rotation systems under irrigation in western Nebraska. Proc. Soil Sci. Soc. America 18:243-247.
E5,8a (2953)
- Mazuy, K. K. and Connor, W. S. [1962], Student's t in an n-way classification with unequal variances (preliminary report) (abstract). AMS 33:820.
E2,13a;All (2954)
- Mazuy, K. K. and Connor, W. S. [1965], Student's t in a two-way classification with unequal variances. AMS 36:1248-1255.
E2a;All (2955)
- McIntyre, G. A. [1955], Design and analysis of two phase experiments. Biometrics 11:324-334.
E7,12ae;S2 (2956)
- McIntyre, G. A. [1956], Query 123. Biometrics 12:527-532. E7,12a;S2 (2957)
- McNemar, Q. [1951], On the use of latin squares in psychology. Psychological Bull. 48:398-401.
E7a (2958)
- Mehra, K. L. [1962], Rank tests for incomplete block designs, paired-comparison case. Ph. D. Thesis, Univ. California.
E2,3a;T11a (2959)
- Meier, P. [1951], The variance of a weighted average using estimated weights (abstract). AMS 22:607.
E3a;All (2960)
- Meier, P. [1951], Weighted means and lattice designs. Ph. D. Thesis, Princeton Univ.
E2,3a (2961)
- Meier, P. [1952], The estimation of error in simple lattice designs (abstract). Biometrics 8:93.
E3a (2962)
- Meier, P. [1953], Variance of a weighted mean. Biometrics 9:59-73.
E3a (2963)
- Meier, P. [1954], Analysis of simple lattice designs with unequal sets of replications. JASA 49:786-813.
E3a (2964)
- Meier, P. and Free, S. M. [1961], Further consideration of methodology in studies of pain relief. Biometrics 17:576-583.
E3a;C (2965)
- Meister, F. [1952], Magische Quadrate. Verlag von Ernst Wurzel, Zurich, 71 pp.
E12ac;B (2966)
- Melton, B. and Finkner, M. D. [1967], Relative efficiency of experimental designs with systematic control plots for alfalfa yield tests. Crop Sci. 7:305-307.
E5,14a (2967)

- Mendelsohn, N. S. and Dulmage, A. L. [1958], Some generalizations of the problem of distinct representatives. Canadian J. Math. 10:230-241. E7c (2968)
- Menon, M. V. K. [1959], Combined interblock and interblock estimates. Ph. D. Thesis, Ohio State Univ. E2,3a (2969)
- Menon, P. K. [1961], Method of constructing two mutually orthogonal latin squares of order $3n+1$. Sankhyā A 23:281-282. E7,12c (2970)
- Menon, P. K. [1963], Combinatorial problems. Res. Training School Publication No. SM 63-2, Indian Stat. Inst. E2c (2971)
- Merrill, L. B. [1954], A variation of deferred rotation grazing for use under southwest range conditions. J. Range Management 7:152-154. E5,8c (2972)
- Mesner, D. M. [1955], Uniqueness of Latin square association schemes for partially balanced incomplete block designs (preliminary report) (abstract). AMS 26:151. E3c (2973)
- Mesner, D. M. [1956], An investigation of certain combinatorial properties of partially balanced incomplete block designs and association schemes; with a detailed study of designs of Latin square and related types. Ph. D. Thesis, Michigan State Univ. E3c (2974)
- Mesner, D. M. [1956], A new class of PBIB designs (abstract). AMS 27:1185. E3c (2975)
- Mesner, D. M. [1957], The structure of incidence matrices of partially balanced incomplete block designs (abstract). Biometrics 13:244. E3c (2976)
- Mesner, D. M. [1963], A note on parameters of PBIB association schemes. Inst. Stat. Mimeo. Ser. No. 375, Univ. N. Carolina. E3c (2977)
- Mesner, D. M. [1964], Negative latin square designs. Inst. Stat. Mimeo. Ser. No. 410, Univ. N. Carolina. E3c (2978)
- Mesner, D. M. [1965], A note on the parameters of PBIB association schemes. AMS 36:331-336. E3a (2979)
- Mesner, D. M. [1966], The block structure of certain PBIB designs of partial geometric types. Inst. Stat. Mimeo. Ser. No. 457, Univ. N. Carolina. E3c (2980)
- Mesner, D. M. [1967], A new family of partially balanced incomplete block designs with some latin square design properties. AMS 38:571-581. E3c (2981)
- Mexas, A. G. [1967], Algorithms for computer analysis of variance of balanced complete structures. M. S. Thesis, Iowa State Univ. E2a;T2a;A15 (2982)

- Mikhail, W. F. [1960], An inequality for balanced incomplete block designs. AMS 31:520-522 (abstract 31:535; acknowledgement of priority 31:1213).
E2c (2983)
- Mitchell, J. A., Bockman, C. D., and Lee, A. V. [1957], Determination of acetyl content of cellulose acetate by near infrared spectroscopy. Anal. Chem. 29: 499-502.
E12e (2964)
- Mitra, S. K. [1959], Some remarks on the missing plot analysis. Sankhyā 21:337-344.
E2,6,7,10a (2985)
- Mitra, S. K. [1960], On the F-test in the intrablock analysis of a balanced incomplete block design. Sankhyā 22:279-284.
E2a (2986)
- Mitscherlich, E. A. [1950], Über die Fehler bei Ertragsversuchen. Dtsch. Akad. Wiss. Heft 37, Akademie-Verlag, Berlin, pp.26.
E5c;C (2987)
- Mitscherlich, E. A. [1954], Über die Anlage von Feldversuchen und die Verarbeitung ihrer Ergebnisse. Z. Pflanzenzüchtung 33:17-22.
E5a;C (2988)
- Möbius, H.-J. [1956], Bemerkungen zu einigen Fragen der Feldversuchsmethodik. Z. Landw. Vers.-Untersuch Wes. 2:282-294.
E2a (2989)
- Moonan, W. J. [1952], The generalization of the principles of some modern experimental designs for educational and psychological research. Ph. D. Thesis, Univ. Minnesota.
E2,7ae;A7 (2990)
- Moonan, W. J. [1954], Multivariate analysis of covariance for a Latin square (summary). JASA 49:349.
E7a;A7 (2991)
- Moraes, J. M., Almeida, J. R. et. al. [1951], Influência do cloro, sobre a composição do caldo da cana de açúcar Co 290, aplicado no solo, na forma de cloreto de sódio. Anais Escola Superior Agri. "Luiz de Queiroz" 8:115-151.
E7ae (2992)
- Moriguti, S. [1954], Optimality of orthogonal designs. Reports Stat. Appl. Res. 3:75-97.
E14 (2993)
- Moser, W. O. J. [1967], The number of very reduced $4 \times n$ Latin rectangles. Canadian J. Math. 19:1011-1017.
E7c (2994)
- Mote, V. L. [1958], On a minimax property of a balanced incomplete block design. AMS 29:910-914.
E2a (2995)
- Movshin, J. [1959], Experimental design - Part I. Why design experiments? ASQC Nat. Conv. Trans. 13:509-522.
E2a;C (2996)
- Mudra, A. [1954], Zur Bestimmung der Einzelfehler in Sortenversuchen. Z. Pflanzenzüchtung 33:23-30.
E2,7ae (2997)

- Mudra, A. [1954], Ein Vergleich verschiedener Versuchsmethoden. Z. Pflanzenzüchtung 33:419-423. E14 (2998)
- Mudra, A. [1955], Bemerkungen zu der Arbeit von N. Atanasiu: Zur Frage der Anlage und Auswertung der Feldversuche. Z. Pflanzenzüchtung 34:1-6. E2a (2999)
- Muller, E. R. [1965], A method of constructing balanced incomplete block designs. Biometrika 52:285-288. E2c (3000)
- Müller, K.-H. [1954], Eine graphische Methode der varianzanalytischen Versuchsauswertung. Z. Pflanzenzüchtung 33:427-436. C (3001)
- Müller, K.-H. [1954], Kritische Bemerkungen zu der Arbeit von N. Atanasiu „Über die statistischen Auswertungsmethoden der Feldversuche.“ Z. Planzenernährung Düngung Bodenkunde 64:129-134. E5a (3002)
- Müller, K.-H. [1955], Zur Bodenstreuung bei Feldversuchen. Z. Acker- und Pflanzenbau 99:119-125. E2ae;C (3003)
- Müller, K.-H. [1955], Zum Bodenausgleich bei der Blockanlage des Feldversuches. Z. Landw. Versuchs Untersuch. Wes. 1:233-241. E2,7a (3004)
- Müller, K.-H. [1956], Exakte Auswertungsverfahren des kontrollierten Anbauvergleiches. Z. Landw. Versuchs Untersuch. Wes. 2:153-161. E2e (3005)
- Müller, K.-H. [1957], Die Anlage und Auswertung faktorieller Feldversuche. Z. Landw. Versuchs Untersuchungs Wesen 2:117-135. E2,12a;T2a (3006)
- Müller, K.-H. [1957], Einfache Auswertungsmöglichkeiten von Versuchen mit fehlenden Angaben. Z. Landw. Versuchs Untersuchungs Wesen 3:391-400. E6a (3007)
- Müller, K.-H. [1959], Vereinfachte Anlagen bei Komplexversuchen. Z. Landw. Versuchs Untersuchungs Wesen 5:5-13. E5,12a (3008)
- Muller, M. E. and Watson, G. S. [1959], Randomization and linear least squares estimation. Dept. Math. Tech. Report No. 32, Princeton Univ. E2a;C (3009)
- Mulligan, B. W. and Haught, A. F. [1956], Experimental design in flame photometry determinations (Summary). JASA 51:520. E5ac (3010)
- Murphy, E. F.; Covell, M. R., and Dinsmore, J. S. [1957], An examination of three methods for testing palatability as illustrated by strawberry flavor differences. Food Res. 22:423-439. E2e;C (3011)
- Murthy, J. S. N. [1964], On the exploitation of a new series of Pairwise Balanced Designs of index unity for the construction of mutually orthogonal Latin Squares (abstract). JISAS 16:169-170. E7,12c (3012)

- Murty, J. S. [1965], On the construction of mutually orthogonal latin squares of non-prime-power orders. JISAS 17:224-229. E7,12,13c (3013)
- Murty, J. S. and Das, M. N. [1967], Balanced n-ary block design and their uses. JISA 5:73-82. E5ac;T6c (3014)
- Murty, V. N. [1952], On a new approach to the analysis of lattice designs (abstract). Proc. Thirty-Ninth Indian Sci. Congress, Part III, p. 15. E3a (3015)
- Murty, V. N. [1953], Analysis of a triple rectangular lattice design. Biometrics 9:422-424. E3ae (3016)
- Murty, V. N. [1954], On a new approach to the analysis to lattice designs (abstract). Ikushugaku Zasshi/Japanese J. Breeding 3(3&4):15. E2,3a (3017)
- Murty, V. N. [1956], Short-cut methods in the analysis of variance. Agri. J. Fiji 3:123-128. E2a;A12 (3018)
- Murty, V. N. [1957], On a parametric relation between the parameters of a balanced incomplete block design (abstract). Proc. Forty-Fourth Indian Sci. Congress, Part III, p. 19. E2c (3019)
- Murty, V. N. [1957], Analysis of simple rectangular lattice designs. Summary Proc. First Conf. Tobacco Res. Workers, Bangalore, 31 January and 1 February, 1957, Indian Centennial Tobacco Comm., pp. 74-75. E3a (3020)
- Murty, V. N. [1957], Separation of error sums of squares in a split-plot design. Summary Proc. First Conf. Tobacco Res. Workers, Bangalore, 31 January and 1 February, 1957, Indian Centennial Tobacco Comm., p. 75. E12a (3021)
- Murty, V. N. [1961], A note on Fisher's inequality for balanced incomplete block designs (abstract). JISAS 13:237. E2a (3022)
- Murty, V. N. [1961], An inequality for balanced incomplete block designs. AMS 32:908-909. E2c (3023)
- Murty, V. N. [1964], On the block structure of PBIB designs with two associate classes. Sankhyā A, 26:381-382. E3c (3024)

- Nair, C. R. [1962], On the methods of block section and block intersection applied to certain PBIB designs. Calcutta Stat. Assoc. Bull. 11:49-54.
E3c (3025)
- Nair, C. R. [1963], A note on the analysis of serially balanced sequences. JISA 1:93-96.
E8a (3026)
- Nair, C. R. [1964], The impossibility of certain PBIB designs. Calcutta Stat. Assoc. Bull. 13:87-88.
E3c (3027)
- Nair, C. R. [1964], A new class of designs. JASA 59:817-833 (corrigendum 60:1250).
E3ace (3028)
- Nair, C. R. [1966], On partially linked block designs. AMS 37:1401-1406.
E4c (3029)
- Nair, C. R. [1967], Sequences balanced for pairs of residual effects. JASA 62:205-225.
E8ace (3030)
- Nair, K. R. [1950], Partially balanced incomplete block designs involving only two replication. Calcutta Stat. Assoc. Bull. 3:83-86.
E3c (3031)
- Nair, K. R. [1951], Rectangular lattices and partially balanced incomplete block designs (abstract). Partially balanced incomplete block designs involving only two replicates (abstract). Proc. Thirty-Eighth Indian Sci. Congress, Part III, p. 13.
E3ac (3032)
- Nair, K. R. [1951], Rectangular lattices and partially balanced incomplete block designs. Biometrics 7:145-154.
E3a (3033)
- Nair, K. R. [1951], Some two-replicate partially balanced designs. Calcutta Stat. Assoc. Bull. 3:174-176.
E3c (3034)
- Nair, K. R. [1951], Some three-replicate partially balanced designs. Calcutta Stat. Assoc. Bull. 4:39-42.
E3c (3035)
- Nair, K. R. [1952], Relation between efficiency of incomplete block designs and the intra-class correlations associated with incomplete and complete blocks. JISAS 4:149-152.
E2,3,14a (3036)
- Nair, K. R. [1952], Analysis of partially balanced incomplete block designs illustrated on the simple square and rectangular lattices. Biometrics 8:122-155.
E3ac (3037)
- Nair, K. R. [1953], Design and analysis of singly linked blocks (abstract). Proc. Fortieth Indian Sci. Congress, Part III, p. 125.
E3ac (3038)
- Nair, K. R. [1953], A note on group divisible incomplete block designs. Calcutta Stat. Assoc. Bull. 5:30-35.
E3c;T2c (3039)

- Nair, K. R. [1953], Some unsolved problems in experimental designs. Calcutta Stat. Assoc. Bull. 4:156-160. E3c;T2c (3040)
- Nair, K. R. [1953], A note on rectangular lattices. Biometrics 9:101-106 (abstract 8:93). E3c (3041)
- Nair, K. R. [1953], Design and analysis of triangular singly linked blocks. Biometrics 9:141-156. E4ace (3042)
- Nair, K. R. [1954], Design and analysis of triangular singly linked blocks (abstract). Ikushugaku Zasshi/Japanese J. Breeding 3(3&4):125. E4ac (3043)
- Nair, K. R. [1954], The so-called almost-balanced incomplete block designs. Calcutta Stat. Assoc. Bull. 5:181-184. E3c (3044)
- Nair, K. R. [1956], Simplified analysis of singly linked blocks (abstract). Proc. Forty-Third Indian Sci. Congress, Part III, pp. 17-18. E4a (3045)
- Nair, K. R. [1956], Simplified analysis of singly linked blocks. Biometrics 12: 369-380. E4ae (3046)
- Nair, K. R. [1958], A note on reinforced incomplete block designs. JISAS 10:150-156. E4a (3047)
- Nair, K. R. and Kishen, K. [1960], Recent developments in experimental design with special reference to the work in India. Bull. ISI 37(3):161-177. E2,3,4,7,12ac; T2,3,4a;B (3048)
- NaNagara, P. [1957], Lattice rectangle designs. Ph. D. Thesis. Cornell Univ. Eliace (3049)
- Nandi, H. K. [1951], On the efficiency of experimental designs. Calcutta Stat. Assoc. Bull. 3:167-171. E14 (3050)
- Nandi, H. K. [1952], Analysis of covariance. Calcutta Stat. Assoc. Bull. 4:79-82. E2a;A7 (3051)
- Nandi, H. K. [1959], Current news. Euler's conjecture on existence of orthogonal Latin squares. Calcutta Stat. Assoc. Bull. 9:76. E7,12c (3052)
- Nandi, H. K. and Adhikary, B. [1966], On the definition of Bose-Shimamoto's cyclical association scheme. Calcutta Stat. Assoc. Bull. 15:165-168. E3c (3053)
- Narayan, L. [1958], The construction and combinatorial properties of Latin squares and balanced sequences. Ph. D. Thesis, Univ. Aberdeen. E7,13,13c (3054)

- Nelder, J. A. [1951], A note on the statistical independence of quadratic forms in the analysis of variance. *Biometrika* 38:482-483. E2a (3055)
- Nelder, J. A. [1954], The interpretation of negative components of variance. *Biometrika* 41:544-548. E5,12a (3056)
- Nelder, J. A. [1954], A note on missing-plot values. *Biometrics* 10:400-401. E6a (3057)
- Nelder, J. A. [1962], New kinds of systematic designs for spacing experiments. *Biometrics* 18:283-307. E5c (3058)
- Nelder, J. A. [1965], The analysis of randomized experiments with orthogonal block structure, I. Block structure and the null analysis of variance. II. Treatment structure and the general analysis of variance. *Proc. Royal Soc., Ser. A*, 283: 147-162, 163-178. E2,7,12,14a;T2a; A5,15 (3059)
- Nissen, Ø. [1951], Detaljplaner og beregningseksempler for forsøk med mange forsøksledd. *Skrivemaskinstua, Oslo, July, Mimeo.* E2,3,5,7,11ae (3060)
- Nissen, Ø. [1951], Nyere metoder for forsøk med et stort antall forsøksledd. (Modern methods for experiments with a large number of treatments.) *Forskning Forsøk Landbruket (Oslo)* 2:192-202. E2,3,7,11a (3061)
- Nissen, Ø. [1951], En plan for faktorielle forsøk med hovedvekten på bestemmelse av samspillene. (A design for factorial experiments when the determination of the interactions is of major interest). *Forskning Forsøk Landbruket (Oslo)* 2: 203-214. E12ac;T2ac (3062)
- Nissen, Ø. [1951], The use of systematic 5x5 squares. *Biometrics* 7:167-170. E7ac (3063)
- Noether, G. E. [1963], Efficiency of the Wilcoxon two-sample statistic for randomized blocks. *JASA* 58:894-898. E2a;A12 (3064)
- Norton, D. A. [1952], Groups of orthogonal row-latin squares. *Pacific J. Math.* 2:335-341. E7,12c (3065)
- Norton, D. A. and Stein, S. K. [1956], An integer associated with Latin squares. *Proc. American Math. Soc.* 7:331-334. E7c (3066)
- Norton, H. W. [1955], A further note on missing data. *Biometrics* 11:110. E6a (3067)

- O'Carroll, F. M. [1963], A method of generating randomized Latin squares. Biometrics 19:652-653. E7c (3068)
- Ogasawara, M. [1965], A necessary condition for the existence of regular and symmetrical PRB designs of T_m type. Inst. Stat. Mimeo. Ser. No. 418, Univ. N. Carolina. E3c (3069)
- Ogasawara, T. and Takahashi, M. [1953], Orthogonality relation in the analysis of variance I. J. Sci. Hiroshima Univ. Ser. A-I 16:457-470. E2,14a (3070)
- Ogawa, J. [1958], On the relationship algebra and the association algebra of the partially balanced incomplete block design (abstract). AMS 29:1279. E3c (3071)
- Ogawa, J. [1959], A necessary condition for existence of regular and symmetrical experimental designs of triangular type, with partially balanced incomplete blocks. AMS 30:1063-1071 (abstract 30:615; Inst. Stat. Mimeo. Ser. No. 219, Univ. N. Carolina). E3c (3072)
- Ogawa, J. [1959], The theory of the association algebra and the relationship algebra of a partially balanced incomplete block design. Inst. Stat. Mimeo. Ser. No. 224, Univ. N. Carolina. E3ac (3073)
- Ogawa, J. [1959], A note on the analysis of a randomized block design. Inst. Stat. Mimeo. Ser. No. 218, Univ. N. Carolina. E2a (3074)
- Ogawa, J. [1961], On a unified method of deriving necessary conditions for existence of symmetrical partially balanced incomplete block designs of certain types. Bull. ISI 38(4):43-57. E3c (3075)
- Ogawa, J. [1961], The effect of randomization on the analysis of randomized block design. Ann. Inst. Stat. Math. 13:105-117. E2a:A5 (3076)
- Ogawa, J. [1963], On the null-distribution of the F-statistic in a randomized balanced incomplete block design under the Neyman model. AMS 34:1558-1568. E2a:A5 (3077)
- Ogawa, J. and Ishii, G. [1964], On the analysis of partially balanced incomplete block designs in the regular case. Inst. Stat. Mimeo. Ser. No. 412, Univ. N. Carolina. E3a (3078)
- Ogawa, J. and Ishii, G. [1965], The relationship algebra and the analysis of variance of a partially balanced incomplete block design. AMS 36:1815-1828. E3ae (3079)
- Ogawa, J., Ikeda, S., and Ogasawara, M. [1964], On the null-distribution of the F-statistic in a randomized partially balanced incomplete block design with two associate classes under the Neyman model. Inst. Stat. Mimeo. Ser. No. 414, Univ. N. Carolina. E3a (3080)

- Ogawa, J. and Pasternack, B. S. [1958], On the problem of incomplete data (abstract).
AMS 29:1279-1280. E6a;A'0 (3081)
- Ogawa, J. and Pasternack, B. S. [1961], Formulation of a model containing a chance mechanism according to which observations are missed: The randomized block design (abstract). AMS 32:922. E2,6a;A10 (3082)
- Ogawa, J., Sadao, I., and Ogasawara, M. [1966], Sur la distribution-nulle de la statistique F pour tester une hypothese-nulle partielle dans un projet de bloc incomplet "randomize" et partiellement equilibre aux m classes associees sous le modele de Neyman (resume). Bull. SI 41:960. E3a (3083)
- Ogilvie, J. C. [1963], A simple method for the elimination of individual trends in the analysis of balanced sets of Latin squares. Biometrics 19:264-272.
E7ae (3084)
- Okuno, C. and Okuno, T. [1961], On the construction of a class of partially balanced incomplete block design by calculus of blocks. Reports Stat. Appl. Res. 8:113-139.
E3c (3085)
- Okuno, T. [1958], On the design and analysis of field experiments. II. Split-plot and split-block designs (in Japanese). Bull. Nat. Inst. Agri. Sci. 6(A):81-146.
E12a (3086)
- Okuno, T. [1961], The model and interpretations for analysis of covariance. Bull. ISI 38(4):555-565. Elae;A7 (3087)
- Okuno, T. [1962], Mathematical models and robust criteria in the study of the analysis of variance. Bull. Nat. Inst. Agri. Sci. 9(A):153-211. E2,12a;A7 (3088)
- Ortlepp, H. [1955], Zur Anwendung einiger Versuchsmethoden im Feldversuchswesen. Z. Landw. Vers.-Untersuch Wes. 1:300-311. E2,5,7a;A14 (3089)
- Ortlepp, H. [1957], Überlegungen und Vorschläge zur Anordnung der Teilstücke in Feldversuchsanlagen. Z. Landw. Vers. Untersuch Wes. 2:136-150.
E2,7a;A14 (3090)
- Ostle, B. [1952], Question 31: How F estimates unity, Amer. Stat. 6(3):32.
E1a (3091)
- Ostrowski, R. T. and Van Duren, K. D. [1961], On a theorem of Mann on Latin squares Math. Computation 15:293-295. E7c (3092)
- Outhwaite, A. D. and Rutherford, A. [1955], Covariance analysis as an alternative to stratification in the control of gradients. Biometrics 11:431-440.
E7ae;A7 (3093)

- Paige, L. J. and Tompkins, C. B. [1960], The size of the 10x10 latin square problem. Proc. Tenth Symp. Appl. Math. American Math. Soc. 10:71-83.
E7,12,13c (3094)
- Paik, U. B. [1960], Field Experiment and Statistical Methods. New Agricultural Techniques. H. M. Publishing Co., Seoul, Korea. E2,3a;T2a;C (3095)
- Paik, U. B. [1962], Analysis of lattice design for the farm experiment. Theses Collection Chungnam National Univ., Vol. II. E2,3a (3096)
- Pansey, V. G. and Abraham, T. P. [1958], Analysis of a long-term manurial-cum-rotational experiment (abstract). IISAS 10:160. E5,8a;A13 (3097)
- Pansey, V. G. and Abraham, T. P. [1960], Simple scientific experiments on farmers' land. Bull. ISI 27(3):179-189. E3ac;T3ac;C (3098)
- Pansey, V. G. and Sukhatme, P. V. [1954], Statistical Methods for Agricultural Workers. Indian Council Agri. Res., New Delhi, Rs 15: pp. xvi+361. E1,2,3,5,7,12ace; T2a (3099)
- Parker, E. T. [1957], On collineations of symmetric designs. Proc. American Math. Soc. 8:350-351. E2c (3100)
- Parker, E. T. [1958], Construction of some sets of pairwise orthogonal latin squares (preliminary report) (abstract). American Math. Soc. Notices 5:815. E7,12c (3101)
- Parker, E. T. [1959], Construction of some sets of mutually orthogonal latin squares. Proc. American Math. Soc. 10:946-949. E7,12,13c (3102)
- Parker, E. T. [1959], Orthogonal latin squares (abstract 557-63). American Math. Soc. Notices 6:276. E7,12c (3103)
- Parker, E. T. [1959], Nonextendible sets of mutually orthogonal Latin squares (preliminary report) (abstract 558-54). American Math. Soc. Notices 6:390-391. E7,12,13c (3104)
- Parker, E. T. [1959], Completion of disproof of Euler's conjecture (abstract 558-55). American Math. Soc. Notices 6:391. E7,12c (3105)
- Parker, E. T. [1959], A computer search for latin squares orthogonal to latin squares of order ten (abstract). American Math. Soc. Notices 6:798. E7,12c (3106)
- Parker, E. T. [1959], Nonextendibility conditions on mutually orthogonal latin squares (abstract 564-77). American Math. Soc. Notices 6:801. E7,12,13c (3107)

- Parker, E. T. [1959], Orthogonal latin squares. Proc. Nat. Academy Sci. (USA) 45:859-862. E7,12,13c (3108)
- Parker, E. T. [1961], Computer searching for orthogonal latin squares of order 10. American Math. Soc. Notices 8:617. E7,12c (3109)
- Parker, E. T. [1962], Nonextendibility conditions on mutually orthogonal latin squares. Proc. American Math. Soc. 13:219-221. E7,12,13c (3110)
- Parker, E. T. [1962], On orthogonal latin squares. Proc. Symp. Pure Math., American Math. Soc. 6:43-46. E7,12,13c (3111)
- Parker, E. T. [1963], Computer investigation of orthogonal latin squares of order ten. Proc. Symp. Appl. Math. American Math. Soc. 15:73-81. E7,12c (3112)
- Parker, E. T. [1963], Remarks on balanced incomplete block designs. Proc. American Math. Soc. 14:729-730. E2c (3113)
- Parker, E. T. [1967], A result in balanced incomplete block designs. J. Combinatorial Theory 3:282-285. E2c (3114)
- Pascual, R. N. [1954], A comparison of the efficiency of randomized blocking and of complete randomization in pot tests. Philippine Agri. 38:435-443. E1,2,14a (3115)
- Pasternack, B. S. [1960], Analysis of covariance for a 3x4 triple rectangular lattice design (3 associate P.B.I.B.). Biometrics 16:7-18. E3ae;A7 (3116)
- Pasternack, B. S. and Ogawa, J. [1961], Stochastic bounds of the "F" statistic when data are incomplete one-way classification. Bull. ISI 38(4):189-200. E1,2ae (3117)
- Patterson, H. D. [1950], The analysis of change-over trials. J. Agri. Sci. 40: 375-380. E8ae (3118)
- Patterson, H. D. [1951], Change-over trials. JRSSB 13:256-271. E7,8ac;T2c (3119)
- Patterson, H. D. [1952], The construction of balanced designs for experiments involving sequences of treatments. Biometrika 39:32-49. E8ac (3120)
- Patterson, H. D. [1953], The analysis of the results of a rotation experiment on the use of straw and fertilizers. J. Agri. Sci. 43:77-88. E5,8a (3121)
- Patterson, H. D. [1959], The analysis of a non-replicated experiment involving a single four-course rotation of crops. Biometrics 15:30-59. E5,8a (3122)

- Patterson, H. D. [1964], Theory of cyclic rotation experiments (with discussion). JRSSB 26:1-45. E5,8ac;A13 (3123)
- Patterson, H. D. [1965], The factorial combination of treatments in rotation experiments. J. Agri. Sci. 65:171-182. E5,8ac;T2a (3124)
- Patterson, H. D. and Lucas, H. L. [1959], Extra-period change-over designs. Biometrics 15:116-132. E8ace (3125)
- Patterson, H. D. and Lucas, H. L. [1962], Change-over designs. N. Carolina Agri. Expt. Sta. U.S. Dept. Agri. Tech. Bull. 147:1-52. E8ace (3126)
- Patterson, H. D. and Williams, R. [1962], The residual effects of phosphorus fertilizers on yields of arable crops: preliminary results of six rotation experiments. Experimental Husbandry 8:85-103. E5,8a (3127)
- Pavate, M. V. [1961], Combined analysis of balanced incomplete block designs with some common treatments. Biometrics 17:111-119. E4a;A13 (3128)
- Peake, R. F. [1953], Planning an experiment in a cotton spinning mill. Appl. Stat. 2:184-192. E2e;C (3129)
- Pearce, S. C. [1952], Some new designs of Latin square type. JRSSB 14:101-106. E7ace (3130)
- Pearce, S. C. [1952], The design of calibration trials with three varieties. Annual Report, East Malling Res. Sta., 1951, pp. 105-107. E5c (3131)
- Pearce, S. C. [1953], Field experimentation with fruit trees and other perennial plants. Commonwealth Bureau Hort. Plantation Crops, Tech. Comm. 23, pp. x+131. E1,2,3,5,6,7,8,12ace; T2a;A7,14;B;C;S1 (3132)
- Pearce, S. C. [1954], Experimentation with perennial plants. FAO/55/8/5513:Index/3, FAOUN, Rome, 51 pp. (Mimeo.) E5,6a;T2a;A9 (3133)
- Pearce, S. C. [1955], The specific problems of experimental design and technique in perennial crops (abstract). Biometrics 11:538-539. E5a;C (3134)
- Pearce, S. C. [1956], Some problems of experimental design and technique with perennial crops. Biometrics 12:330-337. E5a;A13 (3135)
- Pearce, S. C. [1956], Problemas específicos de delineamento e de técnica experimental em culturas perenes. (Specific problems of design and experimental technique in perennial crops.) Agros, Rio Grande do Sul 9(2):12-21. E5,8a (3136)
- Pearce, S. C. [1957], Experimenting with organisms as blocks. Biometrika 44: 141-149. E2ae (3137)
- Pearce, S. C. [1959], Some recent applications of multivariate analysis to data from fruit trees. Annual Report, East Malling Res. Sta., 1958, pp. 73-76. E5a;A7 (3139)

- Pearce, S. C. [1960], Supplemented balance. *Biometrika* 47:263-271 (corrigenda 48:475). E5,12ace (3139)
- Pearce, S. C. [1963], The use and classification of non-orthogonal designs (with discussion). *JRSSA* 126:353-377. E2,3,4,5,7,14a (3140)
- Pearce, S. C. [1964], Experimenting with blocks of natural size. *Biometrics* 20:699-706. E4ac (3141)
- Pearce, S. C. [1964], Non-orthogonal designs in biological research (abstract). *Biometrics* 20:393. E4ac (3142)
- Pearce, S. C. [1967], The efficiency of non-orthogonal designs as used in biological research (abstract). *Biometrics* 23:596-597. E3,14a (3143)
- Pearce, S. C. and Freeman, G. H. [1959], A review of experimental design at East Malling, 1953-1958. *Annual Report East Malling Res. Sta., 1958*, pp. 67-72. E5a (3144)
- Pearce, S. C., Jolly, G. M., and Freeman, G. H. [1953], A review of experimental design at East Malling, 1948-1952. *Annual Report East Malling Res. Sta., 1952*, pp. 83-87. E5a (3145)
- Pearce, S. C. and Taylor, J. [1950], The purpose and design of calibration trials. *Annual Report East Malling Res. Sta., 1949*, pp. 83-90. E5c (3146)
- Phillips, J. P. N. [1964], The use of magic squares for balancing and assessing order effects in some analysis of variance designs. *Appl. Stat.* 13:67-73 (correction 15:151). E12c (3147)
- Pires, A. J. C. and Baptista, J. G. [1955], Análise do delineamento em blocos casualizados quando existem dois e três talhões perdidos. (Analysis of randomized block layouts when two or three lots are missing.) *Melhoramento* 8:61-77. E6ae (3148)
- Pompilj, G. [1963], Analisi delle medie (discussion). *Colloques Internationaux du Centre National de la Recherche Scientifique, No. 110, Le Plan d'Expériences* pp. 79-98. E2,3,12a;T2a (3149)
- Potthoff, R. F. [1959], Multi-dimensional incomplete block designs. Ph. D. Thesis, Univ. N. Carolina. E3,7,12ac (3150)
- Potthoff, R. F. [1962], Three-factor additive designs more general than the latin square. *Technometrics* 4:187-208. E7ace (3151)
- Potthoff, R. F. [1962], Four-factor additive designs more general than the Greco-Latin square. *Technometrics* 4:361-366. E12ac (3152)

- Potthoff, R. F. [1963], Three-dimensional incomplete block designs for interaction models. *Biometrics* 19:229-263. E7ac;T7ace (3153)
- Potthoff, R. F. [1963], Some illustrations of 4 DIB design constructions. *Calcutta Stat. Assoc. Bull.* 12:19-30. E12c (3154)
- Preece, D. A. [1966], Some row and column designs for two sets of treatments. *Biometrics* 22:1-25. E12ac (3155)
- Preece, D. A. [1966], Classifying Youden rectangles. *JRSSB* 28:118-130. E7c (3156)
- Preece, D. A. [1966], Some balanced incomplete block designs for two sets of treatments. *Biometrika* 53:497-506. E2,12ac (3157)
- Preece, D. A. [1967], Incomplete block designs with $v=2k$. *Sankhyā A* 29:305-316. E2,3,14c (3158)
- Preece, D. A. [1967], Cyclic generation of Robinson's balanced incomplete block designs. *Biometrics* 23:574-578. E9c (3159)
- Preece, D. A. [1967], Nested balanced incomplete block designs. *Biometrika* 54:479-486. E9ac (3160)
- Primrose, E. J. F. [1951], Quadrics in finite geometries. *Proc. Cambridge Philosophical Soc.* 47:299-304. E2c (3161)
- Primrose, E. J. F. [1952], Resolvable balanced incomplete block designs. *Sankhyā* 12:137-140. E2c (3162)
- Proschan, F. [1954], Investigation of Latin squares. *IQC* 11(1):30-33. E7a (3163)
- Proschan, F. and Babcock, A. B. [1955], How to design effective experiments. *Chemical Eng.* 62(August):191-198. E1,2a;T2a;A3;C (3164)
- Purcell, W. R. [1951], Balancing and randomizing in experiments. *IQC* 7(4):7-14. E5e;C (3165)
- Puri, M. L. and Sen, P. K. [1966], On some optimum nonparametric procedures in two-way layouts. *Inst. Stat. Mimeo. Ser. No. 485*, Univ. N. Carolina. E2a;A12 (3166)
- Puri, M. L. and Sen, P. K. [1967], On robust estimation in incomplete block designs. *AMS* 38:1587-1591. E3a (3167)
- Puri, M. L. and Sen, P. K. [1967], On some optimum nonparametric procedures in two-way layouts. *JASA* 62:1214-1229. E2a;A12 (3168)

- Raghavarao, D. [1959], A note on the construction of Group Divisible designs from Hyper Graeco Latin Cubes of the first order. Calcutta Stat. Assoc. Bull. 9: 67-70. E3c (3169)
- Raghavarao, D. [1960], On the block structure of certain PBIB designs with two associate classes having triangular and L_2 association schemes. AMS 31: 787-791. E3c (3170)
- Raghavarao, D. [1960], A generalization of group divisible designs. AMS 31:756-771. E3c (3171)
- Raghavarao, D. [1961], Some contributions to the design and analysis of experiments. Ph. D. Thesis, Bombay Univ. E (3172)
- Raghavarao, D. [1962], Some results for GD m-associate designs. Calcutta Stat. Assoc. Bull. 11:150-154. E2,3c (3173)
- Raghavarao, D. [1962], On the use of latent vectors in the analysis of group divisible and L_2 designs. JISAS 14:138-144. E3a (3174)
- Raghavarao, D. [1962], Symmetrical unequal block arrangements with two unequal block sizes. AMS 33:620-633. E4ac (3175)
- Raghavarao, D. [1962], On balanced unequal block designs. Biometrika 49:561-562. E4c (3176)
- Raghavarao, D. [1963], A note on the block structure of BIB designs. Calcutta Stat. Assoc. Bull. 12:60-62. E2c (3177)
- Raghavarao, D. [1966], Duals of partially balanced incomplete block designs and some nonexistence theorems. AMS 37:1048-1052. E3c (3178)
- Raghavarao, D. [1966], An extended partial geometry. JISAS 18(1):99-107. E3c (3179)
- Raghavarao, D. and Chandrasekhararao, K. [1964], Cubic designs. AMS 35:389-397. E3c (3180)
- Raghavarao, D. and Tharthare, S. K. [1967], An inequality for doubly balanced incomplete block designs. Calcutta Stat. Assoc. Bull. 16:37-39. E2c (3181)
- Raktoe, B. L. [1964], Application of cyclic collineations to the construction of balanced t -restrictional prime powered lattice designs. Ph. D. Thesis, Cornell Univ. E2,11,13ac (3182)
- Raktoe, B. L. [1964], Application of cyclic collineations to the construction of balanced t -restrictional lattices. Biometrics Unit Mimeo. Ser. BU-172-M, Cornell Univ. E2,11,13c (3183)

- Raktoe, B. L. [1965], Balanced t -restrictional lattices (abstract). Technometrics 7:275. E2,11,13c;T2c (3184)
- Raktoe, B. L. [1967], Application of cyclic collineations to the construction of balanced t -restrictional prime powered lattice designs. AMS 38:1127-1141. E2,3,11,13c;T2c (3185)
- Ramachandran, G. [1960], Analysis of covariance for a split-plot design-average variances for comparisons of adjusted means (abstract). JISAS 12:211. E5a;A7 (3186)
- Ramachandran, G. [1964], Analysis of covariance for the split-plot design: Average variances. Biometrics 20:204-206. E5a;A7 (3187)
- Ramakrishnan, C. S. [1956], On the dual of a PBIB design and a new class of designs with two replications. Sankhyā 17:133-142. E3ace (3188)
- Ramakrishnan, C. S. [1957], The dual of a two associate PBIB design and derivation of a two parameter family of designs with two replications (abstract). Proc. Forty-Fourth Indian Sci. Congress, Part III, p. 19. E3ac (3189)
- Ramanujacharyulu, C. [1965], Non-linear spaces in the construction of symmetric PBIB designs. Sankhyā A 27:409-414. E3c (3190)
- Ramanujacharyulu, C. [1965], Classification of canonical form of quadrics in finite projective geometry. JISA 3:91-96. E2,3c (3191)
- Ranzani, G. et al. [1953], Vinhaça e adubos minerais (I). Anais Escola Superior Agri. "Luiz de Queiroz" 10:97-108. E2ae (3192)
- Rao, B. M. [1961], Cumulant component estimation in the balanced one-way population with finite sub-populations. Biometrics Unit Mimeo. Ser. BU-140-M, Cornell Univ. E1a;A14 (3193)
- Rao, B. M., Douglas, A. W., and Sheard, R. W. [1960], A numerical example of a response surface design. Biometrics Unit Mimeo. Ser. BU-120-M, Cornell Univ. E2ae;T4ae (3194)
- Rao, C. R. [1956], On the recovery of inter block information in varietal trials. Sankhyā 17:105-114. E2,3,4a (3195)
- Rao, C. R. [1956], A general class of quasifactorial and related designs. Sankhyā 17:165-174. E3,7ac (3196)
- Rao, C. R. [1959], Expected values of mean squares in the analysis of incomplete block experiments and some comments based on them. Sankhyā 21:327-336. E2,3a;A5 (3197)

- Rao, C. R. [1960], Experimental designs with restricted randomisation. Bull. ISI 37(3):397-404. E4ac (3193)
- Rao, C. R. [1961], Combinatorial arrangements analogous to orthogonal arrays. Sankhyā A 23:283-286. E2,7c (3199)
- Rao, C. R. [1961], A study of BIB designs with replications 11 to 15. Sankhyā A 23: 117-127. E2c (3200)
- Rao, C. R. [1961], A combinatorial assignment problem. Nature 191:100. E2c (3201)
- Rao, K. S. [1961], BIB designs with one treatment missing. JISAS 13:159-168 (abstract 13:237-238). E2,6a (3202)
- Rao, M. B. [1965], Solution to problem 37. JISA 3:60. E3c (3203)
- Rao, M. B. [1965], A note on incomplete block designs with $b=v$. AMS 36:1877 E4a (3204)
- Rao, M. B. [1966], Partially balanced block designs with two different number of replications. JISA 4:1-9. E4ac (3205)
- Rao, M. B. [1966], Group divisible family of PBIB designs. JISA 4:14-28. E3c (3206)
- Rao, M. B. [1966], A note on equi-replicate balanced designs with $b=v$. Calcutta Stat. Assoc. Bull. 15:43-44. E2c (3207)
- Rao, P. V. [1960], On the construction of some partially balanced incomplete block designs with more than three associate classes. Calcutta Stat. Assoc. Bull. 9:87-92. E3c (3208)
- Rao, P. V. [1960], The dual of a balanced incomplete block design. AMS 31:779-785 E3c (3209)
- Rao, P. V. [1961], Analysis of a class of PBIB designs with more than two associate classes. AMS 32:800-808. E3a (3210)
- Rao, P. V. [1963], The effect of truncation on the analysis of variance test for PBIB designs. Ph. D. Thesis, Univ. Georgia. E3a (3211)
- Rao, P. V. [1963], The F-test in the intrablock analysis of a class of PBIB designs. Ann. Inst. Stat. Math. 13:25-36. E3a (3212)
- Rao, P. V. [1963], The robustness of ANOVA for a class of 2-associate PBIB designs (abstract). AMS 34:684. E3,14a (3213)

- Rao, P. V. [1965], The effect of truncation on the F-test for a class of PBIB designs (abstract). AMS 36:1605. E3a (3214)
- Rao, V. A. [1958], A note on balanced designs. AMS 29:290-294. E2,14a (3215)
- Rasch, D. and Kisdorff, K. [1964], Die statistische Auswertung von Gruppen-Perioden-Versuchen (GPV). (On the statistical evaluation of group change-over designs.) Blom. Zeit. 6:113-122. E8ae (3216)
- Raut, K. C. [1959], On generalized designs (abstract). JISAS 11:196. E4ac (3217)
- Raut, K. C. [1960], Analysis of generalised non-orthogonal design with recovery of interblock information (abstract). JISAS 12:211. E4a (3218)
- Raut, K. C. [1960], Generalised non-orthogonal design and its analysis with recovery of interblock information. JISAS 12:190-199. E3,4a;T4ac (3219)
- Raut, K. C. and Das, M. N. [1959], Generalised partially balanced design. JISAS 11:145-162. E4ace (3220)
- Rauterberg, E. [1954] Die Berechnung der Streuung von Versuchsergebnissen. Z. Pflanzenernährung Düngung Bodenkunde 64:244-258. E2,7ae (3221)
- Rauterberg, E. [1956], Bemerkungen zu der Arbeit des Verfassers "Die Berechnung der Streuung von Versuchsergebnissen". Z. Pflanzenernährung Düngung Bodenkunde 72:220-224. E2,7a (3222)
- Ray, W. D. [1956], Sequential analysis applied to certain experimental designs in the analysis of variance. Biometrika 43:388-403. E1,2a;S2 (3223)
- Ray-Chaudhuri, D. K. [1959], On the application of the geometry of quadrics to the construction of partially balanced incomplete block designs and error correcting binary codes. Ph. D. Thesis, Univ. N. Carolina (also, Inst. Stat. Mimeo. Ser. No. 230, Univ. N. Carolina). E3c (3224)
- Ray-Chaudhuri, D. K. [1962], Some results on quadrics in finite projective geometry based on Galois fields. Canadian J. Math. 14:129-138. E3c (3225)
- Ray-Chaudhuri, D. K. [1962], Application of the geometry of quadrics for constructing PBIB designs. AMS 33:1175-1186 (also, Inst. Stat. Mimeo. Ser. No. 294, Univ. N. Carolina). E3c (3226)
- Ray-Chaudhuri, D. K. [1963], On some connections between incomplete block designs and minimum covers (discussion). Colloques Internationaux du Centre National de la Recherche Scientifique, No. 110 Le Plan d'Expériences pp. 129-136. E2c (3227)

- Ray-Chaudhuri, D. K. [1965], Some configurations in finite projective spaces and partially balanced incomplete block designs. *Canadian J. Math.* 17:114-123.
E3c (3228)
- Redman, C. E. and King, E. P. [1965], Group screening utilizing balanced and partially balanced incomplete block designs. *Biometrics* 21:865-874 (abstract 20:913).
E2,3a;T7ac (3229)
- Rees, D. H. [1966], The analysis of variance of designs with many non-orthogonal classifications. *JRSSB* 28:110-117.
E7,12a;A10 (3230)
- Rees, D. H. [1967], Some designs of use in serology. *Biometrics* 23:779-791.
E5c (3231)
- Reinach, S. G. [1965], A nonparametric analysis for a multi-way classification with one element per cell. *Suid-Afrikaanse Tydskrif vir Landbouwetenskap* 8:941-959.
E2a,T2a;A12 (3232)
- Renier, A. [1954], Classification et description des dispositifs expérimentaux. *Annales de l'Institut Experimental du Tabac de Bergerac* 2:103-149.
E1,2,7,12a;T2a (3233)
- Ricciuti, C., Coleman, J. E. and Willits, C. O. [1955], Statistical comparison of three methods for determining organic peroxides. *Anal. Chem.* 27:405-407.
E7ae (3234)
- Rich, S. [1952], Using half-tree plots for increasing the efficiency of fungicide tests. *Phytopathology* 42:353-354.
E2a (3235)
- Rickmers, A. D. [1967], The missing data problems in factorial designs. *ASQC Tech. Conf. Trans.* 21:167-173.
E6,10a (3236)
- Riordan, J. [1952], A recurrence relation for three-line latin rectangles. *American Math. Monthly* 59:159-162.
E7c (3237)
- Rives, M. [1955], Méthodes d'analyse pour des essais incomplets. *Annales Inst. Nat. Res. Agronomique* 5(B):103-118.
E7,10ae (3238)
- Rives, M. [1959], Sur la comparaison des moyennes dans les essais variétaux. *Annales Inst. Nat. Res. Agronomique* 9(B):357-376.
E2a;A3 (3239)
- Robinson, J. [1966], Balanced incomplete block designs with double grouping of blocks into replications. *Biometrics* 22:368-373.
E9ac (3240)
- Robinson, J. [1967], Incomplete split plot designs. *Biometrics* 23:793-802.
E12ac (3241)
- Robson, D. S. [1958], Nonparametric estimation: Cumulant components in the balanced one-way classification. *Biometrics Unit Memo. Ser.* BU-93-M, Cornell Univ.
E1a;A14 (3242)

- Robson, D. S. [1961], Cumulant component analysis in balanced designs (abstract).
Biometrics 17:175. E1a;A14 (3243)
- Robson, D. S. [1961], Multiple comparisons with a control in balanced incomplete block designs. Technometrics 3:103-105 (also, Biometrics Unit Mimeo. Ser. BU-87-M, Cornell Univ.). E2a;A3 (3244)
- Robson, D. S. and Atkinson, G. F. [1960], Individual degrees of freedom for testing homogeneity of regression coefficients in a one-way analysis of covariance. Biometrics 16:593-605. E1a;A4,7 (3245)
- Rod, J. [1955], Diagramy nejmenších průkazných rozdílů mezi zkoušenými členy v polním pokuse, založeném v namátkových dílcích a řešeném analysou rozptylu. (Graphs of minimum significant differences between tested varieties in a field trial arranged in randomized blocks and carried out by the analysis of variance.) Sborník Československé Akademie Zemědělských věd Praha 28:607-624. E2a (3246)
- Rohatgi, V. K. [1966], A comparison of bounds for the number of common treatments between any two blocks of certain two-associate PBIB designs. Calcutta Stat. Assoc. Bull. 15:39-42. E3c (3247)
- Rojas, B. and White, R. F. [1957], The modified latin square. IRSSB 19:305-317. E7ac (3248)
- Romier, G. [1964], Automorphismes et Algèbre d'un schéma d'association. Caractérisation algébrique des correspondances partiellement équilibrées. Comptes Rendus 258: 5345-5348. E3c (3249)
- Room, T. G. [1955], A new type of magic square. Math. Gazette 39:307. E7c (3250)
- Roussel, N. [1954], Le problème de l'expérimentation des variétés de betterave et ses relations avec la biométrie. Publications Inst. Belge Amélioration Betterave 22:139-140. E2,3,7,11a (3251)
- Roy, J. [1958], On the efficiency factor of block designs. Sankhyā 19:161-188. E2,14a (3252)
- Roy, J. [1959], A class of two replicate incomplete block designs. Biometrics 15:259-269 (also, Inst. Stat. Mimeo. Ser. No. 201, Univ. N. Carolina). E3ace (3253)
- Roy, J. and Laha, R. G. [1956], Classification and analysis of Linked Block designs. Sankhyā 17:115-132. E2,3,4ace (3254)
- Roy, J. and Laha, R. G. [1956], Two associate partially balanced designs involving three replications. Sankhyā 17:175-184. E3c (3255)

- Roy, J. and Laha, R. G. [1957], On partially balanced Linked Block designs. AMS 28:488-493. E3,4c (3256)
- Roy, J. and Shah, K. R. [1961], Analysis of two-way designs (abstract). Proc. Forty-Eighth Indian Sci. Congress, Part III, pp. 24-25. E7ac (3257)
- Roy, J. and Shah, K. R. [1961], Analysis of two-way designs. Sankhyā A 23:129-144. E7,14ae (3258)
- Roy, J. and Shah, K. R. [1962], Recovery of interblock information. Sankhyā A 24: 269-280. E2,3a (3259)
- Roy, P. M. [1952], A note on the resolvability of balanced incomplete block designs. Calcutta Stat. Assoc. Bull. 4:130-132. E2c (3260)
- Roy, P. M. [1953], A note on the method of inversion of statistical designs. Sci. Culture 18:440-441. E2,3c (3261)
- Roy, P. M. [1953], A note on the relation between bib and pbib designs. Sci. Culture 19:40-41. E2,3c (3262)
- Roy, P. M. [1953], Hierarchical group divisible incomplete block designs with m-associate classes. Sci. Culture 19:210-211. E3c (3263)
- Roy, P. M. [1953], A note on the unreduced balanced incomplete block designs. Sankhyā 13:11-16. E2c (3264)
- Roy, P. M. [1954], Inversion of incomplete block designs. Bull. Calcutta Math. Soc. 46:47-58. E2,3c (3265)
- Roy, P. M. [1954], On the relation between b.i.b. and p.b.i.b. designs. JISAS 6:30-47. E2,3c (3266)
- Roy, P. M. [1954], Rectangular lattices and orthogonal group divisible designs. Calcutta Stat. Assoc. Bull. 5:87-98. E3c (3267)
- Roy, P. M. [1954], On the method of inversion in the construction of partially balanced incomplete block designs from the corresponding b.i.b. designs. Sankhyā 14:39-52. E3c (3268)
- Roy, P. M. [1955], Some combinatorial problems in the design of experiments. Ph. D. Thesis, Calcutta Univ. E2,3c (3269)
- Roy, P. M. [1955], Analysis of $p \times (p-1)$, n -ple latinized rectangular lattices and their multiples. Calcutta Stat. Assoc. Bull. 6:113-131. E3ac (3270)
- Roy, P. M. [1955], Difference theorems for the construction of Group Divisible Designs (abstract). On some simple properties of semi-regular Group Divisible Designs (abstract). Proc. Forty-Second Indian Sci. Congress, Part III, pp. 18-19. E3c (3271)

- Roy, P. M. [1956], $p \times (p-1)$, $(p-2)$ -ple rectangular lattices (abstract). Proc. Forty-Third Indian Sci. Congress, Part III, p. 18. E3c (3272)
- Roy, P. M. [1957], On the distribution of varieties of $p \times (p-1)$, n -ple latinized rectangular lattices and weighted average variances. Calcutta Stat. Assoc. Bull. 7:101-114. E3a (3273)
- Roy, P. M. [1962], On the properties and construction of HGD designs with m -associate classes. Calcutta Stat. Assoc. Bull. 11:10-38 (erratum 12:67). E3c (3274)
- Roy, S. N. [1961], On the planning and interpretation of multifactor multiresponse experiments. Bull. ISI 38(4):59-72. E5,9ac;C (3275)
- Roy, S. N. and Potthoff, R. F. [1958], Multi-dimensional incomplete block designs. Inst. Stat. Mimeo. Ser. No. 211, Univ. N. Carolina. E3,7,12c (3276)
- Roy, S. N. and Roy, J. [1958], Analysis of variance with univariate or multivariate, fixed or mixed classical models. Inst. Stat. Mimeo. Ser. No. 208, Univ. N. Carolina. E2a;A7 (3277)
- Roy, S. N.; Shrikhande, S. S. and Krishnaiah, P. R. [1960], On the efficiency of experimental designs (abstract). AMS 31:242. E14 (3278)
- Roy, S. N. and Srivastava, J. N. [1962], Multivariate hierarchial designs (abstract). AMS 33:307. E5,9ac;A7 (3279)
- Roy, S. N. and Srivastava, J. N. [1963], Hierarchial and p -block multiresponse designs and their analysis. Contributions to Statistics, pp. 419-428 (also, Inst. Stat. Mimeo. Ser. No. 341, Univ. N. Carolina). E5,9ac (3280)
- Rundfeldt, H. [1953], Die Prüfung der wichtigsten Verfahren im Feldversuchswesen an Hand von Modellen. Z. Pflanzenzüchtung 32:300-354. E1,2,7ae;A14;C (3281)
- Rundfeldt, H. [1955], Über die Auswertung von Blockversuchen. Der Züchter 25: 252-255. E2ae (3282)
- Rundfeldt, H. [1960], On an improved method for the evaluation of single trials (abstract). Biometrics 16:313. E2,7a (3283)
- Rundfeldt, H. [1963], Untersuchungen über den Einsatz elektronischer Rechenanlagen bei der Auswertung von Feldversuchen in der Pflanzenzüchtung. Z. Pflanzenzüchtung 49:253-386. E3a;A15 (3284)
- Russell, T. S. [1956], Estimation of individual variations in an unreplicated two-way classification. Ph. D. Thesis, Virginia Polytechnic Inst. E2a;A11 (3285)

Russell, T. S. and Bradley, R. A. [1958], One-way variances in a two-way classification. *Biometrika* 45:111-129. E2a;A11 (3286)

Ryser, H. J. [1950], A note on a combinatorial problem. *Proc. American Math. Soc.* 1:422-424. E2c (3287)

Ryser, H. J. [1951], A combinatorial theorem with an application to latin rectangles. *Proc. American Math. Soc.* 2:550-552. E7c;T7a (3288)

Ryser, H. J. [1963], Combinatorial Mathematics. The Carus Math. Monographs, No. 14, Math. Assoc. Amer. and John Wiley and Sons, Inc. New York pp. xiv+154. E2,7,12,13c (3289)

- Sade, A. [1951], Enumérations des carrés latins 1948. Omission dans les listes de Norton pour les carrés 7×7 . J. Reine Angew. Math. pp. 189-190.
E7c (3290)
- Sade, A. [1951], An omission in Norton's list of 7×7 squares. AMS 22:306-307.
E7c (3291)
- Sade, A. [1958], Groupoïdes orthogonaux. Publicationes Mathematicae (Hungaria) 5:229-240.
E7,12,13c (3292)
- Sade, A. [1958], Quasigroupes automorphes par le groupe linéaire et géométrie finie. J. Reine Angew. Math. 199:100-120.
E2c (3293)
- Saha, G. M. [1967], Construction of partially balanced incomplete block designs through the confounded designs of factorial experiments (abstract). JISAS 19(1): 153.
E3c (3294)
- Sahal, C. [1960], Generalized staircase designs (abstract). JISAS 12:151-152.
E4a (3295)
- Sahasrabudhe, V. B. [1953], A statistical study of the factors affecting the efficiency of incomplete block designs. Indian Cotton Growing Rev. 7:129-142.
E3,14a (3296)
- Sahasrabudhe, V. B. and Agarwal, K. N. [1958], A note on double rectangular lattice designs for cotton varietal trials, Indian Cotton Growing Rev. 12:95-97.
E3a (3297)
- Sakai, K. [1953], Studies in competition in plants. I. Analysis of the competition variance in mixed plant populations. Japanese J. Botany 14:161-168.
E2e;A14 (3298)
- Sampford, M. R. [1957], Methods of construction and analysis of serially balanced sequences. JRSSB 19:286-304.
E8ac (3299)
- Sampford, M. R. and Taylor, J. [1959], Censored observations in randomized block experiments. JRSSB 21:214-237.
E2,6ae;A6 (3300)
- Sanders, P. G. and Duncan, D. B. [1953], Extensions of the multiple comparisons test to incomplete block designs. I (abstract). Virginia J. Sci. 4:290-291.
E2a;A3 (3301)
- Saraf, W. S. [1961], On the structure and combinatorial properties of certain semi-regular group divisible designs. Sankhyā A 23:287-296.
E3c (3302)
- Saunders, A. R. and Rayner, A. A. [1951], Statistical methods with special reference to field experiments. Union South Africa, Dept. Agri. Sci. Bull 200, 3rd Ed.
E (3303)

- Saxena, P. N. [1950], A simplified method of enumerating Latin squares by MacMahon's differential operators. Part I. The 6x6 Latin squares. JISAS 2:161-188. E7c (3304)
- Saxena, P. N. [1951], On the enumeration of Latin cubes of the first order. Ph. D. Thesis, Univ. Bombay. E12c (3205)
- Saxena, P. N. [1951], A simplified method of enumerating Latin squares by MacMahon's differential operators Part II. The 7x7 Latin squares. JISAS 3:24-79. E7c (3306)
- Saxena, P. N. [1960], On the Latin cubes of the second order and the fourth replication of the three-dimensional or cubic lattice designs. JISAS 12:100-140. E3,12ace (3307)
- Scheid, F. [1960], A tournament problem. American Math. Monthly 67:39-41. E2c;T11c (3308)
- Schmidt, W. [1962], Statistische Datenanalyse. Vereinfachte neuere Verfahren. Angewandte Botanik 36:63-85. Elae;A11 (3309)
- Schmidt, W. [1963], Statistische Datenanalyse. II. Vereinfachte Verfahren. Angewandte Botanik 37:187-269. E2ae;A6,12;C (3310)
- Schnell, F. W. [1957], Zur Auswertung und Wirksamkeit teilweise balancierter Gitteranlagen. Moderne Methoden der Pflanzenzucht 44:119-132. E3,14a (3311)
- Schnell, L. [1956], Hozzászólás Horváth Alajos és Sváb János dolgozatához. (Remarks on the work of Alajos Horváth and János Sváb.) Növénytermelés 5:367-372. E2,7a (3312)
- Schröder, [1958], Missing plot estimates by means of covariance analysis in fertilizer field experiments on Majorana hortensis Moench (abstract). Biometrics 14:439. E6a (3313)
- Schulze, J. [1958], Zur Bestimmung der Einzelfehler in Spaltanlagen. Z. Pflanzenzuchtung 40:37-58. E12ae (3314)
- Schulze, J. [1960], Das Rechteckgitter. Wissenschaftliche Z. Humboldt Univ. 9:479-491. E3a (3315)
- Schumann, D. E. W. [1956], The comparison of the sensitivities of experiments using different scales of measurement. Ph. D. Thesis, Virginia Polytechnic Inst. E14 (3316)
- Schumann, D. E. W. and Bradley, R. A. [1957], The comparison of the sensitivities of similar experiments: Theory. AMS 28:902-910. E14 (3317)

- Schumann, D. E. W. and Bradley, R. A. [1959], The comparison of the sensitivities of similar experiments: Model II of the analysis of variance (abstract). AMS 30:835. E14 (3318)
- Schumann, D. E. W. and Bradley, R. A. [1959], The comparison of the sensitivities of similar experiments: Model II of the analysis of variance. Biometrics 15:405-416 (correction 15:631). E14 (3319)
- Schutz, W. M. and Cockerham, C. C. [1966], The effect of field blocking on gain from selection. Biometrics 22:843-863. E3,14a (3320)
- Schützenberger, M. P. [1951], An extension problem in the theory of incomplete block designs. JRSSB 13:120-125. E3c (3321)
- Schützenberger, M. P. [1953], Remarques sur le problème du codage binaire. Publications Inst. Stat. Univ. Paris 2(1&2):125-128. E2c (3322)
- Searle, S. R. [1965], Computing formulae for analyzing augmented random complete block designs. Biometrics Unit Mimeo. Ser. BU-207-M, Cornell Univ. E4a (3323)
- Seber, G. A. F. [1964], Orthogonality in analysis of variance. AMS 35:705-710. E14;A10 (3324)
- Seiden, E. [1954], On the problem of construction of orthogonal arrays. AMS 25:151-156. E3c;T2c (3325)
- Seiden, E. [1954], A remark on the geometrical method of construction of an orthogonal array (abstract). AMS 25:177-178. E3c (3326)
- Seiden, E. [1955], Further remark on the maximum number of constraints of an orthogonal array. AMS 26:759-763. E3c (3327)
- Seiden, E. [1955], On the maximum number of constraints of an orthogonal array. AMS 26:132-135 (correction 27:204). E2,3c (3328)
- Seiden, E. [1960], On a geometrical method of construction of cyclic PBIB (preliminary report) (abstract). AMS 31:820. E3c (3329)
- Seiden, E. [1961], On a geometrical method of construction of partially balanced designs with two associate classes. AMS 32:1177-1190. E3c (3330)
- Seiden, E. [1963], On necessary conditions for the existence of some symmetrical and unsymmetrical triangular PBIB designs and BIB designs. AMS 34:348-351. E2,3c (3331)
- Seiden, E. [1963], On the non-existence of balanced incomplete block designs BIBD, with parameters (46, 69, 9, 6, 1) and (51, 85, 10, 6, 1) (abstract). AMS 34:685 (correction 34:1629). E2c (3332)

- Selden, E. [1963], On the non-existence of some classes of P.B.I.B. based on triangular schemes (abstract). AMS 33:1210. E3c (3333)
- Selden, E. [1963], A supplement to Parker's "Remarks on balanced incomplete block designs". Proc. American Math. Soc. 14:731-732. E2c (3334)
- Selden, E. [1963], On a construction of a class of resolvable BIRD (abstract). AMS 34:685. E2c (3335)
- Selden, E. [1963], A method of construction of resolvable BIRD. Sankhyā A 25: 393-394. E2c (3336)
- Selden, E. [1963], On the non-existence of some classes of P.B.I.B. based on triangular schemes (summary). JASA 58:560. E3c (3337)
- Selden, E. [1965], On the non-existence of PBIBD with the parameters $v=28$, $n_1=12$, $n_2=18$, $p_{11}^2=4$, $b<v$ (abstract). AMS 36:361. E3c (3338)
- Selden, E. [1966], A note on construction of partially balanced incomplete block designs with parameters $v=28$, $n_1=12$, $n_2=15$ and $p_{11}^2=4$. AMS 37:1783-1789. E3c (3339)
- Selden, E. [1966], On a method of construction of partial geometries and partial Bolyai-Lobachevsky planes. American Math. Monthly 73:158-161. E3c (3340)
- Sen, A. R. [1963], Use of pretreatment data in designing experiments on tea. Empire J. Expt. Agri. 31:41-49. E2,8,14ac (3341)
- Seshadri, V. [1961], Estimation in the balanced incomplete block design. Ph. D. Thesis, Oklahoma State Univ. E2a (3342)
- Seshadri, V. [1963], Comparison of combined estimators in balanced incomplete blocks (abstract). AMS 34:1115. E2a (3343)
- Seshadri, V. [1963], Combining unbiased estimators. Biometrics 19:163-170. E2a (3344)
- Seshagiri Rao, K. [1961], B.I.B. designs with one treatment missing (abstract). JISAS 13:237. E2,6a (3345)
- Seshagiri Rao, K. [1964], On the removal of a treatment from some non-symmetric BIRD (abstract). JISAS 16:169. E2,3c (3346)
- Shah, B. V. [1958], On balancing in factorial experiments. AMS 29:756-779 (correction 30:1267). E3ac;T2ac (3347)
- Shah, B. V. [1958], A note on orthogonality in experimental designs. Calcutta Stat. Assoc. Bull. 8:73-80. E14 (3348)

- Shah, B. V. [1959], Some aspects of partially balanced incomplete block designs.
Ph. D. Thesis, Bombay Univ. E3ac (3349)
- Shah, B. V. [1959], On a generalization of the Kronecker product designs. AMS
30:48-54. E4c (3350)
- Shah, B. V. [1959], A generalization of partially balanced incomplete block designs.
AMS 30:1041-1050. E3ac (3351)
- Shah, B. V. [1960], A matrix substitution method of constructing partially balanced
designs. AMS 31:34-42. E3,4c;T2c (3352)
- Shah, B. V. [1961], Asymmetrical factorials in incomplete blocks (abstract). Bio-
metrics 17:176. E3ac;T2ac (3353)
- Shah, K. R. [1960], On certain optimality criteria for incomplete block designs
(abstract). Proc. Forty-Seventh Indian Sci. Congress, Part III, pp. 32-33.
E14 (3354)
- Shah, K. R. [1960], Optimality criteria for incomplete block designs. AMS 31:
791-794. E2,14a (3355)
- Shah, K. R. [1960], A note on the variance in reinforced incomplete block designs.
JISAS 12:146-149. E4a (3356)
- Shah, K. R. [1962], An estimate of inter-group variance in one and two-way designs.
Sankhyā A 24:281-286 E2,7a (3357)
- Shah, K. R. [1964], Use of inter-block information to obtain uniformly better estimators.
AMS 35:1064-1078. E2,3a (3358)
- Shah, K. R. [1964], On a local property of combined inter- and intra-block estimators.
Sankhya A 26:87-90. E2,3a (3359)
- Shah, K. R. [1964], Analysis of two-period experiments. IISA 2:97-108.
E7,9,12a (3360)
- Shah, K. R. [1967], On the recovery of inter-group information in one- and two-way
designs. Ph. D. Thesis, Indian Stat. Inst. E2,3,7a (3361)
- Shah, K. R. [1967], Uniformly better combined estimators in factorial arrangements with
confounding. JASA 62:638-642. E3a;T2a (3362)
- Shah, S. M. [1963], An upper bound for the number of blocks in balanced incomplete
block designs. IISA 1:91-92. E2c (3363)
- Shah, S. M. [1963], Solution of problem 8. IISA 1:121. E2c (3364)

- Shah, S. M. [1963], On the upper bound for the number of blocks in balanced incomplete block designs having a given number of treatments common with a given block. JISA 1:219-220. E2,3,11,13c (3365)
- Shah, S. M. [1964], An upper bound for the number of disjoint blocks in certain PBIB designs. AMS 35:398-407. E3c (3366)
- Shah, S. M. [1965], Bounds for the number of common treatments between any two blocks of certain PBIB designs. AMS 36:337-342. E3ac (3367)
- Shah, S. M. [1966], On the block structure of certain partially balanced incomplete block designs. AMS 37:1016-1020 (correction 38:624). E3c (3368)
- Shah, S. M. [1967], A note on the block structure of incomplete block designs. JISA 5:13-15. E2,3c (3369)
- Sheehe, P. R. and Bross, I. D. J. [1961], Latin squares to balance immediate residual, and other order, effects. Biometrics 17:405-414. E8ac (3370)
- Shih, C. S. [1966], Interval estimation for the exponential model and the analysis of rotation experiments. Ph. D. Thesis, Iowa State Univ. E5,8a (3371)
- Shimamoto, T. [1952], Classification and analysis of partially balanced incomplete block designs with two kinds of associates. M. A. Thesis, Univ. N. Carolina. E3ac (3372)
- Shrikhande, S. S. [1950], Some combinatorial problems in the design of experiments. Ph. D. Thesis, Univ. N. Carolina. E2,3,7ac (3373)
- Shrikhande, S. S. [1950], The impossibility of certain symmetrical balanced incomplete block designs. AMS 21:106-111. E2c (3374)
- Shrikhande, S. S. [1950], Construction of partially balanced designs with two accuracies (abstract). Biometrics 6:193. E3c (3375)
- Shrikhande, S. S. [1950], Construction of partially balanced designs with two accuracies (abstract). AMS 21:313. E7c (3376)
- Shrikhande, S. S. [1950], Designs for animal feeding experiments (abstract). Biometrics 6:193. E8c (3377)
- Shrikhande, S. S. [1950], Designs for animal feeding experiments (abstract). AMS 21:314. E8c (3378)
- Shrikhande, S. S. [1950], Designs for two-way elimination of heterogeneity (abstract). Biometrics 6:193. E7c (3379)
- Shrikhande, S. S. [1951], Designs for two-way elimination of heterogeneity. AMS 22:235-247 (abstract 21:313-314). E7ac (3380)

- Shrikhande, S. S. [1951], On the non-existence of certain difference sets for incomplete group designs. *Sankhyā* 11:183-184. E3c (3381)
- Shrikhande, S. S. [1951], On the non-existence of affine resolvable balanced incomplete block designs. *Sankhyā* 11:185-186. E2c (3382)
- Shrikhande, S. S. [1951], The impossibility of certain affine resolvable balanced incomplete block designs (abstract). *AMS* 22:609. E2c (3383)
- Shrikhande, S. S. [1951], The nonexistence of difference sets for group designs (abstract). *AMS* 22:488. E3c (3384)
- Shrikhande, S. S. [1952], On the dual of some balanced incomplete block designs. *Biometrics* 8:66-72. E3c (3385)
- Shrikhande, S. S. [1952], An inequality for orthogonal arrays of strength 2 (abstract). *AMS* 23:141. E3c (3386)
- Shrikhande, S. S. [1952], A series of group divisible designs for two-way elimination of heterogeneity (abstract). *AMS* 23:140. E7c (3387)
- Shrikhande, S. S. [1953], The non-existence of certain affine resolvable balanced incomplete block designs. *Canadian J. Math.* 5:413-420. E2c (3388)
- Shrikhande, S. S. [1953], Cyclic solutions of symmetrical group divisible designs (abstract). *AMS* 24:146. E3c (3389)
- Shrikhande, S. S. [1953], Cyclic solutions of symmetrical group divisible designs. *Calcutta Stat. Assoc. Bull.* 5:36-39. E3c (3390)
- Shrikhande, S. S. [1954], Affine resolvable balanced incomplete block designs and non-singular group divisible designs. *Calcutta Stat. Assoc. Bull.* 5:139-141. E2,3c (3391)
- Shrikhande, S. S. [1959], The uniqueness of the L_2 association scheme. *AMS* 30:781-798 (abstract 29:938; *Inst. Stat. Mimeo. Ser. No. 204, Univ. N. Carolina*). E3c (3392)
- Shrikhande, S. S. [1959], On a characterization of the triangular association scheme. *AMS* 30:39-47 (abstract 29:1283; *Inst. Stat. Mimeo. Ser. No. 206, Univ. N. Carolina*). E3c (3393)
- Shrikhande, S. S. [1959], Group divisible designs and the construction of pairwise orthogonal sets of Latin squares. Preliminary report (abstract 557-17). *Notices American Math. Soc.* 6:181-182. E7,12c (3394)
- Shrikhande, S. S. [1959], Relation between certain incomplete block design (abstract). *AMS* 30:622 (*Inst. Stat. Mimeo. Ser. No. 207, Univ. N. Carolina*). E3c (3395)

- Shrikhande, S. S. [1960], Relations between certain incomplete block designs. Contributions to Probability and Statistics pp. 388-395. E2,3c (3396)
- Shrikhande, S. S. [1961], A note on mutually orthogonal Latin Squares. *Sankhyā A* 23:115-116 (corrigendum 23:426). E7,12,13c (3397)
- Shrikhande, S. S. [1961], Combinatorial problems. Res. Training School Publication No. SM61-5, Indian Stat. Inst. E2c (3398)
- Shrikhande, S. S. [1962], On a two-parameter family of balanced incomplete block designs. *Sankhyā A* 24:33-40. E2c (3399)
- Shrikhande, S. S. [1965], On a class of partially balanced incomplete block designs. *AMS* 36:1807-1814. E3c (3400)
- Shrikhande, S. S. and Bhagwandas, [1965], Duals of incomplete block designs. *JISA* 3:30-37. E2,3c (3401)
- Shrikhande, S. S. and Jain, N. C. [1962], The non-existence of some partially balanced incomplete block designs with Latin Square type association scheme. *Sankhyā A* 24:259-268. E3c (3402)
- Shrikhande, S. S. and Raghavarao, D. [1963], A method of construction of incomplete block designs. *Sankhyā A* 25:399-402. E2,3c (3403)
- Shrikhande, S. S. and Raghavarao, D. [1963], Affine r -resolvable incomplete block designs. Contributions to Statistics pp. 471-480. E2,3c (3404)
- Shrikhande, S. S. and Raghavarao, D. [1964], A note on the non-existence of symmetric balanced incomplete block designs. *Sankhyā A* 26:91-92. E2c (3405)
- Shrikhande, S. S., Raghavarao, D., and Tharthare, S. K. [1963], Non-existence of some unsymmetrical partially balanced incomplete block designs. *Canadian J. Math.* 15:686-701. E3c (3406)
- Shrikhande, S. S. and Singh, N. K. [1962], On a method of constructing symmetrical balanced incomplete block designs. *Sankhyā A* 24:25-32. E2c (3407)
- Shrikhande, S. S. and Singh, N. K. [1963], A note on balanced incomplete block designs. *JISA* 1:97-101. E2c (3408)
- Sillitto, G. P. [1957], An extension property of a class of balanced incomplete block designs. *Biometrika* 44:278-279. E2c (3409)
- Sillitto, G. P. [1964], Note on Takeuchi's table of difference sets generating balanced incomplete designs. *Rev. ISI* 32:251. E2c (3410)

- Silverman, R. [1960], A metrization for power sets with applications to combinatorial analysis. Canadian J. Math. 12:158-176. E2,12,13c (3411)
- Singer, J. [1960]. A class of groups associated with Latin squares. American Math. Monthly 67:235-240. E12,13c (3412)
- Singh, D. [1962], A method of working out the sum of totals over blocks containing a specified variety in the analysis of a $n \times n$ balanced lattice design. JISAS 14:151-156. E2a (3413)
- Singh, M. [1950], Confounding in split-plot designs with restricted randomization of sub-plot treatments. Empire J. Expt. Agri. 18:190-202. E9,12ae;T2ace (3414)
- Singh, N. [1963], Estimation of missing data in a latin square (abstract). JISAS 15:274. E7,10a (3415)
- Singh, N. K. and Singh, K. N. [1964], The non-existence of some partially balanced incomplete block designs with three associate classes. Sankhyā A 26:239-250. E3c (3416)
- Singh, N. K. and Shukla, G. C. [1963], The non-existence of some partially balanced incomplete block designs with three associate classes. JISA 1:71-77. E3c (3417)
- Skolem, T. [1957], On certain distributions of integers in pairs with given differences. Mathematica Scandinavica 5:57-68. E2c (3418)
- Skolem, T. [1958], Some remarks on the triple systems of Steiner. Mathematica Scandinavica 6:273-280. E2c (3419)
- Smith, C. A. B. [1965], Personal probability and statistical analysis (with discussion). JRSSA 128:469-499. E1,2a;C (3420)
- Smith, F. L. [1958], Effects of plot size, plot shape, and number of replications on the efficiency of bean yield trials. Hilgardia 28:43-63. E2,7a;A14 (3421)
- Smith, H. F. [1950], Letter: Replicated experiments. Forestry 23:56-58. E14;T1ac (3422)
- Smith, H. F. [1950], Error variance of treatment contrasts in an experiment with missing observations (with special reference to incomplete latin squares). JISAS 2:111-124. E7,10ae (3423)
- Smith, H. F. [1952], Perennial experiments with tree crops. Inst. Stat. Mimeo. Ser. No. 62, Univ. N. Carolina. E8a (3424)
- Smith, H. F. [1957], Missing plot estimates. Biometrics 13:115-118. E6a (3425)

- Snedecor, G. W. [1950], Query 77. Biometrics 6:164-166. E5ae (3426)
- Snedecor, G. W. [1952], Query 94. Biometrics 8:169-171. E7a;C (3427)
- Snedecor, G. W. [1952], Query 96. Biometrics 8:383. E2,6ae;A10 (3428)
- Snedecor, G. W. [1952], Query 97. Biometrics 8:384-385. E7a (3429)
- Snedecor, G. W. [1953], Query 103. Biometrics 9:425-427. E2,6ae (3430)
- Snedecor, G. W. [1954], Query 108. Biometrics 10:298-299. E2,6ae (3431)
- Snedecor, G. W. [1954], Query 109. Biometrics 10:299-301. E2a (3432)
- Southern Cooperative Group, [1951], Studies of sampling techniques and chemical analyses of vegetables. Southern Cooperative Ser. Bull. 10:1-143.
E1,5,7e (3433)
- Sparks, J. N. [1963], Expository notes on the problem of making multiple comparisons in a completely randomized design. J. Expt. Education 31:343-349.
E1a;A3 (3434)
- Sprent, P. [1955], A note on design and analysis of soil insecticide experiments. Biometrics 11:427-430. E3a (3435)
- Sprott, D. A. [1954], A note on balanced incomplete block designs. Canadian J. Math. 6:341-346. E2c (3436)
- Sprott, D. A. [1955], Balanced incomplete block designs. Ph. D. Thesis, Univ. Toronto. E2c (3437)
- Sprott, D. A. [1955], Some series of partially balanced incomplete block designs. Canadian J. Math. 7:369-381. E3c (3438)
- Sprott, D. A. [1955], Balanced incomplete block designs and tactical configurations. AMS 26:752-758. E2c (3439)
- Sprott, D. A. [1956], Some series of balanced incomplete block designs. Sankhyā 17:185-192. E2c (3440)
- Sprott, D. A. [1956], A note on combined interblock and intrablock estimation in incomplete block designs. AMS 27:633-641 (correction 28:269).
E3a (3441)
- Sprott, D. A. [1959], A series of symmetrical group divisible incomplete block designs. AMS 30:249-251. E3c (3442)
- Sprott, D. A. [1962], Listing of BIB designs from $r=16$ to 20. Sankhyā A 24:203-204. E2c (3443)

- Sprott, D. A. [1964], Generalizations arising from a family of difference sets.
JISA 2:197-209. E3c (3444)
- Srivastava, J. N. [1962], Contributions to the construction and analysis of designs.
Ph. D. Thesis, Univ. N. Carolina (Inst. Stat. Mimeo. Ser. No. 301, Univ. N.
Carolina). E2,3ac;T3ac (3445)
- Srivastava, J. N. [1962], A generalized partially balanced association scheme
(abstract). AMS 33:296. E3c (3446)
- Srivastava, J. N. [1962], Incomplete multiresponse designs. Inst. Stat. Mimeo.
Ser. No. 340, Univ. N. Carolina, 20 pp. E5c (3447)
- Srivastava, J. N. [1963], An algorithm for the analysis of multidimensional partially
balanced designs (abstract). AMS 34:1116. E3,13a;T7a (3448)
- Srivastava, J. N. [1963], Some classes of designs in multiresponse experiments
(summary). JASA 58:562. E5,9c;A7 (3449)
- Srivastava, J. N. [1964], On a general class of designs for multiresponse experiments.
Inst. Stat. Mimeo Ser. No. 402, Univ. N. Carolina. E5ac (3450)
- Srivastava, J. N. [1965], Some necessary conditions for the existence of partially
balanced arrays (abstract). AMS 36:1079. E3c (3451)
- Srivastava, J. N. [1966], Incomplete multiresponse designs. Sankhyā A 28:377-388.
E5,9ac (3452)
- Srivastava, J. N. [1967], A new class of conditions for the existence of partially
balanced arrays, including BIBD's and orthogonal arrays (preliminary report)
(abstract). AMS 38:641. E2c (3453)
- Srivastava, J. N. and Chopra, D. V. [1967], Partially balanced arrays with $\mu_2=2$
and 3 (abstract). AMS 38:1937. E3c (3454)
- Srivastava, J. N. and Malk, R. L. [1966], On a new property of PBIB designs useful
in an application of MANOVA in psychometrics (abstract). AMS 37:546-547
(Aerospace Res. Lab. ARL 66-0105, U.S. Air Force). E3a (3455)
- Srivastava, J. N. and Roy, S. N. [1960], On a generalization of balanced incomplete
block designs (abstract). AMS 31:538. E2c (3456)
- Stanley, J. C. [1955], Statistical analysis of scores from counterbalanced tests.
J. Expt. Education 23:187-207. E7,12ace (3457)
- Stanley, J. C. [1961], Analysis of doubly nested design. Educational Psychological
Measurement 21:831-837. E12a (3458)

- Stanton, R. G. [1957], A note on EIBDS. AMS 28:1054-1055 (acknowledgement of priority 30:254). E2,14c (3459)
- Stanton, R. G. and Sprott, D. A. [1958], A family of difference sets. Canadian J. Math. 10:73-77. E2c (3460)
- Stanton, R. G. and Sprott, D. A. [1964], Block intersections in balanced incomplete block designs. Canadian Math. Bull. 7:539-548. E2c (3461)
- Stanton, R. G. and Mullin, R. C. [1966], Inductive methods for balanced incomplete block designs. AMS 37:1340-1354. E2,4c (3462)
- Starr, S. [1960], Some results in the analysis of variance I (preliminary report) (abstract). AMS 31:529. E1a;T2a (3463)
- Staude, H. [1959], Abkürzung des Range-Verfahrens von H. O. Hartley zur Auswertung von Blockversuchen. (Shortcut of H. O. Hartley's range-method for evaluating block experiments.) Biom. Zeit. 1:261-275. E2ae (3464)
- Staude, H. [1961], Die Verbindung des Neuen Multiplen Rangtests von Duncan mit Hartleys Range-Verfahren zur Auswertung von Blockversuchen. (The combination of Duncan's new multiple range test with Hartley's range-method for evaluating block experiments.) Biom. Zeit. 3:47-53. E2a;A3 (3465)
- Stearman, R. L. and Ward, T. G. [1957], Variability of specific activities and specific-activity ratios. Archives Biochemistry Biophysics 68:249-254. E1e;T2e (3466)
- Steel, R. G. D. [1958], A class of augmented designs. MRC Tech. Summary Report No. 56:1-16, U.S. Army and Univ. Wisconsin. E4,7ac (3467)
- Steel, R. G. D. and Federer, W. T. [1955], Yield-stand analyses. JISAS 7:27-45. E2ae;A3,7 (3468)
- Stevens, W. L. [1951], Experiências de rotação. Bragantia 11:317-330. E5,8ac (3469)
- Stevens, W. L. [1956], Rotation experiment in Brazil. J. Agri. Sci. 47:257-261. E5,8ac (3470)
- Stiehler, R. D. [1956], Application of statistics to tire testing (summary). JASA 51:524. E7c (3471)
- Still, H. A. [1961], Analysis of multiple covariance when the regression coefficients depend on the blocks. Ph. D. Thesis, Virginia Polytechnic Inst. E2,3a;A7 (3472)
- Stone, M. [1961], Non-equivalent comparisons of experiments and their use for experiments involving location parameters. AMS 32:326-332. E14 (3473)

- Storch, J. M. [1957], Open plaatsen in orthogonale proefschema's. (Missing plot analysis.) Stat. Neerlandica 11:131-139. E2,6a (3474)
- Strand, E. [1959], Studies on the efficiency of experimental designs in small grain experiments. Acta Agri. Scandinavica 9:321-340. E2,3,5,14a;A14 (3175)
- Strand, L. [1966], The use of analysis of covariance. An example with data from a manuring experiment. International Advisory Group of Forest Statisticians, Second Conf. Inst. Skoglig Matematisk Stat. pp. 308-318. E2ae;T2ae;A7 (3476)
- Sutter, G. J. [1962], Some aspects of constrained randomization. M. S. Thesis, Iowa State Univ. ESac;C (3477)
- Sutter, G. J., Zyskind, G., and Kempthorne, O. [1963], Some aspects of constrained randomization. Dept. Stat. Tech. Report and Aeronautical Res. Lab. ARL 63-18, Iowa State Univ. and U.S. Air Force. ESac;C (3478)
- Sváb, J. [1957], A varianciaanalízis megközelítése négyzetreemelés nélkül különös tekintettel blokkelrendezésű szántóföldi kísérletek értékelésére. (A method requiring no squaring approximating to analysis of variance, with special reference to the evaluation of block-design field trials.) Növénytermeles 6:77-90. E2a (3479)
- Sváb, J. [1958], Kísérletsorozat értékelése variancia-analízissel, teljes bontásban; a kölcsönhatás értelmezése. (The evaluation of a series of trials by means of variance analysis with complete partitioning; interpretation of the interaction.) Növénytermeles 7:121-142. E2a;A13 (3480)
- Sváb, J. [1959], Módszer egysorozatos kísérletek elrendezésére és értékelésére. (Method for the layout and evaluation of unreplicated experiments.) Agrobotanika, Tapioszele 1:29-53 (Mimeo.). ESac (3481)
- Swaminathan, S. S. [1963], On designs obtainable by combining different designs (abstract). JISAS 15:259. E2,3,4c (3482)
- Swaminathan, S. S. and Das, M. N. [1964], Combined analysis of incomplete block designs. JISAS 16:296-303. E2,3a;A13 (3483)
- Swaminathan, S. S. and Das, M. N. [1965], Construction and analysis of several series of incomplete block designs, JISAS 17:43-57. E3,4,9c (3484)
- Sweeny, H. C. [1955], Analyses of experiments with correlated observations and heterogeneous variances (summary). JASA 50:597. ESa;T2a;A11 (3485)
- Sweeny, H. C. [1956], Some results on experimental designs when the usual assumptions are invalid. Ph. D. Thesis, Virginia Polytechnic Inst. E2,3,5a;T2a;A11 (3486)
- Sweeny, H. C. [1959], The power of the analysis of variance test under constrained randomization (abstract). Biometrics 15:340. ESa (3487)

- Taguchi, G. [1959], Linear graphs for orthogonal arrays and their applications to experimental designs with the aid of various techniques. Reports Stat. Appl. Res. 6:133-175. E2,3c;T2c (3488)
- Taguchi, G. [1960], Tables of orthogonal arrays and linear graphs. Reports Stat. Appl. Res. 7:1-52. E2,3c;T2c (3489)
- Takahashi, M. [1955], On the analysis of variance for the split-plot design. J. Sci. Hiroshima Univ. Ser. A-1 19:321-325. E5,12a (3490)
- Takeuchi, K. [1961], On a special class of regression problems and its applications: some remarks about general models. Reports Stat. Appl. Res. 8:7-17. E2,ac;A7 (3491)
- Takeuchi, K. [1961], On a special class of regression problems and its application: random balanced incomplete block designs. Reports Stat. Appl. Res. 8:18-28. E2,7ac;A7 (3492)
- Takeuchi, K. [1961], On the optimality of certain type of PBIB designs. Reports Stat. Appl. Res. 8:140-145. E3,14c (3493)
- Takeuchi, K. [1962], A table of difference sets generating balanced incomplete block designs. Rev. ISI 30:361-366. E2c (3494)
- Takeuchi, K. [1963], A remark added to "On the optimality of certain type of PBIB designs." Reports Stat. Appl. Res. 10:225. E3,14c (3495)
- Takeuchi, K. [1963], On the construction of a series of BIB designs. Reports Stat. Appl. Res. 10:226. E2c (3496)
- Tan, W.Y. and Yuan, C.H. [1965], On the biometrical analysis of quantitative inheritance. Botanical Bull. Academia Sinica 6:189-196. E4ac;T3a (3497)
- Tanaka, W. [1967], Quality design on orthogonal arrays. Reports Stat. Appl. Res. 14:1- E2,3c (3498)
- Taylor, J. [1950], The comparison of pairs of treatments in split-plot experiments. Biometrika 37:443-444. E5,12a (3499)
- Taylor, J. [1967], The value of orthogonal polynomials in the analysis of change-over trials with dairy cows. Biometrics 23:297-311 (abstract 20:396). E8a (3500)
- Taylor, W. B. [1952], Some general classes of experimental designs involving two-way elimination of heterogeneity. Incomplete block design with row balance. M.S. Thesis, London Univ. College. E7ac (3501)

- Taylor, W. B. [1957], Incomplete block designs with row balance and recovery of inter-block information. *Biometrics* 13:1-12. E7ae (3502)
- Taylor, W. B. and Armstrong, P. J. [1952], The efficiency of some experimental designs used in dairy husbandry experiments. *J. Agri. Sci.* 43:407-412. E7,8a (3503)
- Tharthare, S. K. [1963], Right angular designs. *AMS* 34:1057-1067. E3c (3504)
- Tharthare, S. K. [1965], Generalized right angular designs. *AMS* 36:1535-1553. E3ac (3505)
- Thayer, F. D., Blanco, E. G., and Wilcoxon, F. [1951], The application of statistics in the tanning laboratory. I. The use of a Youden square (with discussion). *J. American Leather Chemists Assoc.* 46:669-684. E7ae (3506)
- Thompson, F. C. [1960], A long-term manurial experiment with hops. The effect of heavy manuring on soil fertility and on the yield, leaf mineral content and resin content of the variety Fuggle. *J. Horticultural Sci.* 35:185-201. E5a (3507)
- Thompson, H. R. [1956], On a new class of partially balanced incomplete block designs. *Calcutta Stat. Assoc. Bull.* 6:193-195. E3,7c (3508)
- Thompson, H. R. [1956], Extensions to missing plot techniques. *Biometrics* 12:241-244 (correction 13:543). E6a (3509)
- Thompson, H. R. and Seal, K.E. [1964], Serial designs for routine quality control and experimentation. *Technometrics* 6:77-98. E4ace (3510)
- Thompson, N. R., Blaser, R. E., Graf, G. C., and Kramer, C. Y. [1955], Application of a Latin square change-over design to dairy cattle grazing experiments. *J. Dairy Sci.* 38:991-996. E7ace (3511)
- Thompson, W. A. [1954], On the ratio of variances in the mixed incomplete block model. Ph.D. Thesis, Univ. N. Carolina. E2,3a (3512)
- Thompson, W. A. [1955], On the ratio of variances in the mixed incomplete block model. *AMS* 26:721-733. E3a (3513)
- Thompson, W. A. [1955], The relative size of the inter- and intra-block error in an incomplete block design. *Biometrics* 11:406-426. E3ae (3514)
- Thompson, W. A. [1955], A note on the balanced incomplete block designs. *AMS* 27:842-846. E2c (3515)

- Thompson, W. A. [1958], A note on PBIB design matrices. AMS 29:919-922.
E3a (3516)
- Throckmorton, T. N. [1958], An analysis of a modified cross-over design.
M.S. Thesis, Iowa State Univ. E8ac (3517)
- Throckmorton, T. N. [1961], Structures of classification data. Ph.D. Thesis,
Iowa State Univ. E11a;A5 (3518)
- Tiao, G. C. [1965], Bayesian comparison of means of a mixed model with
application to regression analysis. Dept. Stat. Tech. Report No. 49, Univ.
Wisconsin. E2a;T2a;A7 (3519)
- Tiao, G. C. and Draper, N. R. [1967], Bayesian analysis of linear models
with two random components (with special reference to the balanced in-
complete block design). Dept. Stat. Tech. Report No. 102, Univ. Wis-
consin. E2a (3520)
- Tiao, G. C. and Tan, W. Y. [1965], Bayesian analysis of random-effect
models in the analysis of variance. II. Effect of autocorrelated errors.
Dept. Stat. Tech. Report No. 54, Univ. Wisconsin. E2a;T2a (3521)
- Timon, W. E. [1962], The Slipped-Block Design. Ph.D. Thesis, Oklahoma
State Univ. E4a (3522)
- Timon, W. E. [1962], The slipped-block design. (abstract) Biometrics 18:632.
E4c (3523)
- Titus, J. [1955], Testing significance of main plot treatments adjusted for
split plot regression. M.S. Thesis, Univ. N. Carolina. E12a;A7 (3524)
- Tocher, K. D. [1952], The design and analysis of block experiments (with
discussion). JRSSB 14:45-100. E2.3,5,6,7,
10ace (3525)
- Tocher, K. D. [1952], The design and statistical analysis of experiments.
Ph.D. Thesis, London Univ. E (3526)
- Torrens-Ibern, J. [1962], Plans d'expériences pour l'étude des régressions
multiples. Bull. ISI 39(3):161-171. E7ac;T2a (3527)
- Torrens-Ibern, J. [1963], Plans d'expériences pour l'étude de régression
multiples. Colloques Inter. Centre Nat. Recherche Sci. No. 110, Le Plan
d'Expériences pp 257-268. E12ac;A7 (3528)
- Trehan, A. M. [1963], On the bounds of the number of common treatments
between blocks of balanced incomplete block design. J. Indian Stat.
Assoc., 1:102-103. E2c (3529)

- Truitt, J. T. and Smith, H. F. [1956], Adjustment by covariance and consequent tests of significance in split-plot experiments. *Biometrics* 11:23-39.
E5a;A7 (3530)
- Tsan, W. -L. [1957], The theory and practice of the multivarietal randomized arrangement pairing method (In Chinese). *Nung-yeh-hsueh Pao/Act. Agri. Sinica* 8:103-122.
E4,5ac (3531)
- Tsukibayashi, S. [1963], On analysis of covariance with product-moment and range methods. *Reports Stat. Appl. Res.* 10:177-206.
E1,2,S,12a;A7 (3532)
- Tukey, J. W. [1953], Some selected quick and easy methods of statistical analysis. *Trans. New York Academy Sci., Series II*, 16:88-97.
E1e;A3,12 (3533)
- Tukey, J. W. [1955], Query 113. *Biometrics* 11:111-113.
E7a;A4 (3534)
- Turyn, R. J. [1965], Character sums and difference sets. *Pacific J. Math.* 15:319-346.
E2c;T3c (3535)

Urquhart, N. S. [1962], The repeated and slipped block design. M.G. Thesis,
Colorado State Univ. E4ace (3536)

- van den Driessche, R. [1961]. Blocs complets de deux unités. *Biométrie-Praximétrie* 2:131-132. E2a;A7 (3537)
- van den Heiden, J. A. [1953]. Dupliceerbaarheid en reproduceerbaarheid van waarnemingen. *Stat. Neerlandica* 7:15-22. E14 (3538)
- van der Reyden, D. [1954]. Design and analysis of soil insecticide field experiments. *Biometrics* 10:291-297. E3ae (3539)
- van der Vaart, H. R. [1962]. A critical appraisal of some aspects of the concept of optimal design in biology (abstract). *Biometrics* 18:626. E14 (3540)
- van Elteren, P. and Noether, G. E. [1959]. The asymptotic efficiency of the χ^2_r - test for a balanced incomplete block design. *Biometrika* 46:475-477. E2a;T11a (3541)
- Varma, A. A. O. and Chilton, N. W. [1965]. Studies in the design and analysis of dental experiments. II. Sequential analysis (two dichotomous populations where the data are collected in groups.) *J. Oral Therapeutics Pharmacology* 2:44-51. E2ae;S2 (3542)
- Vartak, M. N. [1955]. On an application of Kronecker product of matrices to statistical designs. *AMS* 26:420-438. E4c (3543)
- Vartak, M. N. [1958]. On the Hasse-Minkowski invariant of the Kronecker product of matrices. *Canadian J. Math.* 10:66-72. E4c (3544)
- Vartak, M. N. [1959]. The non-existence of certain PBIB designs. *AMS* 30:1051-1062. E3,4c (3545)
- Vartak, M. N. [1960]. Relations among the blocks of the Kronecker product of designs. *AMS* 31:772-778. E4c;A8 (3546)
- Vartak, M. N. [1961]. On some applications of Kronecker product of matrices to statistical designs. Ph. D. Thesis, Univ. Bombay. E4,5c (3547)
- Vartak, M. N. [1963]. Connectedness of Kronecker product designs. *JISA* 1:215-218. E4,9c;T7c (3548)
- Vartak, M. N. [1963]. Disconnected balanced designs. *JISA* 1:104-107. E2,14c (3549)
- vaz de Arruda, H. [1952]. Análise de uma experiência sobre variedades de soja. (Analysis of an experiment with soybean varieties.) *Bragantia* 12:65-73. E2e;A7 (3550)
- vaz de Arruda, H. [1954]. Eficiência do delineamento em blocos ao acaso, em experiências comparativas de variedades e híbridos de milho. (Efficiency of randomized block designs in experiments to test corn varieties and hybrids.) *Bragantia* 13:217-222. E2,14a (3551)

- vaz de Arruda, H. [1955], Delineamento em blocos incompletos balanceados com o número de variedades igual ao número de blocos. (Analysis of balanced, incomplete block designs when number of varieties equals number of blocks.) *Bragantia* 14:129-136 E2ace (3552)
- vaz de Arruda, H. [1959], Aplicação da transformação raiz quadrada, análise da variância de dados experimentais. (Square root transformation in the analysis of certain field experimental data.) *Bragantia* 18:XV-XIX E2a;A9 (3553)
- vaz de Arruda, H. [1960], Aplicação da análise da covariância, num estudo sobre tamanho de canteiro para experiências com cafeeiros. (The use of covariance analysis to determine plot size in coffee experiment). *Bragantia* 19:I-V E2e;A7,14 (3554)
- Venekamp, J. T. N., Hamming, G. and Vervelde, G. J. [1952], A 4^3 factorial design with confounding in 8×8 quasi-Latin squares. *Landbouwkundig Tijdschrift* (Wageningen) 64:325 E12ac;T2a (3555)
- Venkateswaran, A. N., Seshu, K.A., and Murugarajendran, C. [1963], An incomplete block design for large scale trials in groundnut breeding. *Madras Agr. J.* 50:80-81 E2a (3556)
- Venturini, W. R. and Jorge, J. P. N. [1962], Eficiência do delineamento fatorial 3^3 , em blocos de 9, em uma série de experimentos de adubação do algodoeiro. (Efficiency of a 3^3 factorial design for cotton fertilizer experiments.) *Bragantia* 21:631-637 E14;T2a;A13 (3557)
- Verdooren, L. R. [1965], "Change-over" -proven. (Change-over -trials). *Stat. Neerlandica* 19:323-333 E8ae (3558)
- Vessereau, A. [1960], Contrôle d'une enceinte conditionnée. *Revue Statistique Appliquée* 8(2):53-75 E12ae;T2ae (3559)
- Vittum, M. T., Peck, N. H., and Carruth, A. F. [1959], Response of sweet corn to irrigation, fertility level, and spacing. *N. Y. State Agr. Expt. Stat. Cornell Univ. Bull. No. 786* E12e;T2e (3560)
- Vittum, M. T., Tapley, W. T., and Peck, N. H. [1958], Response of tomato varieties to irrigation and fertility level. *N. Y. State Agr. Expt. Stat. Cornell Univ. Bull. No. 782* E12e;T2e (3561)
- Vos, B. J. [1950], Statistics in biological assay: an example of the graded response. *Ann. New York Academy Sci.* 52:920-92. E7a;T8a (3562)

- Walpole, R. E. [1958], Combined intra- and inter-block analysis for factorials in incomplete block designs. Ph. D. Thesis, Virginia Polytechnic Inst.
E2a;T2a (3563)
- Walpole, R. E. [1958], Combined intra- and inter-block analysis for factorials in incomplete block designs (abstract). Virginia J. Sci. 9:448.
E3a;T2a (3564)
- Walsh, J. E. [1959], Exact nonparametric tests for randomized blocks.
AMS 30:1034-1040 (abstract 30:255). E2a;A12 (3565)
- Wang, C. -C. [1964], Effects of number of buds and different size of seed pieces on the germination, growth and production of sugar cane. (in Chinese) Taiwan Tahsueh Nungshuehyuan Yenchiu Paokao/Mem. College Agri. Nat. Taiwan Univ. 8(1):1-11.
E2e;T2e (3566)
- Wang, C. -C., Cheng, C. -P., and Hsu, J. -S. [1961], Experiments on the competition of Para₇ Pangola-, and Napier-grasses. I. Competition between forage grasses and weeds. (in Chinese) Taiwan Tahsueh Nungshuehyuan Yenchiu Paokao/Mem. College Agri. Nat. Taiwan Univ. 6(2):21-35.
E2ae;A14 (3567)
- Wang, C. -M. [1950], Notes on multi-varietal trials. 1. Simple lattice.
Mem. College Agri. Nat. Taiwan Univ. 2(No. 3):1-31 E2,3ae (3568)
- Wang, C. -M. [1953], Notes on the multi-varietal trials (II) Triple lattice. (in Chinese) Taiwan Tahsueh Nungshuehyuan Yenchiu Paokao/Mem. College Agri. Nat. Taiwan Univ. 3(1):1-19.
E3ae (3569)
- Wang, C. -M. [1958], Comparison of eight statistical treatments of experimental data in fractions (or percentages) (in Chinese) Taiwan Tahsueh Nungshuehyuan Yenchiu Paokao/Mem. College Agri. Nat. Taiwan Univ. 5(2):1-24.
E2ae;A4,9 (3570)
- Wang, H. -L. [1958], Studies on the analysis of pairing experiments. (in Chinese) Nung-yeh-hsueh Pao (J. Agri.)/Act. Agri. Sinica 9:88-97.
E4,5ae (3571)
- Wang, Y. [1964], A note on the maximal number of pairwise orthogonal Latin squares of a given order. Scientia Sinica 13:841-843. E7,12c (3572)
- Ward, G. C. and Dick, I. D. [1952], Non-additivity in randomized block designs and balanced incomplete block designs. New Zealand J. Sci. Tech. B, 33:430-435.
E2a;A4 (3573)
- Watson, G. S. [1956], Missing and "mixed-up" frequencies in contingency tables. Biometrics, 12:47-50 (abstracts, 11:242 and 517). E6a (3574)

- Watson, G. S. [1966], The statistics of orientation data. J. Geology
74:786-797. E1a (3575)
- Wattler, J. B. [1954], Efficiencies of alternative designs in estimating the
corn yield in Iowa. M.S. Thesis, Iowa State Univ. E14 (3576)
- Weeks, D. L. and Graybill, F. A. [1959], Minimal sufficient statistics in
incomplete block designs, Model II (abstract). AMS 30:624-625.
E2,3a (3577)
- Weeks, D. L. and Graybill, F. A. [1961], Minimal sufficient statistics for
the balanced incomplete block design under an Eisenhart Model II.
Sankhyā A 23:261-268. E2a (3578)
- Weeks, D. L. and Graybill, F. A. [1962], A minimal sufficient statistic for
a general class of designs. Sankhyā A 24:339-354. E2,3a (3579)
- Weeks, E. [1952], Balanced incomplete design used as a means of determining
the acceptability of seven types of clothing fabrics (abstract). Virginia J.
Sci. 3:359-360. E2a (3580)
- Wells, M. B. [1967], The number of Latin squares of order eight. J.
Combinatorial Theory 3:98-99. E7c (3581)
- West, O. [1954], Improvements in the technique and design of veld management
experiments. South African J. Sci. 50:222-227. E5ac;C (3582)
- White, R. F. [1963], Randomization analysis of the general experiment. Ph. D.
Thesis, Iowa State Univ. E3,4a;A5 (3583)
- Wiesen, J. M. [1951], The design and analysis of experiments involving sensory
impressions. M.S. Thesis, Iowa State Univ. E2a;C (3584)
- Wiggers, B. G. [1959], Efficiency in de statistiek. (Efficiency in statistics.)
Stat. Neerlandica 13:261-280. E14;A12 (3585)
- Wijnhoven, J. [1958], Statistische methoden en het ontwerpen van experimenten
(Statistical methods and experimental design). Agricultura, Louvain 6:585-594.
E2,3,7,13a;C (3586)
- Wilcoxon, F. [1955], Significance tests by rank methods. ASQC Nat. Conv. Trans.
9:135-140. E1e;A12 (3587)
- Wilcoxon, F. and Wilcox, R. A. [1964], Some rapid approximate statistical
procedures, Lederle Laboratories, Pearl River, New York, pp. 1-60.
E1,2ae;T2ae;A12 (3588)
- Wilk, M. B. [1953], The randomization analysis of a generalized randomized
block design. M.S. Thesis, Iowa State Univ. E2a (3589)

- Wilk, M. B. [1955], Linear models and randomized experiments. Ph. D. Thesis, Iowa State Univ. E2,7,12a;A5 (3590)
- Wilk, M. B. [1955], The randomization analysis of a generalized randomized block design. Biometrika 42:70-79. E2a;A5 (3591)
- Wilk, M. B. and Kempthorne, O. [1956], Some aspects of the analysis of factorial experiments in a completely randomized design. AMS 27:950-985. E1a;T2a;A5 (3592)
- Wilk, M. B. and Kempthorne, O. [1956], Analysis of Variance: Preliminary tests, pooling, and linear models. Derived linear models and their use in the analysis of randomized experiments. Stat. Lab. and Aeronautical Res. Lab. WADC Tech. Report 55-244, vol.II, Iowa State Univ. and U.S. Air Force. E1,2,5,7,12a;A5 (3593)
- Wilk, M. B. and Kempthorne, O. [1957], Non-additivities in a Latin square design. JASA 52:218-236 (summary 51:526). E7a;A4 (3594)
- Wilk, R. E. [1963], The use of a cross-over design in a study of student teachers' classroom behaviors. J. Exptl. Education 31:337-341. E8a (3595)
- Wilkinson, G. N. [1958], Estimation of missing values for the analysis of incomplete data. Biometrics, 14:257-266. E2,6ae (3596)
- Wilkinson, G. N. [1958], The analysis of variance and derivation of standard errors for incomplete data. Biometrics, 14:360-384. E2,6,7,10ae (3597)
- Wilkinson, G. N. [1960], Comparison of missing value procedures. Australian J. Stat. 2:53-65. E2,6,7,10ae (3598)
- Wilkinson, J. W. [1966], Comparing designs for experiments that may be prematurely terminated (abstract). Technometrics 8:211. E5 (3599)
- Willcocks, T. H. [1967], Some squared squares and rectangles. J. Combinatorial Theory 3:54-56. E7c (3600)
- Williams, D. A. [1966], Errors of treatment comparisons when observations are missing from a randomized block experiment with additional replication of a control treatment. Biometrics 22:632-633. E2,6a (3601)
- Williams, E. J. [1950], Experimental designs balanced for pairs of residual effects. Australian J. Sci. Res., Series A, 3:351-363. E8ac (3602)
- Williams, E. J. [1950], Statistical analysis of results for successive tests on the same organism. Nature 166:319 E5a (3603)

- Williams, R. M. [1952], Experimental designs for serially correlated observations. *Biometrika* 39:151-167. E5ac (3504)
- Wilsie, C. P. [1954], Relative efficiency of lattice and randomized block designs for forage crop trials. *Agron. J.* 46:355-357. E2,14a (3605)
- Winder, C. V. [1950], Some examples of the use of statistics in pharmacology. *Ann. New York Academy Sci.* 52:838-861. E7ae;T2,8a;C (3606)
- Wishart, J. [1950], Field trials II: The analysis of covariance. Commonwealth Bur. Plant Breeding Genetics, Tech. Comm. 15. E2,6,7ae;A7 (3607)
- Wishart, J. and Sanders, H. G. [1955], Principles and practice of field experimentation. Commonwealth Pur. Plant Breeding Genetics, Tech. Comm. 18. E2,5,7,12ae;T2ae;A14;C (3608)
- Wishart, J., Thawani, V. D., Kishen, K., and Nair, K. R. [1954], Statistical methods. FAO/55/9/6340: In Dex/1, FAOUN, Rome, 111 pp (mimeo.). E2,3a;T2a;C (3609)
- Wolock, F. W. [1965], Cyclic designs. Ph. D. Thesis, Virginia Polytechnic Inst. E3ac (3610)
- Wolock, F. and David, H. A. [1965], Cyclic designs (abstract). *Biometrics* 21:259. E3c (3611)
- Wood, S. R. [1963], Analysis of a rocket nozzle ablation experiment. *ASQC, Ann. Conv. Trans.* 17:329-332. E2e (3612)
- Woodhouse, W. W. and Rigney, J. A. [1954], A unique application of a balanced lattice design. *Agron. J.* 46:181. E2,14a (3613)
- Wooding, W. M. [1966], A balanced incomplete blocks design for consumer fragrance testing. *ASQC, Ann. Tech. Conf. Trans.* 20:815-822. E2ae (3614)
- Wright, E. C. [1965], Field plans for a systematically designed polycross. *Rec. Agri. Res. N. Ireland* 14:31-41. E5c;T9ac (3615)

- Yalavigi, C. C. [1963], A tournament problem. Math. Student 31:51-64.
E2c;T11c (3616)
- Yamamoto, K. [1950], An asymptotic series for the number of three-line latin rectangles. J. Math. Soc. Japan 1(4):226-241. E7c (3617)
- Yamamoto, K. [1951], On the asymptotic number of Latin rectangles. Japanese J. Math. 21:113-119. E7c (3618)
- Yamamoto, K. [1952], Note on the enumeration of 7×7 Latin squares. Bull. Math. Stat. 5(1&2):1-8. E7,12c (3619)
- Yamamoto, K. [1954], Euler squares and incomplete Euler squares of even degrees. Memoirs Faculty Sci. Kyusyu Univ. Series A, 8:161-180. E7,12c (3620)
- Yamamoto, K. [1956], Structure polynomial of Latin rectangles and its application to a combinatorial problem. Memoirs Faculty Sci. Kyusyu Univ. Series A, 10:1-13. E7,12c (3621)
- Yamamoto, K. [1961], Generation principles of Latin squares. Bull. ISI 38(4):73-76. E7,12,13c (3622)
- Yamamoto, K. [1965], A necessary condition for the existence of partially balanced incomplete block designs with an m-subset association scheme. Memoirs Faculty Sci. Kyusyu Univ. Series A, 19:76-98. E3,4c (3623)
- Yamamoto, K. [1965], On an orthogonal basis of the eigenspaces associated with partially balanced incomplete block designs of Latin square type association scheme. Memoirs Faculty Sci. Kyushu Univ. Series A, 19:99-104. E3,4c (3624)
- Yamamoto, S. [1964], Some aspects for the composition of relationship algebras of experimental designs. J. Sci. Hiroshima Univ. Series A-I, 28:167-197. E2,3,4,7ac (3625)
- Yamamoto, S. and Fujii, Y. [1963], Analysis of partially balanced incomplete block designs. J. Sci. Hiroshima Univ. Series A-I, 27:119-135. E3a (3626)
- Yamamoto, S., Fujii, Y., and Hamada, N. [1965], Composition of some series of association algebras. J. Sci. Hiroshima Univ. Series A-I, 29:181-215. E2,3,4ac (3627)
- Yamamoto, S., Fukuda, T., and Hamada, N. [1966], On finite geometries and cyclically generated incomplete block designs. J. Sci. Hiroshima Univ. Series A-I, 30:137-149. E2c (3628)

- Yang, S. -J. [1958]. A method of raising the degree of precision of trials involving a check variety and other varieties. (in Chinese). Nung-yeh-hsueh Pao (J. Agri.)/Act. Agri. Sinica 9:291-293. E4,5ac (3629)
- Yates, F. [1952], Análise de uma experiência de rotação. (The analysis of a rotation experiment.) Bragantia 12:213-235. E5,8ace (3630)
- Yates, F. [1954], The analysis of experiments containing different crop rotations. Biometrics 10:324-346. E5,8a;A13 (3631)
- Yates, F. [1967], A fresh look at the basic principles of the design and analysis of experiments. Proc. Fifth Berkeley Symp. Math. Stat. Prob. IV:777-790. E7a;T2,4a;C (3632)
- Yates, F. and Patterson, H. D. [1958], A note on the six-course rotation experiments at Rothamsted and Woburn. J. Agri. Sci. 50:102-109. E5,8a (3633)
- Yeh, S. -F. [1963], A study on the control of disturbing factors in an experiment by analysis of covariance. Taiwan Tahsueh Nunghsuehyuan Yenchiu Paokao/Memoirs College Agri. Nat. Taiwan Univ. 7(1):1-11. E2,7ae;A7 (3634)
- Youden, W. J. [1950], Comparative tests in a single laboratory. Statistical Method in Industrial Production, Royal Stat. Soc. pp 30-35. E2ae (3635)
- Youden, W. J. [1950], A note on the four by four Latin Squares. Biometrics 6:289-290. E7a (3636)
- Youden, W. J. [1951], Linked blocks: A new class of incomplete block designs (abstract). Biometrics 7:124. E4c (3637)
- Youden, W. J. [1951], Single link designs (abstract). Virginia J. Sci. 2:380. E4a (3638)
- Youden, W. J. [1952], The interpretation of chemical data. IQC 8(6):90-93. E2a;C (3639)
- Youden, W. J. [1953], Experimental designs for the physical sciences (summary). JASA 48:625. E3a (3640)
- Youden, W. J. [1954], Statistical design achieves important savings by reducing the number of runs using reference controls. Ind. Eng. Chemistry 46(8):99A-102A. E2ac (3641)
- Youden, W. J. [1954], Test procedures may be improved by using statistical design while conducting tests. Ind. Eng. Chemistry 46(10):119A-122A. E5ace (3642)
- Youden, W. J. [1954], Long established experimental procedures illustrate the principles of statistical design. Ind. Eng. Chemistry 46(12):105A-106A. E5ae (3643)

- Youden, W. J. [1955], Statistical design does not necessarily reduce the experimental error of comparisons. Ind. Eng. Chemistry 47(2):97A-99A
E5a (3644)
- Youden, W. J. [1955], Gun problem illustrates the importance of proper scheduling of measurements. Ind. Eng. Chemistry 47(8):103A-105A E5c;C (3645)
- Youden, W. J. [1955], Statistical design brings organization and direction into research and development. Ind. Eng. Chemistry 47(12):89A-90A
E7c;C (3646)
- Youden, W. J. [1956], Engineering vs. classical test patterns. Ind. Eng. Chemistry 48(8):59A-60A E5;C (3647)
- Youden, W. J. [1956], Spark plug testing discloses operating characteristics of engines. Ind. Eng. Chemistry 48(10):61A-62A E2ac (3648)
- Youden, W. J. [1956], Randomization and experimentation (abstract). AMS 27:1185-1186 E5ac;C (3649)
- Youden, W. J. [1957], National physical standards and design of experiment. Bull. ISI 35(2):191-198 E3ac (3650)
- Youden, W. J. [1958], Product specification and test procedures. Ind. Eng. Chemistry 50(10):91A-92A E2ae (3651)
- Youden, W. J. [1958], Circumstances alter cases. Ind. Eng. Chemistry 50(12):77A-78A E2a (3652)
- Youden, W. J. and Connor, W. S. [1953], The chain block design. Biometrics 9:127-140 E4ace (3653)
- Youden, W. J. and Connor, W. S. [1954], New experimental designs for paired observations. J. Res. NBS 53:191-196 E3ace;Tllace (3654)
- Youden, W. J. and Hunter, J. S. [1955], Partially replicated Latin squares. Biometrics 11:399-405 E7ace (3655)

- Zana, J. [1957], Die vom ungarischen Forschungsinstitut der Zuckerindustrie angewandten Feldversuchsmethoden und die mit ihnen gewonnenen Erfahrungen. Sborník cukrovarnicko-řepařské konference v Praze 14-19.X.1955 (Papers of the conference for sugar beet in Prague, 14-19 October, 1955) I and II, pp 283-295. E2,7,12a (3656)
- Zana, J. [1957], A $(k+1)$ típusú 5×5 -ös rácsnégyzet alkalmazása cukorrépa fajtakísérleteknél. (The use of the $(k+1)$ 5×5 type of lattice square in sugar-beet variety trials.) Növénytermelés 6:119-130. E11a (3657)
- Zelen, M. [1954], Analysis for some partially balanced incomplete block designs having a missing block. Biometrics 10:273-281 (abstract 9:263). E3,6ae (3658)
- Zelen, M. [1954], Exact tests of significance for combining inter- and intra-block information in incomplete block designs (preliminary report) (abstract). AMS 25:810. E3a (3659)
- Zelen, M. [1954], A note on partially balanced designs. AMS 25:599-602. E3c (3660)
- Zelen, M. [1955], The use of incomplete block designs for factorial experiments (summary). IASA 50:599. E3a:T2a (3661)
- Zelen, M. [1957], The analysis of covariance for incomplete block designs. Biometrics 13:309-332. E3ae:A7 (3662)
- Zelen, M. [1957], Combining independent tests of significance for incomplete block designs. Ph. D. Thesis, American Univ. E2,3a (3663)
- Zelen, M. [1957], The analysis of covariance for incomplete block designs (summary). JASA 52:383. E3a:A7 (3664)
- Zelen, M. [1957], The analysis of incomplete block designs. JASA 52:204-217. E2,3a (3665)
- Zelen, M. [1957], The use of incomplete block designs for asymmetrical factorial arrangements (abstract). AMS 28:526. E2,3ac:T2ac (3666)
- Zelen, M. [1957], The use of incomplete block designs for asymmetrical factorial arrangements (abstract). Biometrics 13:422. E3a:T2a (3667)
- Zelen, M. [1958], The use of group divisible designs for confounded asymmetrical factorial arrangements. AMS 19:22-40. E3a:T2a (3668)
- Zelen, M. [1962], Introductory lectures on the statistical design of experiments. Math. Res. Center Orientation Lecture Series I. U. S. Army, Univ. Wisconsin. E2,7ae:T2ae:C (3669)

- Zelen, M. and Federer, W. T. [1963], Applications of the calculus for factorial arrangements III: Two way elimination of heterogeneity. Math. Res. Center Tech. Summary Report No. 410:1-29, U. S. Army Univ. Wisconsin.
E7,9ac;A8 (3670)
- Zelen, M. and Federer, W. T. [1964], Applications of the calculus for factorial arrangements II: Two way elimination of heterogeneity. AMS 35:658-672 (also Math. Res. Center Tech. Summary Report No. 410, U. S. Army Univ. Wisconsin, E7,9ac;A8 (3671)
- Zelen, M. and Joel, L. S. [1959], The weighted compounding of two independent significance tests. AMS 30:885-895.
E3a;A11 (3672)
- Zemach, R. B. [1965], On orthogonal arrays of strength four and their applications. Ph. D. Thesis, Michigan State Univ.
2,7,12,13c (3673)
- Zimmermann, K. F. [1955], Feldversuchswesen: die Gitterquadratmethode in praktischer Anwendung. Der Züchter 25:132-138.
Ellace (3674)
- Zimmermann, K. F. [1957], Feldversuchswesen: Vereinfachtes Rechenschema für Blockversuche und Lateinische Quadrate. Der Züchter 27:89-92.
E2,7ae (3675)
- Zoellner, J. A. [1953], Experimental designs with blocks of two plots. M.S. Thesis, Iowa State Univ.
E2,3ace (3676)
- Zoellner, J. A. and Kempthorne, O. [1954], Incomplete block designs with blocks of two plots. Iowa State College Agri. Expt. Sta. Res. Bull. 418.
E2ace (3677)
- Zyskind, G. [1958], Error structures in experimental designs. Ph. D. Thesis, Iowa State Univ.
E2,5,12a;A5 (3678)
- Zyskind, G. [1960], Some randomization consequences in balanced incomplete blocks (abstract). AMS 31:245.
E2a;A5 (3679)
- Zyskind, G. [1963], Some consequences of randomization in a generalization of the balanced incomplete block design. AMS 34:1569-1581. E2a;A5 (3680)
- Zyskind, G. and Kempthorne, O. [1959], The role of treatment error in comparative experiments (summary). JASA 54:508-509.
E1,2a;T2a;C (3681)
- Zyskind, G. and Kempthorne, O. [1960], Treatment errors in comparative experiments. Aeronautical Res. Lab. and Iowa State Univ., U. S. Air Force WADC Technical TN59-19.
E1,2a;T2a;C (3682)
- Zyskind, G., Kempthorne, O., White, R. F., Dayhoff, E. E., and Doerfler, T. E. [1964], Research on the analysis of variance and related topics. Aeronautical Res. Lab. and Iowa State Univ. U. S. Air Force.
E2a;A5 (3683)

Co-authors list for category "E"

<u>Name</u>	<u>Ref. No.</u>	<u>Name</u>	<u>Ref. No.</u>
Abraham, T.P.	2284	Bradley, R.A.	3286
	3097		3317
	3098		3318
Abreu, C.P.	2609		3319
Addelman, S.	2792	Briggs, F.N.	2076
Adhikary, B.	3053	Bross, I.D.J.	3370
Agarwal, K.N.	3297	Brunk, M.E.	2515
Almeida, J.R.	2992	Bush, K.A.	2161
Andrew, G.M.	2473	Bush, S.	2008
Armstrong, P.J.	3503		
Atkins, R.E.	2869	Cady, F.B.	2568
Atkinson, G.F.	2514	Cairns, R.R.	2895
	3245		2896
		Cameron, J.M.	2162
Babcock, A.B.	3164		2163
Baeder, H.A.	2095	Carmer, S.G.	2096
Baker, F.B.	2327	Carruth, A.F.	3560
	2328	Chakravarti, I.M.	2164
Baker, G.A.	2734		2165
Bancroft, T.A.	2200		2166
	2752		2167
Banneick, A.	2069		2168
Baptista, J.G.	2359	Chandrasekhararao, K.	3180
	3148	Chang, L.C.	2880
Barclay, W.D.	2791		2801
Bearse, G.E.	2097	Chanmugam, J.	2755
Behari, V.	2581	Cheng, C.-P.	3567
Bhagwandas	3401	Chilton, N.W.	3542
Bhargava, P.N.	2407	Chopra, D.V.	3454
	2408	Clatworthy, W.H.	2169
	2409		2170
Bhattacharya, K.N.	2191		2171
Bianco, E.G.	3506		2343
Bishop, R.F.	2898		2344
Blaser, R.E.	3511		2345
Bockman, C.D.	2984	Cockerham, C.C.	3320
Bose, R.C.	2447	Coleman, J.E.	3234
Boyd, D.A.	2916	Collier, R.O.	2074
Bradley, R.A.	2818	Connor, W.S.	2172
	2819		2173
	2820		2650
	2821		2954

Connor, W.S.	2955	Feng, X.N.	2381
	3653	Ferris, G.E.	2517
	3654	Fertig, J.W.	2292
Cope, F.W.	2541		2293
Corsten, L.C.A.	2834	Finkner, M.D.	2967
Costa, A.S.	2551	Fortson, J.C.	2249
Covell, M.R.	3011	Free, S.M.	2965
Cox, D.R.	2064	Freeman, G.H.	2714
Cralley, E.M.	2003		3144
Crowther, E.M.	2641		3145
		Fujii, Y.	3626
Dal, Z.D.	2533		3627
Darroch, J.G.	2474	Fukuda, T.	3628
Das, M.N.	2122		
	2297	Gates, C.E.	2877
	2298	Gilbert, N.	2389
	3014	Gilbert, P.	2319
	3220	Glass, S.	2822
	3483	Gomes, F.P.	2638
	3484	Goring, E.T.	2131
David, H.A.	3611		2898
Davis, L.L.	2673	Gosslee, D.G.	2458
Dayhoff, E.E.	3683	Graf, G.C.	3511
Deal, R.B.	2620	Graybill, F.A.	2546
Decker, R.	2553		2740
Del Priore, F.R.	2423		3577
Dick, I.D.	3573		3578
Dillon, J.L.	2684		3579
Dinsmore, J.S.	3011	Greenwood, M.L.	2139
Doerfler, T.E.	3683	Grizzle, J.E.	2322
Donker, J.D.	2877		2323
Douglas, A.W.	3194	Grossmann, B.	2319
Draper, N.R.	3520		2584
Dulmage, A.L.	2770	Guérin, R.	2091
	2968		2092
Duncan, D.B.	2213	Gulmarães, R.F.	2610
	3301	Guttman, I.	2197
			2444
Erdős, P.	2299		
Evans, C.E.	2858	Hamada, N.	3627
			3628
Farden, C.A.	2516	Hamming, G.	3555
Federer, W.T.	2241	Harris, L.C.	2953
	2242	Hartley, H.O.	2200
	2316	Haught, A.F.	3010
	2460	Healy, M.J.R.	2632
	3468		2860
	3670	Henderson, C.R.	2375
	3671	Hill, K.W.	2446

Homeyer, P.G.	2039	Kramer, C.Y.	2229
Hoyle, B.J.	2077		2231
Hsu, J.-S.	3567		2232
Hughes, H.M.	2385		2592
Hunter, J.S.	3655		2595
			2596
Igue, K.	2041		2597
Ikeda, S.	3080		2867
Ishii, G.	3078		3511
	3079	Krane, S.A.	2235
Jackson, L.P.	2131	Krishnaiah, P.R.	3278
	2898	Kuebler, R.R.	2174
Jacobson, N.L.	2039	Kulkarni, G.A.	2410
Jain, N.C.	3402		2411
Jeffers, J.N.R.	2565		2412
Joel, L.S.	3672		2413
Johnson, D.	2449	Kulshreshtha, A.C.	2414
Johnson, J.P.	2078	Kutscher, A.H.	2292
Johnson, N.L.	2047		
	2048	Laha, R.G.	3254
Johnston, T.H.	2003		3255
Jolly, G.M.	3145		3256
Jones, G.L.	2373	Landis, J.	2868
Jorge, J.P.N.	3557	Laskar, R.	2175
		Lee, A.V.	2984
Kannian, K.	2081	Leach, F.B.	2689
Kasdorff, K.	3216	Lenger, A.	2319
Kempthorne, O.	2547	Linder, A.	2693
	3478	Lineweaver, H.	2666
	3592	Link, R.F.	2843
	3593		2844
	3594	Liu, W.R.	2289
	3677	Lowe, C.C.	2518
	3681	Lucas, H.L.	2458
	3682		3125
	3683		3126
Keuls, M.	2775	Lum, M.D.	2676
King, E.P.	3229	Lyness, W.E.	2805
Kishen, K.	3048		
	3609	MacEachern, C.R.	2131
			2898
Kline, L.	2666	MacLeod, L.B.	2131
Knuth, D.E.	2165	Malk, R.L.	3455
	2166	Malavolta, E.	2611
	2167		2638
	2168	Mandel, J.	2857
Konvička, O.	2735	Mann, H.B.	2899
Kramer, C.Y.	2073	Mason, D.D.	2256
	2214		2257

Mason, D.D.	2373	Plaisted, R.L.	2522
Mattson, H.F.	2050		2523
	2051	Posner, E.C.	2601
McKendrick, M.H.	2139	Potthoff, R.F.	3276
McMeekan, C.P.	2664	Pruitt, W.E.	2621
McNee, R.C.	2385		
Mendelsohn, N.S.	2449	Raghavachari, R.	2032
	2770	Raghavarao, D.	3403
Menon, M.V.	2915		3404
Mesner, D.M.	2176		3405
Mitidieri, J.	2639		3406
Mitome, M.	2809	Raktoe, B.L.	2524
Möblus, H.	2069		2525
Moyer, J.C.	2519	Ramachandran, C.K.	2081
Mueller, M.E.	2198	Ranzani, G.	2361
Müller, K.-H.	2069	Rao, C.R.	2807
Mullin, R.C.	3462	Rao, S.V.S.P.	2415
Murugarajendran, C.	3556	Ray-Chaudhuri, D.K.	2180
			2181
Nair, K.R.	2177	Rayner, A.A.	2718
	2178	Richardson, M.	3303
	2179	Ridley, A.O.	2719
	3609	Rigney, J.A.	2691
Nissen, O.	2520	Robson, D.S.	3613
Noether, G.E.	3541		2526
			2527
Ogawa, J.	2745	Roessler, E.B.	2079
	2746	Roseman, C.	2811
	3117	Roy, J.	3277
Ogasawara, M.	2746	Roy, S.N.	3456
	3080	Rupp, M.K.	2346
	3083	Russell, G.C.	2446
Okuno, T.	2683	Rutherford, A.	3093
	2942	Ryser, H.J.	2300
	3085		2567
Oldemeyer, R.K.	2250		2651
Ortlepp, H.	2069	Sadao, I.	3083
Outhwaite, A.D.	2542	Sarhan, A.E.	2624
		Sasaki, T.	2683
Parker, E.T.	2192	Savage, I.R.	2347
	2193	Schlottfeldt, C.S.	2528
Pasternack, B.S.	3081	Schmidt, N.C.	2041
	3082	Schumann, D.E.W.	2215
Patterson, H.D.	3633	Schuster, W.	2578
Pearce, S.C.	2713		2882
	2714	Sanders, H.G.	3608
Peck, N.H.	3560	Soal, K.E.	3510
	3561	Self, R.D.	2096
Plaisted, R.L.	2521	Sen, P.K.	3166

Sen, P.K.	3167	Sváb, J.	2728
	3168		2729
Seshadri, V.	2622		2730
Seshu, K.A.	3556		2731
Shah, K.R.	3257	Swift, J.D.	2652
	3258		2653
	3259		
Shah, S.M.	2797	Tack, P.I.	2095
Sharpe, E.	2379	Takahashi, M.	3070
Sheard, R.W.	3194	Tan, W.Y.	3521
Shimamoto, T.	2182	Tapley, W.T.	3561
Shrikhande, S.S.	2171	Taylor, J.	3146
	2183		3300
	2184	Taylor, W.B.	2566
	2185		2682
	2186	Terry, M.E.	2218
	2187		2219
	2188		2220
	2189		2221
	2190		2222
	2191		2223
	2192		2224
	2193		2225
	2682		2226
	3278		2227
Shukla, G.C.	3417		2228
Singh, K.N.	3416	Tharthare, S.K.	3181
Singh, K.N.	3407		3406
	3408	Thawani, V.D.	3609
Smith, H.F.	3530	Thornton, G.J.	2641
Smith, C.W.R.	2308	Throckmorton, T.N.	2792
Somerville, P.N.	2216	Tompkins, C.B.	3094
	2217	Tootill, J.P.R.	2861
Sprott, D.A.	3460		2862
	3461		2863
Srivastava, J.N.	2194	Torres, A.P.	2361
	2808	Tukey, J.W.	2527
	3279		2843
	3280		2844
Stein, S.K.	3066	Tyler, E.A.	2529
Stephens, D.	2436		
	2437	Valassis, V.T.	2953
Stern, K.	2856	Van Duren, K.D.	3092
Stiehler, R.D.	2911	Varma, A.A.O.	2293
Stoker, D.J.	2864	Verdade, F.C.	2041
Stoneman, D.M.	2445	Vervelde, G.J.	3555
Straus, E.G.	2299		
Sukhatme, P.V.	3099	Walker, R.J.	2653
Sváb, J.	2727	Wallace, D.L.	2843

Wallace, D.L.	2844	Wilcoxon, F.	3506
Walpole, R.E.	2229	Williams, R.	3127
Walser, M.	2450	Willits, C.O.	3234
Walz, R.N.	2427	Wolfe, E.K.	2302
Wang, H.L.	2474	Wolock, F.W.	2421
Ward, T.G.	3466		2422
Watson, G.S.	3009	Worthington, V.	2857
Webster, J.T.	2082	Wutke, A.C.P.	2041
Weeks, D.I.	2623		
	2784	Youden, W.J.	2348
	2785	Yuan, C.H.	3497
West, D.L.	2548		
	2549	Zelen, M.	2530
Westmacott, M.	2690		2531
Wheeler, D.	2706		2532
White, R.F.	2792		2839
	3248		2840
	3683		2841
Whittle, P.	2432		2912
Wickens, R.	2897	Zyskind, G.	2792
Wilcox, R.A.	3588		3478
Wilcoxon, F.	2386		