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6. AUTHOR(S)  Dr. Asit P. Basu		AFOSR F49620-92-J-0371	
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13. ABSTRACT (Maximum 200 words) Here we submit the final report for research carried out at the Department of Statistics, University of Missouri-Columbia during the period October 1, 1992 - July 31, 1994. During this period the Principal Investigator (PI), A. P. Basu, along with his collaborators considered a number of problems in reliability theory. A. P. Basu edited the research monograph "Advances in Reliability" (1993), which has been published by North-Holland. Six refereed papers also were published. The titles of these papers are given below. 1. Life Testing and Reliability Estimation with Asymmetric Loss Function 2. On a test for exponentiality against Monotone Failure Rates 3. Bayesian Approach to Some Problems in Life Testing and Reliability Estimation 4. Characterizations of a Family of Bivariate Exponential Distributions 5. Bayesian Reliability of Stress-Strength Systems 6. Some Problems of "Safe Dose" Estimation Some of the research areas are of interest to researchers at Rome Laboratory, Griffiss Air Force Base, New York.			
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**Institution** University of Missouri-Columbia  
**Contract/Grant No.** F49620-92-J-0371

A. Publications in peer-reviewed professional journals and refereed book chapters during the reporting period, 1 October 1992 through 30 September 1993.

Book Edited:

Basu, Asit P., Editor,

ADVANCES IN RELIABILITY, North-Holland, Amsterdam, 1993.

Book Chapters:

1. Klein, John P. and Goel, Prem K., Editors, Survival Analysis: State of the Art, Kluwer Academic Publishers, Dordrecht, 1992.

• Basu, A. P., Life Testing and Reliability Estimation with Asymmetric Loss Function.

2. Sen, Pranab K. and Salama, Ibrahim A., Editors, Order Statistics and Nonparametrics: Theory and Applications.

• Basu, A. P., On a test for exponentiality against Monotone Failure Rates.

3. Goel, Prem, K. and Iyengar, N. S., Editors, Bayesian Analysis in Statistics and Econometrics, Springer-Verlag, New York, 1992.

• Basu, A. P., Bayesian Approach to Some Problems in Life Testing and Reliability Estimation.

4. Basu, A. P., Editor, Advances in Reliability, North-Holland, 1993.

• Basu, A. P., Characterizations of a Family of Bivariate Exponential Distributions.

5. Basu, A. P., Editor, Advances in Reliability, North-Holland, 1993.

• Basu, A. P., Bayesian Reliability of Stress-Strength Systems.

6. Cothorn, Richard C. and Ross, Phillip N., Editors, Environmental Statistics Assessment and Forecasting.

• Basu, A. P., Some Problems of "Safe Dose" Estimation.

B. Number of additional researchers working with the Principal Investigator

Faculty one, A. P. Basu

Postdocs	<u>0</u>
Graduate Students	<u>1</u>
Other	<u>0</u>

C. Professional honors received by all of the above listed contributors

Asit P. Basu was elected Fellow of the following societies:

1. American Association for the Advancement of Science, 1987
2. American Statistical Association, 1983
3. Institute of Mathematical Statistics, 1983
4. Royal Statistical Society, England, 1974  
and also was elected
5. Member of International Statistical Institute, 1987.

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