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FIELD	GROUP	SUB-GROUP	Gas Turbines, Propulsion, Combustion, reprints. (ngm)	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Eleven students participated in the Air Force Research in Aero Propulsion Technology (AFRAPT) program during the 1987-88 academic year. During this year: one new Ph.D. candidate completed two qualifying exams and initiated his thesis research; one new Ph.D. candidate withdrew from the program and is now permanently employed at a participating company; four M.S.M.E. candidates completed their thesis and are now permanently employed at a participating company; five M.S.M.E. candidates have completed their course work, and are working on their thesis projects.				
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Final
~~ANNUAL SUMMARY REPORT~~

August 1987 - August 1988

RESEARCH AS PART OF THE
AIR FORCE RESEARCH IN AERO PROPULSION TECHNOLOGY
(AFRAPT) PROGRAM

GRANT AFOSR - 86 - 0305

Sanford Fleeter

August 1988

Thermal Sciences and Propulsion Center
School of Mechanical Engineering
Purdue University
West Lafayette, Indiana 47907

Prepared for

Directorate of Aerospace Sciences
Air Force Office of Scientific Research



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The status of the eleven students who participated in the Air Force Research in Aero Propulsion Technology (AFRAPT) Program at Purdue during the 1987-88 academic year is summarized in the following.

**MICHAEL
ANDRUSZKIEWICZ**

Thesis Advisor: Professor Sanford Fleeter
Research Topic Forced Response of Advanced Turbomachine Blade Rows
Company Affiliation General Electric - Cincinnati
Current Status Mr. Andruszkiewicz has completed approximately 50% of his Ph.D. course work, has passed two Ph.D. qualifying exams, and has initiated his thesis research.

JAMES ELEY

Thesis Advisor: Professor Sanford Fleeter
Research Topic Unsteady Flow Generated Structural Dynamic Blade Response
Company Affiliation Pratt & Whitney - Florida
Current Status Mr. Eley has completed his M.S.M.E. Thesis titled "Aerodynamics of an Oscillating Cascade With Flow Separation" and has accepted a permanent position at Pratt & Whitney - South.

DANIEL GIORDANO

Thesis Advisor: Professor Sanford Fleeter
Research Topic Periodic Unsteady Flow Visualization and Analysis
Company Affiliation Allison Gas Turbines
Current Status Mr. Giordano has completed most of his M.S.M.E. course work and has initiated his thesis research. Also, he has been awarded the 1988 AIAA Gordon C. Oates Propulsion Award for first year graduate students.

WILLIAM HAMILTON

Thesis Advisor: Professor Sanford Fleeter
Company Affiliation Pratt & Whitney - Connecticut
Current Status Failed 2 out of 3 Ph.D. qualifying exams and has chosen to return to Pratt & Whitney - North on a permanent basis.

GREG HEBERT

Thesis Advisor: Professor William G. Tiederman
Research Topic Comparison of Steady and Unsteady Flows in a Turbine Stator Cascade
Company Affiliation Allison Gas Turbines
Current Status Mr. Hebert has completed his M.S.M.E. program and is retuning to Allison Gas Turbines on a permanent basis.

ADAM LIPPERT

Thesis Advisor: Professor Paul Sojka
Research Topic Auto-Ignition of Endothermic Fuels
Company Affiliation TEXTRON Lycoming
Current Status Mr. Lippert

DOUGLAS MORGAN

Thesis Advisor: Professor John Sullivan
Research Topic Concentration Measurements in a Cold Flow Model Annular Combustor Using Laser Induced Fluorescence
Company Affiliation General Electric - Cincinnati
Current Status Mr. Morgan has completed his M.S.M.E. program and is currently employed at AVCO

JOSEPH NEAL

Thesis Advisor: Professor Sanford Fleeter
Research Topic The Effects of Loading on the Aerodynamics of an Annular Cascade of Three-Dimensional Airfoils
Company Affiliation General Electric - Lynn
Current Status Mr. Neal has completed his M.S.M.E. program and is currently employed at Pratt & Whitney - Florida.

JEFF WHITLOW

Thesis Advisor: Professor Arthur H. Lefebvre
Research Topic Fuel Thermal Stability
Company Affiliation Pratt & Whitney - Florida
Current Status Mr. Whitlow has completed his coursework and is currently writing his M.S.M.E. thesis.

JACK WHITE**Thesis Advisor:****Professor William G. Tiederman****Research Topic****Turbulence in Positive and Negative Pressure Gradient Boundary Layers****Company Affiliation****Allison Gas Turbines****Current Status****Mr. White has completed the majority of his M.S.M.E. course work and has initiated his thesis reseach.****JAMES WOLFF****Thesis Advisor:****Professor Sanford Fleeter****Research Topic****Unsteady Viscous Flows in Airfoil Cascades****Company Affiliation****Garrett Engine Division****Current Status****Mr. Wolff has completed his M.S.M.E. course work and is currently finishing his thesis research. Mr. Wolff will be remaining in the Purdue AFRAPT program to a Ph.D. degree.**