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To: Rice Undergraduate S/E Students
From: Professor David W. Scott, Director, RIMS
Re: Invitation to Apply to **Summer Research Experiences Program**

The first year of a new Department of Defense-sponsored summer research program is set for June 3 — August 15, 1996, on campus in Herman Brown Hall. This three-year project will provide research experience and opportunities for undergraduate and graduate students in several areas of the Mathematical Sciences. Approximately four or five undergraduates are invited to participate the first summer and will be fully funded. (An equal number of graduate students will participate.) Special efforts to include Hispanics and women are underway. The contract requires U.S. citizenship for participants receiving support.

The theme for the first summer is **"Classification and Optimization in Statistics"**. This general topic is meant to offer the possibility of including research in topics such as prediction and group identification, clustering, neural nets, dimension reduction, linear programming methods for regression, and related optimization problems.

Participants need not have any particular background in statistics, although some familiarity with ideas of probability and data manipulations will be helpful. Advanced work in mathematical sciences and related disciplines in science and engineering is desirable. A willingness to learn fundamentals in these topics and participate in lecturers, colloquia, computer experiments, and research projects is all that is required. Participants will have the latest in computer graphics equipment from Silicon Graphics and Sun available, and ample time for group and independent research work.

Undergraduates selected will be awarded a stipend of $3,080 plus a possible scientific trip in August. Participants will be selected beginning April 2 or until all slots have been filled. In addition, books and materials will be furnished.

The program will be reasonably structured on a weekly basis, to include at least two hourly lectures per day, with regular colloquia presented by various RIMS faculty, visiting faculty, and DoD sponsors. Basic research results, research experiences, new collaborations, programming, data analysis, and html/java files will be desired outcomes. The actual period for lecturing is expected to cover a 2.5 month period from June 3 to August 15.

The project is being planned by a steering committee:

David W. Scott, Statistics, Director
Richard A. Tapia, CAAM
John C. Polking, Mathematics
Don H. Johnson, Electrical Engineering
Linda M. Torczon, Computer Science/CRPC

The following visiting faculty have agreed to participate in the 1996 RIMS program. Each will lecture for one or two weeks over the course of the summer:

George Terrell – Virginia Polytechnic Institute
Michael Trosset – University of Arizona/Consultant
Stephen Sain – Southern Methodist University
John Elder – Consultant
Rosine Hall – Ecology & Evolutionary Biology)

As a case study, Rosine Hall will direct a research project aimed at using remotely sensed data to attempt to predict surface vegetation types in the Big Thicket. A wide range of other data and problems will be available.

If you are interested, please return the enclosed application. If you have any questions, please call the RIMS Director, Professor Scott. Participants will be selected by the Scientific Board. We believe you will find this program an enjoyable and intellectually stimulating experience. We invite you to apply.

Sincerely yours,

David W. Scott
Professor

Encl.