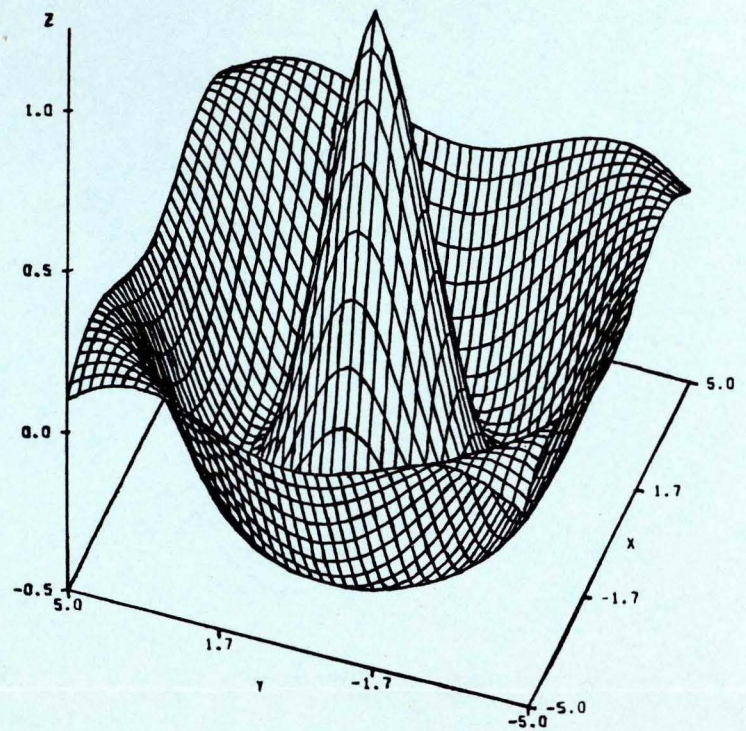




Program in Applied Mathematical Sciences



Plot of $z = \cos(\sqrt{x^2 + y^2}) \exp(-\sqrt{x^2 + y^2}/4)$ using SAS/Graph. From Weeg Computing Center Newsletter, Vol. 13, No. 1 (1982).

Description

Applied Mathematical Sciences at Iowa is a broadly based interdisciplinary program leading to the Doctor of Philosophy degree. The program enables students with diverse backgrounds to build a solid foundation of skills in a mathematical science and to apply these skills to another science. The mathematical science can be mathematics, statistics, or computer science. The other science can be any behavioral, biological, engineering, medical, physical, or social science. The program is flexible so that students can concentrate on applied mathematics such as differential equations and numerical analysis or on other applicable techniques in mathematics, statistics, or computer science.

Procedures and Requirements

Students applying for admission should have a background in a mathematical science or in a science, together with a desire to apply mathematics, computer science, or statistics to the solution of relevant scientific problems. Students may enter with either a bachelor's or a master's degree. Each student has a committee to help plan a program consistent with the student's background, interests, and goals. The student's program is designed to develop expertise in methods of application of a mathematical science, to build a good foundation in related topics of theoretical mathemat-

ics, statistics, or computer science, and to provide sufficient knowledge in a particular science so that the student can use mathematical science techniques in that science. An objective of the program is to have each student's dissertation research include many of the activities of an applied mathematical scientist. For example, this could involve formulation of a model, quantitative analysis of the model, and interpretation of the results.

Faculty

K. Atkinson (Mathematics), D. Bricker (Systems Engineering), C. J. Chen (Energy Engineering), J. Gatica (Mathematics), E. Haug (Materials Engineering), H. Hethcote (Mathematics), S. Hubbell (Zoology), T. Ichiishi (Economics), W. Klink (Physics), G. Knorr (Physics), K. Lonngren (Information Engineering), V. Oliker (Mathematics), R. Shultz (Computer Science), G. Woodworth (Statistics).

These faculty members are the advisers to the program. They assist students in planning their courses and in finding suitable thesis problems and supervisors in the scientific areas chosen by the students.

The University

Approximately one-third of the 28,000 students currently enrolled at The Uni-

versity of Iowa are in graduate and professional programs. A 2 million volume library system includes a mathematical sciences library with over 30,000 volumes. Through the network of terminals on campus, students have access to the IBM, Prime, VAX, and Hewlett-Packard computers at a modern computer center. The University of Iowa has numerous laboratories and work and study areas as well as excellent facilities for cultural and recreational activities. The beautiful and spacious campus is located along the Iowa River in a pleasant city with a population of about 50,000.

Financial Support

Research and teaching assistantships are available to qualified applicants. Support for students as research assistants is available during the summers. Applications for fall semester admission and for financial support should be received by March 1. For application forms and further information about the academic program, write to the Chair, Program in Applied Mathematical Sciences, The University of Iowa, Iowa City, Iowa 52242.

The University of Iowa does not discriminate in its educational programs and activities on the basis of race, national origin, color, religion, sex, age, or handicap. For additional information, please contact the Coordinator of Title IX and Coordinator of 504 in the Office of Affirmative Action, 202 Jessup Hall, The University of Iowa, Iowa City, Iowa 52242. Phone: (319) 353-4619.

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Program in Applied Mathematical Sciences
Graduate College
The University of Iowa
Iowa City, Iowa 52242

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