## APPLIED AND COMPUTATIONAL MATHEMATICAL SCIENCES PROGRAM

Mathematics is the common language of the modern technological world. Sophisticated mathematical modeling, simulation, analysis, and computation are now essential tools in virtually every area of social, life, and physical sciences, as well as in business and engineering. From cell phones to automotive control systems to mutual funds management to designer drugs to medical imaging, the mathematical sciences provides the keys to accessing the innovations of today and tomorrow.

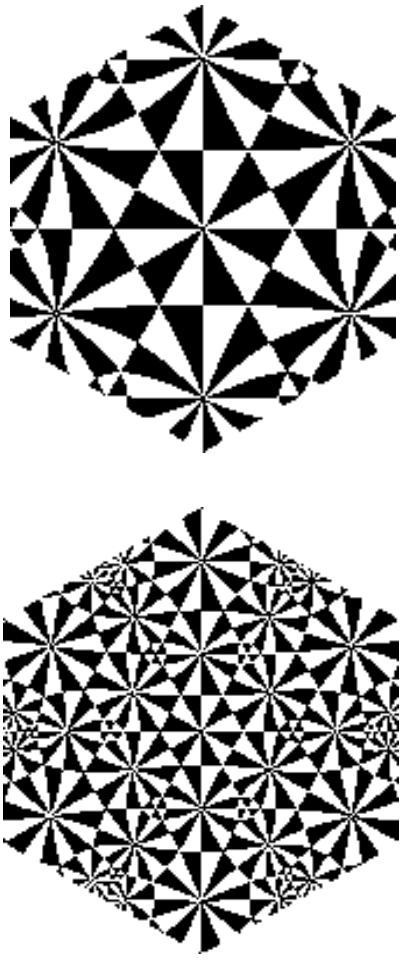
The Applied and Computational Mathematical Sciences (ACMS) BS degree program is designed to provide a broad education in the mathematical sciences and to foster interdisciplinary work in an applied discipline. The emphasis on interdisciplinary work is an integral component of the program. Each student is required to choose from among eight areas of specialization: Biological and Life Sciences, Discrete Mathematics and Algorithms, Engineering and Physical Sciences, Mathematical Economics, Operations Research, Scientific Computing, Social and Behavioral Sciences, and Statistics. Each area of specialization was designed in consultation with the applied departments in order to encourage and facilitate the attainment of a second major in an applied discipline.

It is safe to say that most students do not come to the University knowing that they are going to major in Applied and Computational Mathematical Sciences. Indeed, it is a rare student who is even aware of the existence of this program. Nonetheless, last year the program completed its fifth year of operation with 185 declared majors, 62 graduating seniors, and 163 alumni. Of the 62 graduating seniors, 17 were double majors. This is an impressive record of growth for such a demanding undergraduate degree. We anticipate that the ACMS program will continue to grow and continue to attract some of the very best students on campus. Our efforts to refine and improve the degree also continue as we engage more applied departments in the design of streamlined double major curriculums.

During the past year our students have had a number of successes. Mentioned elsewhere in this newsletter is the success of the UW teams in *The Consortium for Mathematics and its Applications* annual International Mathematical Modeling Contest. Four UW teams entered the contest, two from Mathematics and two from ACMS. All four teams did very well with the Math Dept. team of Ryan Card, Ernie Esser, and Jeff Giansiracusa being named one of the eight outstanding winners from a field of 522 teams. For their winning solution, this team was also awarded the annual *Society for Industrial and Applied Mathematics* (SIAM) Mathematical Modeling Award. The SIAM award was presented to the team in Philadelphia this past summer. Two members of this team, Ryan Card and Ernie Esser, are ACMS majors as well as Math majors. Ryan Card was also named the ACMS student of the year.

Although the ACMS program is a successful, vibrant, and growing undergraduate program, it is also a program under serious stress. Currently ACMS receives no direct financial support from the University. Its only sources of funding are annual gifts of $2000 each from the Applied Mathematics Department, the Mathematics Department, and the Statistics Department. In addition, the Mathematics Department also contributes student advising, supplements the Program Directors salary, and funds incidentals such as photocopying and postage. In addition, several ACMS students have been able to obtain research grants through the University of Washington VIGRE grant. These grants provide support for students to pursue undergraduate research opportunities. In addition, this past year the Department of Computer Science and Engineering graciously offered to fund the ACMS student awards for 2002. Without this funding, we would not have been able to suitably acknowledge the achievements of our very best majors.

Funding for this year's student awards has yet to be identified. For this reason, the program is very appreciative of all contributions to its Friends of ACMS Fund. This fund contains the only discretionary money for the program. It is hoped that this fund will eventually be able to provide support for student awards and research. In the past this fund has been sustained by faculty contributions. For further information, please contact either Mary Sheetz (206-543-6163; sheetz@math.washington.edu) or Jim Burke (206-543-6183; burke@math.washington.edu).



*Designed by Daniel Meyer, graduate student*