

## **Strategic Initiative Proposal: The Center for Women in Mathematics at Smith College**

The Department of Mathematics and Statistics has just received a significant grant from the National Science Foundation to start a Center for Women in Mathematics at Smith College. The Center includes parallel programs aimed at increasing the participation of women in mathematical professions. Our Post-Baccalaureate Mathematics Program is the first such program in the country. Under the program we will admit women with bachelor's degrees who aspire to careers in the mathematical sciences but lack important undergraduate coursework. The junior year program brings promising women majoring in mathematics at coeducational schools to Smith for their junior year. Students in both programs take most of their courses in mathematics, participate in a research project, and benefit from the all-women environment of Smith College.

The mathematics department conceived this proposal and NSF funded it because women's colleges, and Smith in particular, have led the country in the production of mathematicians. At Smith, women major in mathematics at a rate well above the national average. Smith mathematics majors go on to graduate work at a higher rate. Graduate students coming from Smith successfully earn their doctorates at a higher rate.

Both of these programs extend Smith's impact on the world, and do so in the spirit of the original mission of the college. While women have made significant progress in many fields, their participation in mathematics remains low. The grant is targeted on this critical population. It is a measure of the difficulty of the problem and of the significance of Smith College that the programs could raise the number of women completing Ph.D.s at top-tier institutions by as much as five percent.

But the Center will be much more than the new programs. It will focus on Smith undergraduates and will encompass most of what we do. We plan a series of weekly lectures. We will test this year a new program of undergraduate research with faculty. We hope to see more student presentations at Collaborations and we expect to take our most successful majors to mathematical conferences. We will offer extensive mentoring and preparation for success in a male-dominated field.

The Center will be a community of scholars. In addition to undergraduates and participants of the two programs, it will include our MAT students and alumnae working in mathematical fields. We will be holding regular meetings of this community; we see the alumnae as critical to the success of the Center.

It will be a diverse community. As the program starts up, we will be working with organizations of minority mathematicians to recruit participants. Again, Smith has

both a history and a potential: the first two African-American women to earn Ph.D.s in mathematics were Smith graduates.

The importance of the Center to Smith should go well beyond mathematics majors. We hope to enhance the College as a place to be (even a destination) in the junior year. We hope to contribute to the culture of research on campus. We believe it will be an important attraction to prospective students and faculty. The programs may prove to be a model for proposals in other areas where women are underrepresented. The Center captures, in a sense, the continuing importance of a women's college.

In the few weeks since the programs were announced, we have received requests from potential applicants. Several have said they feel this program was made just for them. President Christ reports that many of our own alumnae regret that they did not take more mathematics and quantitative courses while they were here. The idea of this program, let alone its actual existence, is already showing that it can inspire women to study mathematics.

The College has been important in helping us with the grant and getting us started with publicity, planning, and admissions. As we construct the Center, we see many ways in which we will need assistance. Foremost is administrative: we will be relying on the graduate office and the admissions office for handling much of the admissions process. At present, the department doesn't have a dedicated administrative assistant; we share the extremely able Heather McQueen. In a very short time, we believe we will need full-time assistance.

The Center for Women in Mathematics is an important initiative for Smith. It will be an attractive program for both corporate and alumnae donors. We hope the College will support its continuation by helping us find on going funding.

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From the Department of Mathematics and Statistics  
Ruth Haas, Chair.