

# Society for Undergraduate Mathematics

Presents:

## **Research Experience for Undergraduates at Temple**

by Edward Letzter and Yury Grabovsky

During the 6 weeks of Summer 2002 Drs. Letzter and Grabovsky ran an NSF funded REU program at Temple. All undergraduates who have at least one semester of undergraduate studies left after the program are eligible to apply. Last year we have received over a 100 applications from students from all over the country. In an ultra-competitive process we selected 10 participants, 5 for each mentor. During the 6 weeks of program the students were able to make significant progress in a research problem proposed to them.

The group working with Professor Letzter was finding irreducible representations of certain special algebras, while the group working with Professor Grabovsky was finding exact relations for effective tensors of composite materials.

In the coming weeks Drs. Letzter and Grabovsky will give several lectures reporting on the work done by their undergraduate teams. The lectures are about undergraduate research and are directed to our math majors. Interested graduate students and faculty are welcome to attend. The lectures will run on Thursdays from 4 to 5pm in Wachman Hall Room 617.

In the first lecture Dr. Grabovsky will introduce a linear algebra problem arising from the study of effective tensors of composite materials. In the lecture you will be able to learn what a tensor is and how effective tensor describes the properties of a composite. You will also learn about exact relations—beautiful formulas relating effective properties of a composite to the properties of its component materials.

In two subsequent lectures Dr. Grabovsky will describe how his young research team attacked and defeated the problem. These lectures will be followed by Dr. Letzter reporting on research of his team. The detailed abstracts of each lecture will be announced each week.

Thursday October 17, 2002

Wachman Hall, Room 617, 4:00pm

Graduate students are especially welcome!

Free Doughnuts and Coffee will be available from 3:45 to 4pm.