2007

2007 Undergraduate Mathematics Day Poster

University of Dayton. Department of Mathematics

Undergraduate Mathematics Day

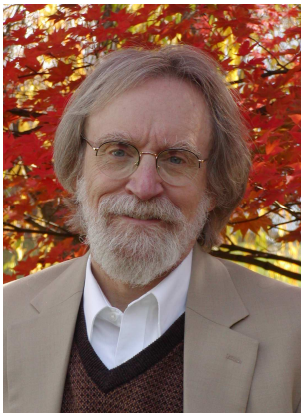
at the University of Dayton

Saturday, November 3, 2007

Photos from Undergraduate Mathematics Day 2005

- **An undergraduate mathematics conference**
- **Contributed 15-minute talks, especially by undergraduate students, on mathematics research, the learning and teaching of mathematics, the history of mathematics, and applications to disciplines related to mathematics**
- **Two invited addresses**
- **Submit articles (based on talks presented) for publication in refereed online Conference Proceedings**
- **No registration fee, complimentary lunch**
- **Limited support for housing and travel**

Registration and information at
http://academic.udayton.edu/MathEvents/Fall07/
MathEvents@udayton.edu
Deadline for abstracts is Wednesday, October 24, 2007.



The Eighth Annual Schraut Memorial Lecture

William Dunham

Muhlenberg College

An Euler Trifecta

To recognize Leonhard Euler's 300th birthday, we provide a sketch of his life and give a brief survey of some of his mathematical achievements. Then we consider three specific results: His 1740 proof that there are as many ways to write a whole number as the sum of distinct summands as there are ways to write it as the sum of (not necessarily distinct) odd summands – the discovery that gave birth to the study of number partitions; an evaluation of a definite integral that no one would dare to touch in Calc II; and Euler's unorthodox proof of his famous identity from 1749.

Colleen Hoover

St. Mary's College

Garden-Variety Symmetry

After a gentle introduction to the topic of symmetry, we explore the symmetry groups of bounded plane figures, pulling examples from the garden. Using techniques from geometry and algebra, we prove a classic theorem that completely describes the set of finite plane symmetry groups. Further, we attempt to expand our study of finite symmetry groups to corresponding infinite symmetry groups, and that is where the trouble begins.

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