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Garden-variety Symmetry (Abstract)

Colleen Hoover

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Saturday, November 3, 2007

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Invited Address:

Garden-variety Symmetry

Dr. Colleen Hoover

Associate Professor of Mathematics,
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Abstract:

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

This talk should be accessible to any student with an interest in mathematics.

An Associate Professor of Mathematics at Saint Mary's College in Notre Dame, IN, Colleen Hoover received her B.A. from the University of Dayton (1991) and her M.S. and Ph.D. from the University of Notre Dame. Though she retains her interest in her original field of mathematical logic, her current research involves a biographical project on 20th century American mathematician Marston Morse and work in mathematics education. As a faculty member in the "Reach for the Numbers" program, she has worked with teachers in the South Bend Community School's Bilingual Department to enhance the mathematical achievement of local ELL (English as a Learned Language) students. Also, she recently coauthored the text "A Visual Mathematics Dictionary" for K-8 teachers and students.