Eighth Kenneth C. Schraut Memorial Lecture (Poster)

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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.