

*The Department of Mathematical Sciences presents a colloquium by*

**Gordon Williams, Ph.D.**  
*Ursinus College*

**Generalizing Polyhedra: Beyond Convexity**

Friday, April 4th, 2008

Mendel Hall, room G92

2:35 pm - 3:30 pm.  
(coffee and donuts at 2:30)

**Abstract:** We will explore some of the exciting recent history of the study of polyhedra and polytopes, in particular efforts to generalize the theory to the study of non-convex bodies. Our discussion will include topics such as the recently solved Bellows Conjecture, approaches for generalizing polytopes to non-convex bodies in higher dimensions, and some ways in which intuition based on the study of polyhedra doesn't necessarily extend to higher dimensions.

***About the speaker:** Originally from Cambridge, England, Dr. Williams first studied at Hampshire College, where he wrote an honor's thesis on elliptic curves and public key cryptography. After working in industry in Alaska for two years, he pursued graduate studies at the University of Massachusetts at Amherst, and then took his PhD in combinatorial geometry from the University of Washington in 2002 under the guidance of Branko Gruenbaum. He joined Ursinus College's Math department in 2005.*