

# Ellis R. Kolchin Memorial Lecture

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## "Tilting in Calabi-Yau Categories"

Tilting is a fundamental operation in homological algebra, with a variety of applications in both algebra and geometry. After explaining the general idea, I will focus on two examples. The first involves birational transformations of threefolds; here the tilting concept has recently led to explicit formulae describing the way Donaldson-Thomas invariants change under flops. The second example involves triangulations of surfaces and quiver mutation.

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**Monday, April 23rd, 2012 at 4:30 pm**  
Julius S. Held Lecture Hall, 304 Barnard Hall  
Barnard College, 3009 Broadway at 117th Street

Tea will be served at 4 pm in 508 Mathematics Hall  
2990 Broadway at 117th Street