Math Colloquium

Why String Theory Prefers Algebraic Geometry
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Thursday November 8th

4:30 PM LeConte 412

Superstring theory is hoped to provide a theory of all fundamental physics including and understanding of quantum gravity. While theoretical physicists like to describe spacetime in terms of differential geometry, we will show how stringy geometry is better explained in terms of representation theory of certain algebras and can be more easily described in terms of algebraic geometry. We will discuss how mirror symmetry arises and how the derived category of coherent sheaves is useful in this context.

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