## Colloquium

# Jeremy Martin

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#### Friday, February 10, 2012 at 3 pm in Bell Hall 143

### Points, Lines, Vectors, Lengths, Slopes, Graphs, Pictures, and Rigidity, Not Necessarily In That Order

A graph is a collection of vertices attached to each other by edges. Usually, graphs are seen as purely combinatorial objects with no inherent geometry, but what about studying the space of all ways to draw a graph? The problem turns out to be equivalent to understanding the constraints on the lengths and slopes of the line segments connecting a set of points in the plane, and is closely related to combinatorial rigidity theory: determining whether a physical models of a graph is rigid or flexible. The talk will be accessible to students.