Fall Colloquium Series

When Algebraic Geometry Meets Graph Theory

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Abstract:

Many graph theoretic problems, both structural and algorithmic, have benefited from the viewpoint of linear algebra. However, very few related results have come from the application of tools from algebraic geometry. In this talk we will discuss a particular application of Hilbert's Nullstellensatz, a celebrated theorem in classic algebraic geometry, to understanding 3-colorability of graphs and its consequences on computational complexity theory. This is joint work with Bo Li and Benjamin Lowenstein.

Wednesday, December 3, 1:05 - 1:50pm in 3-1639