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THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

Fall 2021

Symbolic powers of ideals, interpolation and related problems

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University of Arkansas

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10:30 am

Abstract

Interpolation problems are classical problems arising in several areas of mathematics. Broadly speaking, they ask to determine specific information about the set of all hypersurfaces passing through a given set of points X with given multiplicities.

By a classical theorem of Zariski and Nagata, these questions translate into questions about symbolic powers of ideals of points, e.g. determining the initial degrees of the symbolic powers of an ideal defining a set of points, or their Hilbert functions.

In this talk we present a few known results, including a celebrated theorem by Alexander and Hirschowitz, and some of the many related conjectures and open questions, including a conjecture raised by Nagata connected to his counterexample to Hilbert 14th problem.

link: meet.google.com/urm-rhmx-dhw

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