

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Paolo Mantero
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Date: Thursday, February 25, 2021

Time: 3:00 PM

Location: Zoom

Zoom URL: [notredame.zoom.us/j/97739336655?
pwd=QmUxd3V2Rndyd0VFNlc0RFBxK0xPQT09](https://notredame.zoom.us/j/97739336655?pwd=QmUxd3V2Rndyd0VFNlc0RFBxK0xPQT09)

Lecture Title:

Interpolation problems

Abstract

Homogeneous polynomial interpolation problems are challenging problems in Algebraic Geometry. They ask for information regarding hypersurfaces of given degrees passing with given multiplicity through a given set X of points in a projective space. A theorem by Zariski and Nagata allows one to translate the problem into a question about the Hilbert function of symbolic powers of the ideal I_X defining the set of points, so the problem can be tackled with Commutative Algebra tools as well. In the present talk we will review the history of some interpolation problems, state classical and recent results and discuss open problems and conjectures.