1003-14-1562 **David Eisenbud*** (`de@msri.org`). *Linearly presented ideals and applications to embeddings of projective spaces.*

Any embedding of one projective space in another is given by an ideal of homogeneous polynomials, primary to the maximal ideal, generated a single degree, and with an additional property: some power of the ideal should be equal to a power of the maximal ideal. This property has surprising interactions with Groebner bases and homological properties of ideals. I will describe recent work with Bernd Ulrich and Craig Huneke on this topic. Sample theorem: any linearly presented primary ideal defines an embedding. (Received October 05, 2004)

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