

BI-CO MATHEMATICS COLLOQUIUM

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*“Cryptography, Coding Theory,
and Curve Interpolation”*

Monday, March 31, 2008

Tea at 4:15 p.m. – Math Lounge, KINSC H208

Talk at 4:30 p.m. – KINSC Hilles 109

Abstract: The goal of cryptography is to use mathematics to communicate secrets so that only the people you want to hear the information do in fact hear it. The goal of coding theory is to use mathematics to build redundancy into messages so that they can withstand errors that may occur in the transmission. While much of the mathematics used in these areas is extremely deep, major advancements in both of these areas have come from the simple fact that two points determine a unique line as well as higher dimensional analogues of this fact which we all learn in grade school. In this talk, I will describe these applications of curve interpolation, and discuss broader ideas that come up in the modern theory of communications.

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