

Applied & Computational Mathematics & Statistics Colloquium

J. Maurice Rojas
Texas A&M

Will give a lecture entitled:

Extreme Extremal Results for Sparse Systems

Wednesday, August 4, 2010

4:00 pm

Location: 127 Hayes-Healy Hall

* Tea at 3:30 pm in 257 Hurley *

Abstract:

Descartes' Rule is a 17th century result telling us that polynomials with few terms have few real roots. However, almost 400 years later, there is still no definitive sharp generalization to systems of equations in many variables. Part of the mystery is the precise nature of extremal systems: systems of sparse polynomial equations with enough real roots to break a conjectural upper bound.

We discuss recent progress on finding extremal systems and pose some problems likely quite amenable to numerical algebraic geometry. Conversely, we also describe how fewnomial theory can contribute to numerical algebraic geometry.