



2011 Seminar Series



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Friday, November 11, 2011

Time: 3:00 - 4:00 PM

Room: BSE 2.102

Chebyshev polynomials, their relatives and descendants

Abstract: Chebyshev polynomials are the simplest orthogonal polynomials (in a precise sense I will explain). They are most familiar from applications in Numerical Analysis. In the first half of the talk I will show that in fact, they are ubiquitous throughout mathematics, and can be found in many fields, from Linear Algebra to Combinatorics. Moreover, one encounters the next simplest class (the "relatives") in even more areas, such as Probability. In the second half of the talk, I will describe fancier versions of Chebyshev polynomials (the "descendants"), such as their matrix-valued and operator-valued analogs.

A reception will follow the talk and will be held in BSE 2.102