

THE DEPARTMENT OF MATHEMATICAL SCIENCES

Indiana University - Purdue University Fort Wayne

is pleased to present

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## **A Variation on the Classical Stieltjes Electrostatic Model**

### **Abstract**

In a series of seminal papers, T. J. Stieltjes (1856–1894) provided an elegant electrostatic interpretation of the zeros of classical orthogonal polynomials (Jacobi, Laguerre, Hermite), which he extended to the more general case of the so-called Heine-Stieltjes polynomials. In this talk, we present a variation of this setting, and consider the asymptotic behavior of the zeros as the degree of the polynomials tends to infinity. In doing so, a continuous equilibrium problem in the presence of an external field arises in a natural way. The solution of this equilibrium problem is discussed.

Noon – 1:00, Wednesday, October 7, 2015. Location: KT 216

<http://ipfw.edu/departments/coas/depts/math/news/seminars.html>