Baylor University

COLLEGE OF ARTS & SCIENCES
Department of Mathematics

FRITZ FEST: CELEBRATING A CAREER IN OPERATOR THEORY, ORDINARY DIFFERENTIAL EQUATIONS, PARTIAL DIFFERENTIAL EQUATIONS AND QUANTUM THEORY

A conference in honor of Fritz Gesztesy's 70th birthday.

Fritz Gesztesy, Ph.D.
Ralph and Jean Storm
Professor of Mathematics

Friday, November 3, 2023
Armstrong Browning Library, Lewis
Birkhead Lecture Hall

2:30 pm – Coffee and Refreshments
3:15– 3:30 pm – Introductory Remarks

Featured Speakers:

Professor Rudi Weikard (University of Alabama at Birmingham, USA)
3:30 pm–4:20 pm

Weyl–Titchmarsh theory for first–order systems with distributional coefficients.

We investigate the spectral theory for the system Ju'+qu=wf of ordinary differential equations where J is a constant invertible skew–hermitian matrix while q is a hermitian and w a non–negative matrix whose entries are distributions of order 0. This is the most general setting for such equations due to the limitations on defining products of distributions. A major obstacle is the fact that, in general, the unique continuation of solutions of the differential equation is not possible. In this talk we will pay particular attention to 2x2 system thereby extending what is known about the classical Sturm–Liouville equation.

Professor Roger Nichols (Univeristy of Tennessee at Chattanooga, USA)
4:30 pm–5:20 pm

On the Krein––von Neumann Extension of an Ordinary Differential Operator

Among all nonnegative self–adjoint extensions of a densely defined, closed, nonnegative Hilbert space operator, the Friedrichs and Krein––von Neumann extensions are extremal in the sense that they are, respectively, the largest and smallest (with respect to order between nonnegative self–adjoint operators) such extensions. We survey recent results on the characterization via boundary conditions of the Krein––von Neumann extension of a strictly positive ordinary differential operator. This survey includes results for singular second–order operators, regular 2n–th order operators, and specific examples (Bessel, Jacobi, and one–term operators).

For Information and Registration please visit:
https://math.artsandsciences.baylor.edu/conferences/fritz–fest

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