

Session Program

May 18 - 22, 2026



27th Conference of the International Linear Algebra Society (ILAS 2026)

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction

Virginia Tech
Blacksburg, VA 24061

Tue, May 19

2:00 PM

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction: E

Session | Location: Virginia Tech, Torgersen Hall 1020

2:00 - 2:25 PM **Numerical linear algebra for data driven nonlinear dynamics**

Speaker
Zlatko Drmac

2:25 - 2:50 PM

Wavelet-Based Observables for Koopman Analysis: An Extended Dynamic Mode Decomposition Framework

Speaker
Cankat Tilki

2:50 - 3:15 PM **Reduced order modeling and numerical linear algebra analogs**

Speaker
Amy de Castro

3:15 PM

Wed, May 20

10:45 AM

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction: G

Session | Location: Virginia Tech, Torgersen Hall 1020

10:45 - 11:10 AM **Dynamical Tensor Train Approximation for Kinetic Equations**

Speaker

Geshuo Wang

11:10 - 11:35 AM **Tensor-based Dynamic Mode Decomposition for Complex Dynamics**

Speaker

Feliks Nueske

11:35 AM - 12:00 PM **Learning magnetic field structure from trajectories**

Speaker

David Bindel

12:00 PM

Thu, May 21

11:00 AM

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction: H

Session | Location: Virginia Tech, Torgersen Hall 1020

11:00 - 11:25 AM **Adaptive kernel methods**

Speaker

Matthias Voigt

11:25 - 11:50 AM

Non-intrusive reduced-order models for parameterized partial differential equations using kernel methods

Speaker

Alejandro Diaz

11:50 AM - 12:15 PM

Matrix Structures for Certified Stability of Nonlinear Reduced Models

Speaker

Peter Benner

12:15 PM

2:00 PM

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction: I

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2:00 - 2:25 PM

Approximate Deconvolution and Spatial Filtering of Reduced Order Models for Fluid Flow

Speaker

Jorge Reyes

2:25 - 2:50 PM

Randomized Linear Algebra for Symplectic Model Order Reduction of Hamiltonian Systems

Speaker

Robin Herkert

2:50 - 3:15 PM

Reduced Order Modeling of Conservation Laws via CDT

Speaker

Sarswati Shah

3:15 - 3:40 PM

Solution of generalized tensor Lyapunov equations arising in optimal control and model reduction

Speaker

Boris Kramer

3:40 PM

Fri, May 22

8:45 AM

Linear Algebra Foundations for Data-driven Modeling and Model Order Reduction: J

Session | Location: Virginia Tech, Torgersen Hall 1020

8:45 - 9:10 AM **Loewner linearizations of structured rational matrices**

Speaker

Paul Van Dooren

9:10 - 9:35 AM

Tackling the curse of dimensionality through the parametric Loewner framework: recent advances and applications

Speaker

Ion Victor Gosea

9:35 - 10:00 AM

From Structured Loewner Matrices to Balanced Mechanical Systems

Speaker

Steffen W. R. Werner

10:00 AM