

Center for Simulational Physics
Franklin College of Arts and Sciences
UNIVERSITY OF GEORGIA

David P. Landau Symposium April 6-10, 2026

Agenda (as of April 7)


Note: In-person event to be held in room 322, CSP Seminar room, Physics building.

Zoom link:

<https://zoom.us/j/96288496595?pwd=QMqzQa6iAby3yehnehZ8efLuybb6oT.1>

Monday, April 6

- 8:45 - 9:30 am Registration, coffee, snacks
Lobby (outside room 322)
Opening Remarks and Session 1, Phillip Stancil, session chair
- 9:30 - 9:40 am **Dean Anna Stenport**, Franklin College, UGA
- 9:40 - 9:45 am **Craig Wiegert**, Physics and Astronomy, UGA
- 9:45 - 10:45 am Plenary Lecture: **Wolfhard Janke**, University of Leipzig
Non-Flat Wang-Landau et al. Rare-Event Sampling
- 10:45 - 11:15 am **Nobuyasu Ito**, RIKEN Center for Computational Science
From molecule to society
- 11:15 - 11:30 am Coffee Break
- 11:30 am - 12:00 pm **Dilimulati Aierken**, Princeton University
Computational Approaches for Biophysics of RNA-Driven Condensation



*Nonadiabatic Quantum Molecular Dynamics for Digital
Quantum Computers*

4:15 - 4:45 pm **Phillip Stancil**, University of Georgia
*Collisional Dynamics for the Next Decade: Atoms, Molecules,
AI, and Quantum Computing*

Wednesday, April 8

8:30 - 9:00 am Coffee, snacks
Session 5, Andre Erpenbeck, Session Chair

9:00 - 10:00 am Plenary Lecture: **Alex Bunker** (zoom), University of Helsinki
*Computationally assisted design (CAD) for nanomedicine:
molecular dynamics simulation and machine learning*

10:00 - 10:30 am **Sara Mason**, Brookhaven National Laboratory
*Mechanism Discovery in Defect Chemistry: Interpretable
Machine Learning Meets Density Functional Theory*

10:30 - 11:00 am **Eric Suter**, Core4ce with the AFRL
First-principles modeling of TiN

11:00 - 11:15 am Coffee Break

11:15 - 11:45 am **Gabriel Bruno** (zoom), Univ. Federal de Minas Gerais
Metrics on Neural Network Potentials: Insights on good fitting

11:45 am - 12:15 pm **Thomas Wuest**, ETH Zurich
*AI in Academia - and for the Solution of the HP Model of
Protein Folding*

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- 12:15 - 2:00 pm Lunch
- Session 6, Thomas Wuest, Session chair
- 2:00 - 3:00 pm Plenary Lecture, **Mark Novotny**, Mississippi State University
Computer Simulations: Monte Carlo, Phase Transitions, Scaling, Disorder, and Ising/Quantum
- 3:00 - 3:30 pm **Daniel Seaton**, Northeastern University
From Physicist to Data Scientist: Learning Analytics in Higher Education
- 3:30 - 5:00 pm Poster Session, Coffee, Snacks
- 6:00 - 8:00 pm Reception/Dinner, Georgia Center Hotel, Dogwood Hall

Thursday, April 9

- 8:30 - 9:00 am Coffee/snacks
Session 7, Thomas Vogel, Session Chair
- 9:00 - 10:00 am Plenary Lecture: **Burkhard Duenweg** (zoom), Max Planck Institute for Polymer Research
Statistical Physics and Rheology: Two worlds meet (and crash??)
- 10:00 - 10:30 am **Mohamed Laradji**, University of Memphis
A Simple Model, Many Phenomena: Membrane Mechanics, Phase Behavior, and Nanoparticle Assembly

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- 10:30 - 11:00 am **Guy Cohen** (zoom), Tel Aviv University
Inching Past Sign Problems in Quantum Monte Carlo
- 11:00 - 11:15 am Coffee Break
- 11:15 - 11:45 am **Andre Erpenbeck**, University of Georgia
Extending Quantum Monte Carlo from Short-Time Data to Long Times and Beyond
- 11:45 am - 12:15 pm **Ping Ma**, University of Georgia, Statistics
Quantum Statistical Bootstrap: Uncertainty Quantification via Quantum Computing
- 12:15 - 2:00 pm Lunch
- Session 8, **Chair**, Session Chair
- 2:00 - 3:00 pm Plenary Lecture: **Francesca Tavazza** (zoom), NIST
ML-aided Materials Property Prediction and Autonomous Experimentation: a modern approach to Materials Discovery and Optimization
- 3:00 - 3:30 pm **Matthew Wilson**, Los Alamos National Laboratory
The xRAGE code and Fortran/C++ Interoperability
- 3:30 - 3:45 pm Coffee Break
- 3:45 - 4:00 pm Group Photo

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- 4:00 - 4:30 pm **Mike Geller**, University of Georgia
Introduction to Nonlinear Quantum Computation
- 4:30 - 5:00 pm **Amara Katarbarwa**, Georgia Tech Research Institute
Detailed assessment of calculating drag force with quantum computers: Explicit time-evolution precludes exponential advantage for nonlinear differential equations
- Friday, April 10
- 8:30 - 9:00 am Coffee, snacks
Session 9, **Chair**, Session Chair
- 9:00 - 10:00 am Plenary Lecture: **Friederike Schmid**, Johannes Gutenberg
Universität Mainz
How to model noisy frictional contacts
- 10:00 - 10:30 am **Cass Hall**, University of Georgia
Gravitational instability in protoplanetary discs
- 10:30 - 11:00 am **Jason Terry** (zoom), University of Oxford
*Meteorites and Planet Formation Models: How Jupiter and
Infall Shaped our Solar System*
- 11:00 - 11:15 am Coffee Break
- 11:15 - 11:30 am Contributed: **Ian Drury**, University of Georgia
Asteroid impacts and planetary system architecture

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- 11:30 am - 12:00 pm **Julio Rocha** (zoom), UFOP, Brazil
Qudit Implementation of the Rodeo Algorithm for Quantum Spectral Filtering
- 12:15 - 2:00 pm Lunch
- Session 10, Phillip Stancil, Session Chair
- 2:00 - 2:30 pm **Junqi Yin**, Oak Ridge National Laboratory
Deep Learning Meets Wang-Landau: Scalable Thermodynamics Sampling for Complex Materials on Supercomputers
- 2:30 - 2:45pm Binder Lecture: **Bernd Schuttler**, University of Georgia
- 2:45 pm Closing Remarks