

**Telluride Workshop 2025**  
***“Non-equilibrium Phenomena, Nonadiabatic Dynamics and Spectroscopy”***

Samueli Room  
Telluride Innovation Center  
300 S. Townsend St.  
Telluride, CO 81435  
August 18<sup>th</sup>-22<sup>nd</sup>, 2025

TSRC Host: Mark Kozak [mark@telluridescience.org](mailto:mark@telluridescience.org) / 970.708.4426

**Lunches are NOT included in registration.**

We have 23 presentations: 7 on Monday, 3 on Tuesday (Afternoon only), 7 on Wednesday, and 6 on Thursday.

Each talk is scheduled for 35 minutes + 10 minutes for discussion. Interruptions and questions during talks are encouraged.

The scientific program starts at 8:50 am on Monday, August 18<sup>th</sup>, and ends at 12 pm on Friday, August 22<sup>nd</sup> (Friday is reserved for group discussions, collaborations, etc.). The first half day of Tuesday, August 19<sup>th</sup> is reserved for group discussions, collaborations, group hike, etc. There is no “town talk” this week. However, on Thursday, August 21<sup>st</sup> from 5:30-6:30 there is a Telluride Chamber Music concert hosted at the Telluride Innovation Center.

Breakfast is served daily 8:30-9:00, immediately before the start of the workshop. On Monday, August 18<sup>th</sup> there will be a picnic from 5:30 pm at the Telluride Innovation Center.

	M 8/18	T 8/19	Wed 8/20	Th 8/21	Fri 8/22
Breakfast (8:30-9:00)					
8:50-9:00	Opening Remarks				
9:00-9:45	Bittner	Hike	Neuhauser	Giustino	<a href="#">Collab Time</a>
9:45-10:30	Ping	Hike	Ullrich	Mandal	<a href="#">Collab Time</a>
Break (15 Min)		Hike			<a href="#">Collab Time</a>
10:45-11:30	Martens	Hike	Schleife	Zhang	<a href="#">Collab Time</a>
11:30-12:15	Blumberger	Hike	Kanai	Weight	<a href="#">Collab Time</a>
Lunch (12:15-1:45)					End 12:00
1:45-2:30	Rahman	Cheng	White	Talbot	
2:30-3:15	Coker	Turkowski	Leveillee	Fajen	
Break (15 Min)					
3:30-4:15	Johnson	Wong	Oas	<a href="#">Collab Time</a>	
4:15-5:00	<a href="#">Collab Time</a>	<a href="#">Collab Time</a>	<a href="#">Collab Time</a>	<a href="#">Collab Time</a>	
	Picnic at TIC (5:30)			TSRC Chamber Music	
				at the Center (5:30-6:30)	

Sunday, Aug 17th		
5:00-6:30 pm	Meet & Greet at Alibi – 157 S. Fir Street	
Monday, Aug 18th		
8:30	Breakfast (30 minutes)	
8:50	Opening Remarks	
9:00	Eric Bittner	A Clockwork Quantum: Symmetry, Noise, and the Emergence of Quantum Order
9:45	Yuan Ping	First-principles open quantum dynamics and transport for solids based on density-matrix formalism
10:30	Coffee Break (15 minutes)	
10:45	Craig Martens	Quantum-Classical Mixology
11:30	Jochen Blumberger	Coupled trajectory mixed quantum classical dynamics from the exact factorization: energy conservation, detailed balance and (de)coherence
12:15	Lunch (on your own, 1 hour 30 minutes)	
1:45	Talat Rahman	Ultrafast exciton dynamics and photoluminescence in 2D transition metal dichalcogenides
2:30	David Coker	Chirped laser pulse control of vibronic wave packets and excitation energy transfer in light harvesting
3:15	Coffee Break (15 minutes)	
3:30	Landon Johnson	Modeling Synthesis and Excited State Dynamics in Colloidal Nanostructures: SiC and Perovskites
4:15-5:00	--	Collaboration time
5:00-5:30	--	Free Time before Picnic
5:30	Picnic at Telluride Innovation Center	
Tuesday, Aug 19th		
8:30-9:00	Breakfast (30 minutes)	
	Open time for Hike / Collaboration	
	Lunch (on your own)	
1:45	Hai-Ping Cheng	Modeling Exchange Coupling, Clock Transition, and Spin Dynamics
2:30	Volodymyr Turkowski	Nonhomogeneous ultrafast spin dynamics in monoclinic V2O3: the roles of local and long-range Coulomb correlation effects
3:15	Coffee Break (15 minutes)	
3:30	Bryan Wong	Quantum Dynamics of Materials in External Fields: Software and Hardware Developments
4:15-5:00	--	Collaboration time
Wednesday, Aug 20th		
8:30	Breakfast (30 minutes)	
9:00	Daniel Neuhauser	Solving the GW-Bethe-Salpeter Equation from Real-Time Response: A Stochastic Approach
9:45	Carsten Ullrich	Real-time TDDFT for excitons in solids
10:30	Coffee Break (15 minutes)	
10:45	Andre Schleife	Electron dynamics of graphene under electron irradiation
11:30	Yosuke Kanai	Coupled Quantum Dynamics between Electrons and Protons in Condensed Phase Systems

12:15	Lunch (on your own, 1 hour 30 minutes)	
1:45	Alexander White	Electronic response of warm dense matter: Inelastic Scattering and Nonadiabatic Born Effective Charges
2:30	Joshua Leveillee	Mixed deterministic-stochastic resolution-of-the-identity compressed exchange
3:15	Coffee Break (15 minutes)	
3:30	Tori Oas	Theoretical Insights into Ligand passivation on CdSe surfaces
4:15-5:00	--	Collaboration time
Thursday, Aug 21st		
8:30	Breakfast (30 minutes)	
9:00	Feliciano Giustino	Ab initio theory of exciton polarons
9:45	Arkajit Mandal	Cavity Modified Exciton Transport
10:30	Coffee Break (15 minutes)	
10:45	Yu Zhang	Transport and optical properties of Planner Hyperbolic phonon polaritons
11:30	Braden Weight	Photophysical Properties and Nonadiabatic Dynamics of Exciton-Polaritons
12:15	Lunch (on your own, 1 hour 30 minutes)	
1:45	Justin Talbot	Improving Time-Dependent Density Functional Theory for Nonadiabatic Dynamics: Orbital Optimization to the Rescue
2:30	Jonathan Fajen	The Ultrafast Photochemistry of Thymine: Predictions from Coupled Cluster Theory and the hole-hole Tamm-Dancoff Approximation.
3:15	Coffee Break (15 minutes)	
3:30-5:00	--	Collaboration time
Friday, August 22nd		
8:30	Breakfast (30 minutes)	
9:00-12:00	--	Collaboration time
12:00 pm	End of Workshop	