Non-equilibrium Statistical Physics: from molecular materials to theoretical engineering.
Honoring Professor Valdimir Chernyak 60th Birthday

Telluride, Colorado
July 4-8 2016

Monday, July 4

Informal Meetings

Tuesday, July 5

Morning

8:00-8:45 **Registration & Breakfast (provided)**

8:45-9:00 **Conference Opening:** ***Acknowledging Professor Vladimir Chernyank career accomplishments and contribution to the field of non-equilibrium statistical physics.***

9:00 AM **Shaul Mukamel** UC Irvine
Matter and Field Spectral Densities for Multidimensional Optical Response

9:40 AM **Vladimir Chernyak** Wayne State University
Gauge Invariance and Reduction Schemes in Nonequilibrium Statistical Mechanics, Chemical Physics, Nonlinear Spectroscopy, Topology, and Computer Science.

10:20 AM **Jasper Knoester** University of Groningen
Exciton dynamics in low-dimensional molecular assemblies

11:00 AM **Coffee Break**

11:15 AM **Jianshu Cao** MIT
Coherent transport in disordered systems

11:55 AM **David Dunlap** UNM
Disorder in organic semiconductors due to fluctuations in space charge density

12:35 PM **Lunch (on your own)**

Afternoon

2:00 PM **Roger Loring** Cornell University
Old theory meets new experiments: multidimensional spectra with the optimized mean trajectory approach

2:40 PM **Guanhua Chen** The University of Hong Kong
Quantum mechanical simulation of open electronic systems

3:20 PM **Nikolai Sinitsyn** LANL
Multistate Landau-Zener problem: the challenge to mathematical physics.

4:00 PM **Coffee Break**

4:15 PM **Vladimir Mandelshtam** UC Irvine
Self-consistent phonons: A practical method to account for anharmonic effects in classical or

quantum many-body systems

4:55 PM **David Picconi** Technical University, Munich
Insights into the absorption spectrum and the product state distributions of photodissociating molecules

5:35 PM **Hao Li** University of Houston
Exciton Scattering Approach for Spectroscopic Calculations in Branched Conjugated Macromolecules

Wednesday July 6

Morning
8:30-9:00 AM **Breakfast (provided)**

9:00 AM **Leonas Valkunas** Vilnius University
Modeling of self-regulation ability of light-harvesting antenna

9:40 AM **Eric Bittner** University of Houston
Charge-separation at donor/acceptor interfaces: coherent or incoherent, that is the question

10:20 AM **Dmitri Kilin** South Dakota State University
Photo induced dynamics at the interfaces of nanomaterials

11:00 AM Coffee Break

11 :15 AM **Joris Bierkens** Warwick
The zig-zag process

11:55 AM **Galen Craven** University of Pennsylvania
Geometrical Descriptors of Time-Dependent Transition States

12:35 PM **Lunch (on your own)**

Afternoon
2:00PM **Kirill Velizhanin** LANL
Heat and Charge Transport on Nanoscale: From Kramers Turnover to Topological Edge States

2:40 PM **John Klein** Wayne State University
On the Kirchhoff and Boltzmann distributions in higher dimensions

3:20 PM **Michael Catanzaro** Wayne State University
The Topology of Higher-Dimensional Currents and Langevin Processes

4:00 PM **Coffee Break**

4:15 PM **Misha Stepanov** University of Arizona
Instantons causing iterative decoding to cycle

4 :55 PM **Michael Chertkov** LANL

Statistical Mechanics of Optimal Stochastic Control

Thursday July 7

Morning
8:30-9:00 AM **Breakfast (provided)**

9:00 AM **Anna Krylov** University of Southern California
On density matrices, non-adiabatic couplings, and singlet fission

9:40 AM **Maxim Gelin** Technical University, Munich
Simulation of femtosecond wave-packet dynamics and two-dimensional electronic spectra at conical intersections

10:20 AM **Spiridoula Matsika** Temple University
Excimers, Exciplexes and Conical Intersections in Photoinitiated Processes of Biological Systems

11:00 AM Coffee Break

11:15 AM **Sebastian Fernandez-Alberti** National University of Quilmes
Excited state nonadiabatic molecular dynamics in dendrimers: energy redistribution with and without vectorial energy transfer.

11:55 PM **Kush Patel** University of Houston
Quantum Simulations of Charge Transfer Dynamics for Model Donor-Bridge-Acceptor Supramolecules

12:35 PM **Lunch (on your own)**

Afternoon
2:00 PM **Swarnendu Bhattacharyya** Technical University, Munich
Six-dimensional quantum dynamical investigation of the ultrafast radiationless decay dynamics of the phosphine cation

2:40 PM **Svetlana Kilina** North Dakota State University
Light-Driven Processes in Semiconductor Nanostructures: Effect of their Surface Chemistry

3:20 PM **Vladimir Lankevich** University of Houston
Quantum mechanical calculations on lattice models of organic photovoltaic systems
4:00 PM Coffee Break

4:15 PM **Sergei Tretiak** LANL
Chemical functionalization and optical properties of carbon nanotube materials

4:55 PM **Andrei Piryatinski** LANL
Exciton dynamics and photon emission properties of semiconductor carbon nanotubes

Friday July 8
9:00 AM -12:00 PM Informal Discussions, Collaboration
12:00 PM End of workshop