Quantum Thermodynamics: Coherence, Flux, and Heat Engine Efficiency
MIT, Room 4-270

SATURDAY, OCTOBER 10, 2015

8:30-8:50    Registration
8:50-9:00    Opening Remarks
9:00-9:50    Marlan Scully, Texas A&M University
             *Quantum Thermodynamics: Recent Results and Open Questions*
9:50-10:20   Dazhi Xu, Massachusetts Institute of Technology
             *Non-equilibrium behaviors of the quantum heat engine: Polaron effects and time-dependent control*

10:20-10:40  Coffee Break

10:40-11:30  Ronnie Kosloff, Hebrew University of Jerusalem
             *Quantum equivalence and quantum signatures in heat engines and refrigerators*

11:30-12:00  Erez Boukobza, Tel Aviv University
             *Thermodynamics of light-matter interactions: attenuation and amplification, the Carnot limit and beyond*

12:00 PM     LUNCH BREAK

1:00-1:50    Tobias Brandes, Technical University of Berlin
             *From quantum phase transitions to Maxwell’s demon*

1:50-2:20    Javier Cerrillo, Technical University of Berlin
             *Non-Markovian Quantum Transport in the Strong Coupling Regime*

2:20-2:40    Coffee Break

2:40-3:30    Andreas Buchleitner, Albert-Ludwigs University of Freiburg
             *Transport on network-like structures – from light-harvesting to boson sampling*

3:30-4:00    Aurélia Chenu, University of Toronto
             *Quantum Dynamics of Photosynthetic Light-Harvesting Complexes*

4:00 PM      POSTER SESSION-Room 4-265
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SUNDAY, OCTOBER 11, 2015

9:00-9:50  Michael Thoss, Friedrich-Alexander University of Erlangen-Nuremberg
Quantum transport in molecular junctions: Vibrational effects and Transient Phenomena

9:50-10:20  Chern Chuang, Massachusetts Institute of Technology
Quantum transport in spin ladders and exciton lattices

10:20-10:50  Mattia Walschaers, Albert-Ludwigs University of Freiburg
Enhanced Currents of Non-interacting Indistinguishable Particles

10:50-11:10  Coffee Break

11:10-11:40  Adolfo del Campo, University of Massachusetts, Boston
A Many-Particle Quantum Heat Engine

11:40-12:10  Martin Bruderer, Institute for Theoretical Physics, Ulm University
Controlled heat transport and heat engines at the nanoscale

12:10-12:40  Konstantin Dorfman, University of California, Irvine
Characterizing quantum coherence enhanced Quantum Heat Engines by multidimensional Raman Spectroscopy

12:40  Closing Remarks