Quantum conductance and forces across molecular junctions

Since the pioneering work of Aviram and Ratner (1974), molecular electronic devices have captivated many scientists and engineers. Although the realization of practical devices still seems distant, devices being built today serve as fascinating laboratories for exploring fundamental questions in the quantum and statistical mechanics of open nanoscale systems. This symposium will survey recent progress on these exciting issues.

Thursday 2 November 2017
Science Center (Room 4102)

9:30 AM Coffee and bagels

10:00 AM Electron transfer and conductance across thermal gradients
Abraham Nitzan, University of Pennsylvania

11:10 AM Coffee

11:30 AM Green function methods for optoelectronics and molecular dynamics
Michael Galperin, University of California at San Diego

12:40 PM Lunch

2:00 PM Electron transport in single molecule circuits
Latha Venkataraman, Columbia University

3:10 PM Coffee

3:30 PM Toward atomistic modeling of electromechanical spectroscopies in molecular junctions
Ignacio Franco, University of Rochester

4:40 PM Coffee

5:00 PM Single molecule junction bond rupture measurements: Probe of molecule-metal link bond strength diversity?
Mark Hybertsen, Brookhaven National Laboratory

Sponsored by the Initiative for the Theoretical Sciences, and by the CUNY doctoral programs in Chemistry and Physics.

The Graduate Center is located at 365 Fifth Avenue, between 34th and 35th Streets, in Manhattan.