2 POSTDOCTORAL SCHOLAR POSITIONS
ULTRAFAST NONLINEAR SPECTROSCOPY with QUANTUM LIGHT and X-RAY PULSES; THEORY AND COMPUTATIONS

RESEARCH TOPICS:

(A) Nonlinear Spectroscopy with Quantum Optical Fields

Novel optical signals which use entangled photons and quantum light, pulse shaping, and coherent control algorithms will be designed and simulated for probing vibrational and exciton dynamics in molecular aggregates and semiconductor nanostructures.

(B) Ultrafast Nonlinear X-ray Spectroscopy of Molecules

Emerging X-ray free electron laser (XFEL) beam sources offer new types of probes of matter with unprecedented spatial and temporal resolutions. Cutting-edge theoretical and simulation tools for nonlinear multidimensional X-ray/optical spectroscopies will be developed.

Time-dependent many-body approaches will be developed to nonlinear x-ray core-electron spectra and conical intersections. Computational tools will be implemented for the design and analysis of measurements involving multiple ultrafast optical and x-ray pulses.

Recent Ph.D. is required. Salary will be commensurate with experience.

Send a curriculum vitae, publication list and arrange for three letters of recommendation to

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Relevant Publications


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