IOWA Department of Chemistry

Department News

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Three Month Seminar

Thursday, May 05, 2022 - 12:30 PM

Christian Haas

"Evidence of Quantitative Electron Transfer Rate Enhancement in Photosynthetic Reaction Centers", A Magnetically-Modified Electronic Coupling

Add Video Zoom

Organic Seminar

Friday, May 06, 2022 - 12:30 PM

Clarence Pierre

"Siderophore-Mediated Nutrient Products: Synthesis and Applications"

Three Month Seminar

Friday, May 06, 2022 - 2:00 PM

Dulanthi Elaraqoda

"Isolation and Characterization of Secondary Metabolites from Selected Fungi"

PhD Oral

Monday, May 09, 2022 - 12:30 PM

Prof. Xuhui Huang
University of Wisconsin

"Markov State Models to Study Functional Dynamics of Proteins and Protein Complexes"

Markov state models (MSMs) and extensions have been widely used to study the kinetics and thermodynamics of biomolecular conformational changes and protein-ligand interactions. In this talk, I will first briefly review the theoretical foundation and practical aspects of MSMs. I will then discuss our recent efforts in developing Transition Path Theory (TPT) and Transition Path Sampling (TPS) framework for quantitative mechanistic insights into rare events in complex biomolecular systems. I will also discuss our recent efforts in combining Markov State Models with deep learning techniques for dimerization free energy calculations of membrane protein helices and for the discovery of allosteric mechanisms of protein kinases. I will also briefly discuss our recent efforts in developing Markov State Models for intrinsically disordered proteins (IDPs) and in combining Markov State Models with cryo-electron tomography (cryo-ET) data to study the structures and dynamics of HIV-1 capsid assemblies. Finally, I will briefly discuss our efforts in developing artificial intelligence (AI) based methods for protein structure prediction and protein-protein interaction prediction.

Chemistry DEI Cohort Meeting

Hey Graduate Students!

We are forming a cohort for the Chemistry Diversity and Inclusion Committee. We would like to have a cohort of students who are interested in being involved in the committee's work, including being a liaison between the committee and the student body, and being involved in the committee's work on recruitment, retention, and climate. We would like to have a cohort of students who represent the diversity of our department, including students who are:

- Women
- Black/African American
- Latinx/Hispanic
- Asian
- Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual
- Disabled
- Veteran
- Parents/Caregivers
- Low-income/first-generation
- Other identities you think are important

We would like to do an introductory meeting with the cohort on Wednesday, April 13, from 3:30-4:30 pm. If you are interested in being part of the cohort, please let me know by Friday, April 8.

Thanks!
Dr. Kate Waters
Associate Professor
Director of Undergraduate Studies
Department of Chemistry
Kate-waters@uiowa.edu

NOTICE: COMPRESSED AIR SHUTDOWN

Beginning on Monday, April 18, the Chemistry Department will shutdown the compressed air system for a period of approximately 2 weeks. This will affect the following areas: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40,