Erik Nordquist

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Education

– | **Ph.D. Chemistry**, University of Massachusetts Amherst

2018 | **B.S. Chemistry and Physics**, The College of Idaho

Fellowships

2020 – 2022 | **Chemistry-Biology Interface (CBI) Fellowship**
Funded Traineeship through NIH and UMass

2022 | **UMass CNS Teaching Fellowship**
Funded Traineeship through UMass in connection with CIRTL

Publications

2021 | 1. **Nordquist, E.** *et al.* Physics-Based Modeling Provides Predictive Understanding of Selectively Promiscuous Substrate Binding by Hsp70 Chaperones. *PLOS Computational Biology* (2021).

2020 | 2. Gong, X. *et al.* Accelerating the Generalized Born with Molecular Volume and Solvent Accessible Surface Area Implicit Solvent Model Using Graphics Processing Units. *Journal of Computational Chemistry* (2020).

Undergraduate Mentoring

2019 – 2020 | Callie Jillson studied how DnaK's helical lid impacts substrate binding for her senior thesis.

2020 – 2021 | Samantha Schultz used protein-like nanopores to help design the protocol for enhanced sampling of hydrophobic dewetting transitions. She took that work to BPS 2022.

Presentations

2022 | **Biophysical Society Annual Meeting**
”Free Energy of Hydrophobic Dewetting in Gating of BK Channels”

2020 | **Northeastern Structural Symposium Research Talk**
”Physical Origins of Selective Promiscuity to Hsp70s Revealed Through Physics-Based Modeling”
UMass ResearchFest Poster
W.E. McEwen Poster Prize winner; ”Physical Origins of Selective Promiscuity to Hsp70s Revealed Through Physics-Based Modeling”

2019 | **Molecular Biophysics in the Northeast Poster Session**
”Understanding the Origins of DnaK’s Selective Promiscuity with Physics-based Modeling”

Professional Development

2021 | **Intro. to Evidence-based Undergraduate STEM Teaching**
8-week CITRL-run course, incl. topics: active learning, formative assessments, backward design, etc.

The Inclusive STEM Teaching Project online course
4-week CIRTL-run, evidence-based course on inclusive STEM teaching.

2019 | **OpenACC GPU Hackathon at MIT**
Parallelizing implementation of implicit solvent model GBMV2/SA

Service

2021 | **Journal Referee Biophysical Journal**, reviewed 1 article

2021 | **Search Committee for Grad Program Director**, UMass Amherst Chem. Dept.

2021 – | **Journal of Emerging Investigators**, 12 articles reviewed to-date

2020 | **CBI Alumni Networking Event**, Organization Committee

2019 – 2021 | **Annual Chem Dept ResearchFest**, Organization Committee