

Stefan Seritan

EDUCATION

- 2015 – Present **Graduate Student (Ph.D. Candidate)**
PHYSICAL CHEMISTRY
Stanford University
- 2011 – 2015 **Bachelor of Science**
CHEMISTRY AND BIOCHEMISTRY
University of California, Santa Barbara
GPA: 3.83/4.0

HONORS & AWARDS

- 2016 **NSF Graduate Research Fellowship**
National Science Foundation
- 2014 **ACS 248th National Meeting Undergraduate Poster Award**
American Chemical Society, COMP Division
- 2014 **Summer Undergraduate Research Fellowship**
University of California, Santa Barbara
- 2013 **Undergraduate Research and Creative Activities Grant**
University of California, Santa Barbara

RESEARCH EXPERIENCE

Graduate Researcher JUL. 2015 - PRESENT
Martinez Group
Stanford University

- Improving real-time interactive molecular dynamics (IMD) simulations, utilizing the Unity game engine, haptic controllers, and VR/AR HMDs
 - Developing undergraduate curriculum for chemistry using IMD simulations
- Building a distributed cloud framework for asynchronous GPU-accelerated electronic structure calculations
- Benchmarking a factorized full configuration-interaction method
- Reaction discovery on shocked HE materials
- System administrator for a HPC cluster with over 100 nodes and over 300 GPUs

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🔄	https://github.com/sseritan
📁	https://bitbucket.org/sseritan

RESEARCH EXPERIENCE CONT.

Undergraduate Researcher MAR. 2013 - JUN. 2015
Peters Group
University of California, Santa Barbara

- Investigated the reactivity of activated methyltriox-orhenium with cyclohexene to form epoxides in solution using DFT
- Implemented a sequential quadratic programming algorithm to study the structure of amorphous supports in catalytic systems
- Studied the effect of a surfactant additive to crystal nucleation in solution using a Potts lattice gas model and Monte Carlo simulations
- Worked on an extended Gibbs ensemble model to study solid-solid phase equilibria

Laboratory Intern JAN. 2010 - JUN. 2010
Drs. Florin and Sanda Despa
University of California, Davis

- Studied the effects of islet amyloid polypeptides (IAPP) and apoptosis on cardiac myocytes, and searched for IAPP in human heart tissue samples. Lab experience includes:
 - Confocal laser microscopy
 - Western blots
 - Gel electrophoresis
 - Fluorescence imaging

TEACHING EXPERIENCE

Head Teaching Assistant SEP. 2017 - DEC. 2017
Stanford University OCT. 2016 - DEC. 2016

Teaching Assistant APR. 2016 - JUN. 2016
Stanford University SEP. 2015 - DEC. 2015

Campus Learning Assistance Services Tutor OCT. 2014 - MAR. 2015
University of California, Santa Barbara

Learning Assistant SEP. 2012 - DEC. 2012
University of California, Santa Barbara

PUBLICATIONS

Journal Articles

1. Fales, B.S.; Seritan, S.; Settje, N.F.; Levine, B.G.; Koch, H.; Martínez, T.J. Large Scale Electron Correlation Calculations: Rank-Reduced Full Configuration Interaction *J. Chem. Theor. Comp.* **2018**, *Just Accepted*. DOI: 10.1021/acs.jctc.8b00382
2. Goldsmith, Z.K.; Provazza, J.; Seritan, S. Viewpoints on the 2017 American Conference of Theoretical Chemistry. *J. Phys. Chem. A* **2017**, *121* (41), 7807-7812. DOI: 10.1021/acs.jpca.7b09624
3. Goldsmith, B.R.; Hwang, T.; Seritan, S.; Peters, B.; Scott, S.L. Rate-Enhancing Roles of Water Molecules in Methyltrioxorhenium-Catalyzed Olefin Epoxidation by Hydrogen Peroxide. *J. Am. Chem. Soc.* **2015**, *137* (30), 9604-9616. DOI: 10.1021/jacs.5b03750
4. Seritan, A.L.; Seritan, S. Geriatric Psychopharmacology in Acute Settings. *Curr. Psychopharmacol.* **2015**, *4* (2), 112-118. DOI: 10.2174/221155600402160201125256
5. Poon, G.; Seritan, S.; Peters, B. FD Nucleation: A design equation for low dosage additives that accelerate nucleation *Faraday Discuss.* **2015**, *179*, 329-341. DOI: 10.1039/C4FD000226A
6. Seritan, A.L.; Ortigas, M.; Seritan, S.; Bourgeois, J.A.; Hagerman, R. Psychiatric disorders associated with FX-TAS. *Curr. Psychiatry Rev.* **2013**, *9*, 59-64. DOI: 10.2174/157340013805289699

PROFESSIONAL ORGANIZATIONS

Student Member <i>American Chemical Society</i>	MAR. 2013 - PRESENT
Student Member <i>American Association for the Advancement of Science</i>	APR. 2015 - APR. 2016
Honorary Member <i>Phi Lambda Upsilon, National Chemistry Honor Society</i>	SEP. 2014 - JUN. 2015

PRESENTATIONS

Posters

1. Seritan, S.; Martínez, T.J. *Ab Initio* Interactive Molecular Dynamics: A Hands-On Experience with Quantum Chemistry. American Conference of Theoretical Chemistry, Boston University, MA, July 2017.
2. Seritan, S.; Martínez, T.J. Constructing an Intuitive Virtual Reality Interface for Interactive Ab Initio Molecular Dynamics. Theory and Applications of Computational Chemistry Conference, Seattle, WA, August 2016.
3. Seritan, S.; Martínez, T.J. Constructing an Intuitive Virtual Reality Interface for Interactive Ab Initio Molecular Dynamics. UCLA IPAM DFT Summer School, Los Angeles, CA, August 2016.
4. Seritan, S.; Peters, B. Development of an extended Gibbs ensemble for the study of solid-solid phase equilibria. College of Creative Studies Science Week, Santa Barbara, CA, October 2014.
5. Seritan, S.; Goldsmith, B.R.; Peters, B. A systematic *ab initio* strategy for predicting structure-activity relationships in amorphous catalysts and supports. ACS 248th National Meeting, San Francisco, CA, August 2014.
6. Seritan, S.; Goldsmith, B.R.; Peters, B. Computational tools for studies of catalysis on amorphous supports. UCSB Undergraduate Research Colloquium, Santa Barbara, CA, May 2014.
7. Seritan, S.; Despa, F.; Despa, S. IAPP and injury of cardiac myocytes. ROP Biotechnology Symposium, Davis, CA, May 2010.

SKILLS

Programming Languages	Highly Proficient in C, C++, C#, PYTHON Moderately Experienced in CUDA, FORTRAN, JAVASCRIPT, JAVA, RUBY, HTML, CSS
Computer Skills	Bash, Makefiles, Linux Administration (DHCP, DNS, NIS, TFTP), Numerical Libraries (cuBLAS/BLAS, NumPy/SciPy), Microsoft Office Suite, Visual Studio
Languages	Fluent in English Proficient in Romanian Conversational in Spanish