Wesley A. Beckner

Contact Information	Benson Hall Room B17 Dept. of Chemical Engineering University of Washington Seattle, WA 1750 USA	*Cell:* (817) 676-6617 *E-mail:* wab665@uw.edu *Website:* wesleybeckner.github.io

Education

University of Washington, Seattle, Washington USA

Ph.D. Candidate, Chemical Engineering, May 2019 (expected graduation date)
- Advisor: Jim Pfaendtner

University of Washington, Seattle, Washington USA

M.S., Chemical Engineering, December, 2016

University of Texas, Austin, Texas USA

B.S., Chemical Engineering, May, 2014

Honors and Awards

National Science Foundation Research Traineeship (NRT)	since 2016
Data Intensive Research Enabling Clean Technologies Trainee	2016-2018
National Science Foundation Graduate Research Fellowship Honorable Mention	2015
Chemical Engineering Endowment	2014
Achievement Rewards for College Scientists Fellow	2014-2016
Friends of Alec Scholar	2014
Undergraduate Research Fellowship	2013
Tracor/Frank W. McBee, Jr. Scholarship	2013

Academic Experience

University of Washington, Seattle, Washington USA

Graduate Student **September, 2014 - present**
Includes current Ph.D. research, Ph.D. and Masters level coursework and research/consulting projects.

Visiting Researcher **June 2016**
Assisted in the training of new graduate students to use molecular simulation engines in the research lab of Dr. Yi He at Zhejiang University, Hangzhou, China.

Study Abroad Teaching Assistant **June - July, 2016**
Co-taught unit operations labs for undergraduates from University of Wisconsin and University of Washington at Zhejiang University in Hangzhou, China. Emphasis on responsibility for heat and mass transfer workshops.

Instructor **July - August, 2015**
Co-taught programming course for data science incubator for social good at the UW eScience Institute. Shared responsibility for lectures, workshops, and homework assignments.

Publications

W. A. Beckner, Y. He, J. Pfaendtner, "Chain flexibility in self-assembled monolayers affects protein adsorption and surface hydration, a molecular dynamics study", *J. Phys. Chem. B.*, 2016, 120(40), 10423-10432. DOI: 10.1021/acs.jpcb.6b05882

W. A. Beckner, C. Mao, J. Pfaendtner, "Statistical models are able to predict ionic liquid viscosity

across a wide range of chemical functionalities and experimental conditions", *Mol. Syst. Des. Eng.*, 2018. DOI: 10.1039/C7ME00094D

PAPERS IN PREPARATION	K. Sakloth, **W. A. Beckner**, J. Pfaendtner, G. B. Goh, "IL-Net: Using expert knowledge to guide the design of furcated neural networks", arXiv preprint: 1809.05127
	L. Schmser, M. Trefz, S. Roeters, **W. A. Beckner**, J. Pfaendtner, S. Woutersen, M. Bonn, D. Schneider, T. Weidner, "Refining the X-ray crystal structure of aquaporin with Sum Frequency Generation spectroscopy"
CONFERENCE PRESENTATIONS & INVITED TALKS	**Beckner, W. A.**, Pythonic Package Development. Electrochemical Society Hackweek, Seattle, WA, 2018. link
	Beckner, W. A., Alamdari, S., Dawson, N., Climate Sentiment Analysis on Twitter Data. KPMG Lighthouse Group, Seattle, WA, 2018. link
	Beckner, W. A., Navigating Solvent Design with Statistical Models. Graduate Student Symposium, Seattle, WA, 2017. link
	Beckner, W. A., Application of High Performance Computing and Machine Learning to Accelerate Material Discovery for Energy Capture and Storage. American Institute of Chemical Engineers Conference, San Francisco, CA, 2016
	Beckner, W. A., Green Events: Engaging Students in Sustainable Practice Through On-Campus Event Planning. Smart and Sustainable Campus Conference, Baltimore, MA, 2014
	Beckner, W. A., Entzminger, K., and Maynard, J. A. Site-Directed Incorporation of Nitrophenylalanine to Study Antibody:Nitro Group Interaction. Rice University Regional Undergraduate Symposium, Houston, TX, 2013

PROFESSIONAL EXPERIENCE	**Campus Environmental Center**, Austin, Texas USA

Assistant Director   **August, 2012 - August, 2014**

- Co-founded a university-funded sustainability consultation service
- Provided network of campus resources to organization partners
- Executed and expanded campus sustainability initiatives
- Served as a student liaison between students and administrators
- Planned milestone "green" events including a record-breaking build-a-thon
- Participated in search committee to hire campus zero waste coordinator

SKILLS	- Languages: Python, Bash, JavaScript, HTML, SQL, Matlab, C#

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- Technologies: LaTeX, common Windows database, spreadsheet, and presentation software, Google Cloud Platform, Tensor Flow, Tableau, Flask
- Schedulers: Torque, Slurm
- Algorithms: GROMACS molecular dynamics engine
- Operating Systems: Unix/Linux, Windows, iOS.

CERTIFICATIONS	- Data Engineering on Google Cloud Platform Specialization (Coursera)

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  - Building Resilient Streaming Systems on Google Cloud Platform
  - Google Cloud Platform Big Data and Machine Learning Fundamentals
  - Leveraging Unstructured Data with Cloud Dataproc on Google Cloud Platform
  - Serverless Data Analysis with Google BigQuery and Cloud Dataflow

Serverless Machine Learning with Tensorflow on Google Cloud Platform

- Data Science Option (University of Washington)