


## Dallas Foster, CV

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CONTACT INFORMATION	Oregon State University Department of Mathematics	(801)828-5740 fostdall@oregonstate.edu <a href="http://www.dallasfostermath.com">http://www.dallasfostermath.com</a>   <a href="https://github.com/fostdall/">https://github.com/fostdall/</a>
RESEARCH INTERESTS	Uncertainty Quantification, Numerical Analysis, Scientific Computing, Multi-Scale Modeling, Inverse Problems.	
EDUCATION	<b>Department of Mathematics, Oregon State University</b> 2016-(2021) Ph.D. in Mathematics GPA: 3.85 Focus: Data Assimilation, Bayesian Inverse Problems  <b>Department of Mathematics, University of Utah</b> 2012-2016 B.S. in Mathematics Math GPA: 4.0 Focus: Inverse Problems in Atmospheric Science B.S. in Political Science Overall GPA: 3.93 Focus: Political Economy, Development, and Migration.	
APPOINTMENTS	<b>Graduate Research Assistant</b> 2019-Present Oregon State University , Corvallis, OR Data Assimilation techniques in hyperbolic regimes. Reference: Juan Restrepo restrepo@math.oregonstate.edu  <b>Graduate Research Assistant</b> 2018-2019 Los Alamos National Laboratory, Los Alamos, NM Perform Bayesian inference for large scale global climate statistics utilizing machine learning techniques. Reference: Nathan Urban (505) 665-7543  <b>Undergraduate Research Assistant</b> 2014-2016 University of Utah, Salt Lake City, UT Develop and implement models for Arctic Sea Ice. Reference: Kenneth M. Golden golden@math.utah.edu	
PUBLICATIONS	<b>D. Foster</b> , N. Urban, D. Comeau, Bayesian Approaches to Linear Inverse Modeling with Applications to Sea Surface Temperature Anomalies, Manuscript in preparation, 2019  <b>D. Foster</b> , C. Victor, B. Frost, J.M. Restrepo, Gradient Sensing via Cell Communication, Manuscript in preparation, 2018.  C. Strong, <b>D. Foster</b> , E. Cherkaev, I. Eisenman, K.M. Golden, On the definition and analysis of marginal ice zone width, <i>Journal of Atmospheric and Oceanic Technology</i> , Vol. 34, 2017.	

INVITED  
PRESENTATIONS

*Bayesian Inference in Linear Inverse Problems with Applications to Sea Surface Temperature Anomalies*, **D. Foster**, N. Urban, D. Comeau. 2019 Oregon State Graduate Appreciation. Poster

*Decadal Predictability of Global Sea Surface Temperature Anomalies*, **D. Foster**, N. Urban, D. Comeau. 2018 Oregon State Applied Math and Computation Seminar

*Gradient Sensing via Cell Communication*, **D. Foster**, B. Frost-LaPlante, C. Victor, J. Restrepo. 2017 SIAM Pacific Northwest Regional Conference.

*On the definition and analysis of marginal ice zone width: applying insights from analysis of eccentric annuli*, C. Strong, **D. Foster**, I. Eisenman, K.M. Golden. National Conference on Undergraduate Research (2016)

PROFESSIONAL  
AFFILIATIONS

**Society for Industrial and Applied Mathematics (SIAM)**

Member

2011-Present

**Oregon State University Chapter of SIAM**

Treasurer

2016-2018

Organized payments to speakers and vendors.  
Prepared end-of-year financial reports.

President

2018-Present

Organized Speaker visits.  
Created and implemented Python language training.

HONORS AND  
AWARDS

Presidential Scholarship, University of Utah

2012-2016

Provost Distinguished Scholarship, Oregon State University

2016-2017

ARCS (Achievement Rewards for College Scientists) Foundation Scholar

2016-2019

RELEVANT  
SKILLS

Programming 6 Years Experience with Python, MATLAB, Mathematica, R  
Languages

3 Years Experience with C, C++, Fortran, FEniCS (Finite Element)  
2 Years Experience with OpenMP, MPI, OpenCL, TensorFlow  
Misc. Software: Stan, Git, Docker, scikit-learn, Atom, Visual Studio

SELECTED  
COURSEWORK

- Real Analysis
- Complex Variables
- Linear Algebra
- Ordinary Differential Equations
- Partial Differential Equations
- Finite Element Analysis
- Computational Fluid Dynamics
- Numerical Analysis
- Numerical ODEs and PDEs
- Probability
- Computational Methods of Statistical Physics
- Mathematics and Climate
- Uncertainty Quantification
- Non-convex Optimization

TEACHING  
EXPERIENCE

**Graduate Teaching Assistant**

- Trigonometry
- Differential Calculus
- Integral Calculus
- Vector Calculus
- Differential Equations
- Linear Algebra

**Instructor**

- Integral Calculus