Stan Swierczek

Contact Information	stanleyswierczek@gmail.com
Citizenship	US
Research Interests	Ocean/Earth System Modeling, Numerical Analysis, Data Assimilation, Mathematical Modeling, Model Validation

Education

University of Arizona
Ph.D. Applied Mathematics — 2021 (expected)

University of Arizona
M.S. Applied Mathematics — 2018

Washington State University
M.S. Mathematics — 2016

University of Scranton
B.S. Mathematics — 2007

Skills — MATLAB, Python, MITgcm, Globus, Linux, git, LaTeX

Research

Investigating predictability of DIC and SST in the Argentine Basin through wind stress perturbation experiments. — 2020–2021
Advisors: J. Russell, Department of Geosciences, University of Arizona.
M. Mazloff, Climate, Atmospheric Science & Physical Oceanography, Scripps Institution of Oceanography.

Effect of resolution on heat and carbon transports in a regional ocean circulation model for the Argentine Basin. — 2018–2020
Advisors: J. Russell, Department of Geosciences, University of Arizona.
M. Mazloff, Climate, Atmospheric Science & Physical Oceanography, Scripps Institution of Oceanography.
M. Morzfeld, Geophysics, Scripps Institution of Oceanography.

Numerical inversion of Laplace transform. — 2017–2018
Advisor: M. Brio, Department of Mathematics, University of Arizona.

Inverse source problem for the wave equation in thermo-acoustic tomography. — 2016–2017
Advisor: L. Kunyansky, Department of Mathematics, University of Arizona.

Graduate Coursework — Earth System Modeling, Climate Dynamics, Fluid Mechanics, Data Assimilation, Numerical Analysis, Numerical Analysis of PDE, Methods of Applied Mathematics, Finite Elements, Time Series Analysis

WORKSHOPS	**ECCO Summer School** Consortium for Estimating the Circulation & Climate of the Ocean University of Washington	2019
	Math to Industry Boot Camp Institute for Mathematics and its Applications University of Minnesota	2016

PUBLICATIONS

Swierczek, S., Mazloff, M.R., & Russell, J.L. Investigating predictability of DIC and SST in the Argentine Basin through wind stress perturbation experiments. (in prep)

Swierczek, S., Mazloff, M.R., Morzfeld, M., & Russell, J.L. The effect of resolution on vertical heat and carbon transports in a regional ocean circulation model of the Argentine Basin. (submitted with revisions)

TALKS

The effect of resolution on vertical heat and carbon transports in a regional ocean circulation model of the Argentine Basin

AGU Fall Meeting 2020	December 2020
Comer Climate Conference 2020	October 2020
SOCCOM Modeling Telecon	May 2020
AGU Ocean Sciences Meeting 2020	February 2020

Assimilating float and mooring data to forecast carbon and heat fluxes in the Argentine Basin

SOCCOM Southern Ocean Meeting, Scripps Institution of Oceanography	March 2019

Error in Weeks' method for the numerical inverse Laplace transform

Research Tutorial Group Seminar, University of Arizona	December 2017

Fundamental ideas of mathematical tomography

Applied Math 1st Year Presentation, University of Arizona	December 2016

SEAGOING EXPERIENCE	**Assistant Deck Operations, R/V Sikuliaq** OOI Coastal Endurance Mooring Array Fall 2019 Deployment Washington/Oregon Coast	October 2019
TEACHING EXPERIENCE	**Teaching Assistant/Instructor** University of Arizona Washington State University	 2016–2018 2014–2016
OTHER EXPERIENCE	**Blasting Technician/Equipment Operator/** **Mine Laborer** Maurer & Scott, Tamaqua, PA & WESCO, Rillito, AZ	2005–2009, 2011–2012
HONORS AND AWARDS	Excellence in Teaching by a Graduate Student Award Washington State University College of Arts and Sciences	2016
PROFESSIONAL MEMBERSHIPS	American Geophysical Union Society for Industrial and Applied Mathematics American Mathematical Society	