Jason Turner

https://jasonlturner.github.io
jlturner5@wisc.edu | 413.242.4702

EDUCATION

UNIVERSITY OF WISCONSIN - MADISON | Ph.D. in Mathematics
Expected May 2023 | Madison, WI

UNION COLLEGE | B.Sc. in Mathematics and Physics
June 2018 | Schenectady, NY

PUBLICATIONS

`Turner, J. L., and Stechmann, S. N.`, Parallelizing a serial code: open–source module, EZ Parallel 1.0, and geophysics examples, Geoscientific Model Development Discussions, 2020 (2020), pp. 1–18. (Under Review.)

`Turner, J. L., and LaBrake, S.`, Elementary computational fluid dynamics using finite-difference mehtods, Union Digital Works Honors Theses, 1581 (2018), pp. 1–27.

`Turner, J. L., Johnson, B., and Gasparovic, E.`, Introduction to computational topology using simplicial persistent homology, Union Digital Works Honors Theses, 1660 (2018), pp. 1–129.

RESEARCH PROJECTS

MULTI-MODEL COMMUNICATION USING KALMAN FILTER-BASED STRATEGIES | University of Wisconsin - Madison Department of Mathematics
November 2019 - Present | Madison, WI

EZ PARALLEL: AN MPI FORTRAN LIBRARY FOR EASING FINITE DIFFERENCE / PSUEDO-SPECTRAL CODE PARALLELIZATION | University of Wisconsin - Madison Department of Mathematics
September 2018 - March 2020 | Madison, WI

`EZDFFTPACK`: A COLLECTION OF WRAPPERS FOR `DFFTPACK` | University of Wisconsin - Madison Department of Mathematics
August 2019 | Madison, WI

STATISTICAL ANALYSIS OF RICHTMYER-MESHKOV INSTABILITIES | Los Alamos National Labs
June 2018 - August 2018 | Los Alamos, NM

SIMULATION OF ELEMENTARY FLUID FLOWS | Union College Department of Physics
January 2018 - June 2018 | Schenectady, NY

PERSISTENT HOMOLOGICAL ANALYSIS OF BUCKYBALL® ARRANGEMENTS | Union College Department of Mathematics
September 2017 - March 2018 | Schenectady, NY

GENERALIZATIONS OF COLLATZ FUNCTIONS | CSU Channel Islands REU 2017
June 2017 - August 2017 | Camarillo, CA & Schenectady, NY

ACHIEVEMENTS AND FELLOWSHIPS

FELLOWSHIPS AND GRANTS

NERSC AY 2020 Exploratory Allocation Award 2020

Department of Energy Computational Science Graduate Fellowship 2019

AWARDS

University Housing's Honored Instructor Award 2019

George H. Catlin (1867) Prize 2018

Martin Terry Resch Prize 2018

Professor Frank Titus Memorial Prize in Physics 2018

SOCIETIES

Omicron Delta Kappa Honor Society 2017

Phi Beta Kappa Honor Society 2017

Pi Mu Epsilon Honor Society 2017

Sigma Pi Sigma Honor Society 2017

AFFILIATIONS

Department of Energy Computational Science Graduate Fellowship

University of Wisconsin-Madison Department of Mathematics

American Mathematical Society

TALKS, WORKSHOPS, AND POSTER PRESENTATIONS

Statistical Analysis of Richtmyer-Meshkov Instabilities .... Los Alamos 2018 Computational Physics Summer Workshop

Persistent Homology of BuckyBall® Configurations .... 2018 Union College Steinmetz Day

The Dynamics of Everyday Fluid Flows .... 2018 Union College Steinmetz Day

Integrating Fluid Dynamics into the Undergraduate Curriculum .... 2018 APS March Meeting

Generalizations of Collatz Functions .... Union College Undergraduate Math Seminar Series

Introduction to LaTeX: General Use and Resume Writing .... Winter 2018, Union College

Generalizations of Collatz Functions to Geometric Algebras .... 2017 APS New York State Sectional Autumn Meeting