Stefanie Klajbor-Goderich

EDUCATION

Ph.D. in Mathematics – 2020
University of Illinois at Urbana-Champaign
Dissertation title: *Equivariant Dynamics and Categories of Equivariant Vector Fields*
Dissertation advisor: Eugene Lerman

Bachelor of Science in Mathematics – 2013
University of Puerto Rico, Río Piedras Campus
Summa Cum Laude, GPA 4.00, Dean's List Scholarship
Most Distinguished Mathematics Student, Dr. Francisco Garriga Award

TEACHING EXPERIENCE

NetMath, Department of Mathematics, University of Illinois at Urbana-Champaign
Academic Hourly May 2020 – October 2021
Teaching and course development for synchronous and asynchronous undergraduate online math courses.

- Courses: Calculus I-III, Linear Algebra, Differential Equations, and Probability.
- Led active-learning online course discussions, developed materials, and provided actionable student feedback.
- Supervised teaching assistants and mentors for synchronous multivariable calculus courses.
- Helped revise and develop courses – including Calculus III, Category Theory, and more.
- Awarded *Fall 2020 Excellence in Online Teaching* award.

Department of Mathematics, University of Illinois at Urbana-Champaign
Teaching Assistant August 2014 – May 2020
Teaching assistant for active-learning math courses, including course development and TA supervision.

- Active-learning teaching for all courses in the Calculus sequence, with particular emphasis in multivariable calculus.
- Lectured, led active-learning activities, and developed course materials in Calculus I and III as part of the Math Merit Program.
- Served as *Head Teaching Assistant* for Calculus III – including supervision of teaching assistants and course content development.
- Consistently named to the *List of Teachers Ranked as Excellent* by students.

WORKSHOPS FACILITATED

PI4 Applied Linear Algebra Working Group
Workshop Lead May 2018

- Led workshop on advanced linear algebra for graduate students with applications in statistics and data analysis including regression, principal components analysis, and more.
- Designed materials for use in the workshop with support from National Science Foundation grant DMS 1345032 "MCTP: PI4: Program for Interdisciplinary and Industrial Internships at Illinois."

Illinois Geometry Lab Computational Workshop
Workshop Lead September 2017

- Created workshop introducing Python scientific computing for undergraduates working in research.
- Facilitated lectures and active-learning sessions with Jupyer notebooks on numpy, scipy, and matplotlib.

PI4 Computational Bootcamp on Data Science
Instructor May - June 2017

- Supervised and assisted with graduate student projects on complex data analysis and statistical learning.
- Facilitated project data management and version control.
- Joint with: David Le Bauer (Carl R Woese Institute for Genomic Biology and National Center for Supercomputing Applications) and Neal Davis (Department of Computer Science, UIUC)

PI4 Applied Linear Algebra Working Group
Workshop Lead May 2017

- Created workshop on advanced linear algebra for graduate students with applications in statistics and data analysis including regression, principal components analysis, and more.
- Designed materials for use in the workshop with support from National Science Foundation grant DMS 1345032 "MCTP: PI4: Program for Interdisciplinary and Industrial Internships at Illinois."

Illinois Geometry Lab Computational Workshop
Workshop Lead January 2017

- Created and led workshop on an introduction to Python scientific computing for undergraduates.
- Facilitated lectures and active-learning sessions with Jupyer notebooks on numpy, scipy, and matplotlib.

PI4 Computational Bootcamp on Numerical Computation
Teaching Assistant June 2016

- Assisted teaching workshops on numerical computation for graduate students.
- Helped develop Jupyter notebook workshop materials on programming and
- Workshop lead: Anil Hirani (Department of Mathematics, UIUC)

SUPERVISION OF STUDENT RESEARCH

Illinois Geometry Lab, Hamiltonian flows project **Urbana, IL**
Research mentor August 2017 – December 2017

- Served as graduate mentor for a team of four undergraduate students working on a research project in Hamiltonian geometric flows.
- Assisted student work in numerical simulations of partial differential equations using Python.
- Project lead: Professor Ely Kerman

Institute for Computational and Experimental Research in Mathematics (ICERM) **Providence, RI**
Research mentor, Computational Dynamics and Topology Summer at ICERM June 2015 – August 2015

- Advised interdisciplinary undergraduate research teams resulting in several successful applied mathematics research projects presented during the Summer at ICERM conference.
- Collaborated on numerical simulations which resulted in a numerical PDEs model of crowd dynamics.
- Program leads: Professors Vadim Zharnitsky, Yuliy Baryshnikov, and Maxim Arnold.

OTHER PROFESSIONAL EXPERIENCE

University of Illinois at Urbana-Champaign, Mathematics
Academic Advisor, Actuarial Science November 2021 – Present
Serving as academic advisor for around 200 actuarial science undergraduate students and collaborating in Actuarial Science Program administration.

- Provided individualized student academic advising in over 400 student advising meetings per year, developing 190 long-term completion plans, and maintained regular advising contact with students.
- Developed new ways to track and achieve student success - including student plan templates, ASRM student FAQs, degree requirement worksheets, and more.
- Led over 25 recruitment events for prospective students and families - including organizing student panels and developing new recruitment presentations.
- Assisted in the management of 10 Actuarial Science scholarships – including preparing and processing applications, coordinating faculty committees, and liaising with relevant departmental offices.
- Proposed and led a revision to the Actuarial Science major requirements in coordination with Actuarial Science faculty and the Mathematics Undergraduate Office.
- Led the reassessment of Actuarial Science learning goals to reflect curriculum changes and industry developments, in consultation with Actuarial Science faculty. This effort was part of the 2021-2022 Learning Outcomes Assessment report to the Office of the Provost and was recognized as "Exceeding Expectations" by the Provost.
- Assisted in coordinating course offerings for Actuarial Science every semester.
- Served as Staff Advisor for the Actuarial Science Club, coordinating student engagement in recruitment, student panels, and more.

PROGRAMMING LANGUAGES AND SOFTWARE

R – Proficiency in statistics and data science with R, including:
- Tidyverse framework for data science.
- Quarto and related markdown scientific publishing tools.

Python – Proficiency in its use for data analysis, data visualization, and scientific computation using libraries such as NumPy, SciPy, pandas, and sklearn. Experience with Jupyter notebooks.

Mathematica – Proficiency in its use for mathematical visualization and numerical computation.

LaTeX – Proficiency in its use for scientific document preparation and technical presentations.

Microsoft Office – Proficiency with Word, PowerPoint, and Excel, with significant experience using advanced spreadsheet tools and functions.

Git Version Control – Experience in its use for version control and software development collaboration.

Haskell – Basic proficiency in functional programming with Haskell.

LANGUAGES

- English (native fluency)
- Spanish (native fluency)

PUBLICATIONS

Klajbor-Goderich, Stefanie. *Equivariant Dynamics and Categories of Isomorphic Vector Fields*. 2020. University of Illinois at Urbana-Champaign, PhD dissertation. Illinois Library IDEALS Database https://hdl.handle.net/2142/107880

Klajbor-Goderich, Stefanie. *Nonlinear Stability of Relative Equilibria and Isomorphic Vector Fields*. 2018 SIGMA 14 (2018)**, 21,** 37 pages. https://doi.org/10.3842/SIGMA.2018.021