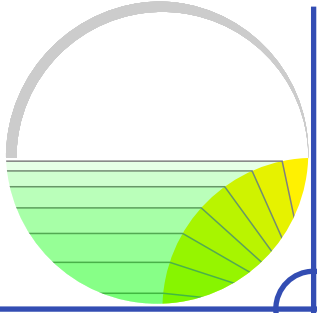

John R. Mahoney

I love to create, combine, and recontextualize.

PROGRAMMING

Python: np, sp, mpl, pd
GUI / interactive
git, LaTeX, beamer, tikz
ipython, Jupyter, VS Code
MATLAB
Mac OS, UNIX

INTERPERSONAL

Excellent listener
Flexible and creative
Work well in close-knit teams
Independent worker
Thoughtful mentor

PROJECTS

Python & Physics course
Burning Invariant Manifolds
CMPy contributor
Simpson's Paradox
timesquare
resumè template

INTERESTS

jazz saxophone and piano
soccer, tennis, and hiking
cooking delicious food!

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COMMUNICATION SKILLS

Written: Wrote and co-authored over 25 papers published in high quality journals (PRL, PRX, PRA, PRE, CHAOS, J. Stat Phys.). Edited multiple articles for colleagues. Read about: prediction, reacting fluids, quantum information.

Verbal: Designed and delivered over 35 talks and posters including: Quantum Info Workshop at Nanyang Technical University, Singapore; Conference on Complex Systems, Amsterdam; CHAOS15 at Henri Poincaré Institute, Paris; Oberwolfach, Germany (awarded "best poster");

Visual: Value aesthetic communication. Created scientifically advanced visual representation of reacting flow topology. Promoted and taught use of Venn diagrams for information theory. Often discover and appreciate connection between art and science. Look at: topology of reacting flows, info diagram, Poincaré art.

ANALYTIC SKILLS

Research: Connected my work on reacting fluids to existing fields: invariant manifolds, FT Lyapunov exponents, ARD equation, catastrophe theory, vehicle path planning, differential geometry.

Critical Thinking: Reframed an assumption in the literature to build a fruitful research avenue - *crypticity and cryptic order*.

Data: Created Python pipeline for data on diabetes patients: clean, process, analyze (multiple pair lagged regression), visualize.

WORK EXPERIENCE

Fall 2020 Math Specialist: UC Davis
Summer 2020 Course Designer and Instructor: UC Davis
Oct 2019 Math Lecturer: Napa Valley College
Spring 2019 Physics Lecturer: UC Davis
Fall 2018 Math Lecturer: CSU Maritime
2017-2018 Consultant: Dept. Biomedical Informatics, Columbia University
Fall 2017 Spring 2018, Math Lecturer: UC Davis
2015-2017 Project Scientist: UC Davis
2010-2015 Postdoctoral Scholar: UC Merced

EDUCATION

Ph.D. in Physics, UC Davis, advisor: James P. Crutchfield
B.S. in Physics and Mathematics, CSU Chico
attended Williams College for Physics, Mathematics and Music