Overview of Fellows’ Activity

Data Science Education Community of Practice
DSECOP Workshop

June 23, 2022

Mohammad Soltanieh-ha
Clinical Assistant Professor
Information Systems Department
Boston University

Faculty Expert, Google Cloud
Introduction

**Education:** Computational physics (Ph.D.), Northeastern University 2015

**Industry experience:** Data scientist, Infor 2015 - 2018

**APS Topical Group on Data Science (GDS):** Founding chair 2018-2021

**Teaching (MBA & MS)**
- Big data analytics for business
- Business Analytics Toolbox
- Introduction to Data Analytics

**Research**
- Computer vision applications in automating cancer diagnosis
- Macroeconomics time series forecasting
- High performance computing
DSECOP Fellows

Team: dsecop.org/team

Sebastian Atalla
Investigating the use of deep learning in denoising and reconstructing hyperpolarized xenon-129 MRI and xenon-enhanced CT
Email: atalla@unc.edu
Web: https://github.com/swatalla
Title: PhD Student
Affiliation: The University of North Carolina at Chapel Hill

Fatemeh Bagheri
Observations of exoplanets orbiting source stars in microlensing events and the direct detection of light reflection from exoplanets.
Email: bagheri.fatemeh@gmail.com
Web: DSECOP Fellows
Title: NSF Postdoc
Affiliation: The University of Texas at Arlington (UTA)

Julie Butler
Machine learning in many-body studies of the nucleus and related nuclear systems
Email: buttle222@msu.edu
Web: DSECOP Fellows
Title: PhD Student
Affiliation: Michigan State University

Cunwei Fan
Deep learning methods to analyze leptons from data produced by hadron collider and Monte Carlo simulation from CERN
Email: cfan11@illinois.edu
Web: DSECOP Fellows
Title: PhD Student
Affiliation: University of Illinois at Urbana

Radha Mastandrea
Trains neural networks to recognize the physical symmetries of particle collision events and use these symmetries for classification tasks.
Email: rmastand@berkeley.edu
Web: DSECOP Fellows
Title: PhD Student
Affiliation: UC Berkeley, Lawrence Berkeley National Laboratory

Karan Shah
Machine learning accelerated electronic structure simulations for matter under extreme conditions.
Email: k.shah@hzdr.de
Web: https://karan.sh
Title: PhD Student
Affiliation: Center for Advanced Systems Understanding, Helmholtz-Zentrum Dresden-Rossendorf, Görlitz, Germany
DSECOP: Data Science Education Community of Practice

Preparing students for multiple career paths by offering teaching materials to faculty members who teach undergraduate and graduate physics courses.

GitHub: bit.ly/DSECOP-GitHub

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- Intro to Deep Learning by Fatima Bagheri
- Learning the Schrodinger Equation by Karan Shah
- NMR Deep Learning by Sebastian Atalla
- Solving Differential Equations with NNs by Julie Butler
- Spectral Clustering by Cunwei Fan
Thank you!
Questions?