Anastasiya Salova

Google Scholar

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EDUCATION UC Davis, Davis, CA September 2015 to August 2021 (expected)

Ph.D. candidate in Physics

Passed qualifying exam March 2018, preliminary exam September 2016

GPA 3.80 out of 4.0

Yale University, New Haven, CT

September 2011 to May 2015

BS in Mathematics and Physics

Teaching EXPERIENCE

Teaching Assistant for General Physics

September 2015 to December 2016

(UC Davis Phys 7A, 7B, 7C)

Responsibilities included teaching the discussion and lab session, grading, attending weekly TA meetings, holding weekly office hours and a final review session.

Teaching Assistant for Network Theory

Spring Quarter 2018

(UC Davis ECS/MAE 253)

Responsibilities included holding office hours for students of different academic backgrounds, grading homeworks and exams, assisting with group projects.

Research EXPERIENCE

Visitor, IPAM Long Program

September-December 2019

Title: Machine Learning in Physics and the Physics of Learning

Institute for Pure and Applied Mathematics at UCLA

- Attended 5 week-long workshops on various topics
- Participated in working groups (coarse-graining in MD, dynamical systems, ML with constraints, model discovery)

Graduate Student Research Assistant

September 2016- present

UC Davis Physics Department

Advisor: Prof. Raissa D'Souza

- Nonlinear dynamics, symmetry breaking states, and control of collective behavior of nanoelectromechanical oscillators (NEMS) and other limit cycle oscillator networks
- Effect of symmetries in dynamical systems on the Koopman operator and its approximations
- Effective decoupling in networks of linearly coupled limit cycle oscillators

Graduate Student Research Assistant

Spring Quarter 2016

UC Davis Physics Department

Supervisor: Prof. Emilija Pantic

• Searching for dark matter particles via their collisions with argon nuclei

Undergraduate Thesis Research Project

May 2014 to May 2015

Yale University Physics Department Thesis Advisor: Prof. Daniel McKinsey

• Gamma Source Position Reconstruction for PIXeY Detector

Perspectives on Science and Engineering

April to July 2012

Summer Research

Yale University Physics Departament Supervisor: Prof. Jack Sandweiss

SCHOLARSHIPS

- Perspectives of Science and Engineering (PSE) Summer Research Scholarship, 2012
- Michele Dufault Endowment Fund for Yale Women in Science Scholarship, 2013-2014
- Andrew Serge Gagarin Scholarship, 2012-2014

Conference
PREENTATION

• Dynamics Days, Hartford, CT

• IPAM seminar series, Los Angeles, CA

• NetSci ISODS satellite meeting, Burlington, VT

• NetSci, Burlington, VT

• SIAM DS19, Snowbird, UT

• Dynamics Days, Evanston, IL

• APS Far West, Fullerton, CA

• SIAM AN20 (accepted)

January 2020

November 2019

May 2019

May 2019

May 2019

January 2019

October 2018

postponed, originally scheduled for July 2020

Conference Posters

• Dynamics Days, Evanston, IL

• Dynamics Days, Denver, CO

January 2019

January 2018

Summer Schools & Seminar SERIES

Santa Fe Institute Complexity Summer School

June to July 2018

- Attended lectures and participated in discussions on complex behavior in mathematical, physical, living, and social systems
- Participated in interdisciplinary group research projects (e.g., data-driven approaches to cardiac dynamics)

Understanding and Exploring Network Epidemiology in the Time of Coronavirus (Net-COVID) seminar series

April 2020

- Attended weekly seminars and discussion series
- Participated in a reading group on adaptive networks in epidemiology

Lake Como School "Complex Networks: cancelled, originally scheduled for May 2020 Theory, Methods and Applications" (6th edition)

• Accepted, did not attend due to cancellation

PUBLICATIONS

Published

- Matheny, M. H., Emenheiser, J., Fon, W., Chapman, A., Salova, A., Rohden, M., Li, J., Hudoba de Badyn, M., Posfai, M., Duenas-Osorio, L., Mesbahi, M., Crutchfield, J. P., Cross, M. C., D'Souza, R. M., and Roukes, M. L. (2019). Exotic states in a simple network of nanoelectromechanical oscillators. Science, 363(6431), eaav7932.
- Salova, A., Emenheiser, J., Rupe, A., Crutchfield, J. P., and D'Souza, R. M. (2019). Koopman operator and its approximations for systems with symmetries. Chaos: An Interdisciplinary Journal of Nonlinear Science, 29(9), 093128.

To be submitted

• Salova, A. and D'Souza, R. M. (2020). Decoupled synchronized states in networks of linearly coupled limit cycle oscillators. arXiv preprint arXiv:2006.06163.

In preparation

• Emenheiser, J., Salova, A., Snyder, J., Matheny, M. H., Fon, W., Li, J., Roukes, M.L, Crutchfield, J. P., and D'Souza, R. M. Dynamically decoupled synchronization in rings of nanoelectromechanical oscillators.

Journal Refereeing

Physical Review E, Nature Communications

SERVICE AND OUTREACH

- Volunteer at 2019 APS Conferences for Undergraduate Women in Physics (CUWiP) at UC Davis
- Member of the UC Davis Physics Diversity and Inclusion group

Public Talks

How stable is the solar system, Astronomy on Tap in Davis, 2019