

Research Collaboration Workshop, “Women in Data Science and Mathematics”

AUGUST 7 - 11, 2023

Scientific Overview

The third research collaboration workshop, “Women in Data Science and Mathematics”, WiSDM 2023, will be held on the UCLA campus during August 7-11, 2023. This workshop builds on successes from WiSDM 2017 and 2019.

Recent burgeoning of processing speed and sources of data have created a tremendous demand for mathematically-founded approaches to modeling data for exploration, understanding, and prediction. Relevant mathematical tools span the full discipline, from algebraic geometry used for existence and uniqueness proofs of low rank approximations for tensor data, to category theory used for natural language processing applications, to approximation and optimization frameworks developed for convergence and robustness guarantees for deep neural networks. These research problems are inherently interdisciplinary, requiring mathematics, computer science, and data domain expertise. Many of these problems also have immediate applications in industry and government. This one-week workshop consists primarily of time spent in small research groups actively working to solve problems in data science. Participants typically range from senior researchers to early graduate students, collaborating as equals and building relationships centered on shared research interests and complementary research skills. Our previous two workshops have produced follow-on sessions at national mathematics conferences and two volumes of early research results in the AWM-Springer series (2017 and 2019).

Participation

Additional information about this workshop including application information can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM’s mission, and we welcome their applications.

Organizers

Andrea Bertozzi (University of California, Los Angeles (UCLA)), **Kathryn Leonard** (Occidental College), **Deanna Needell** (University of California, Los Angeles (UCLA)), **Linda Ness** (Rutgers University)

Research Group Leaders

Karolyn Babalola, Andrea Bertozzi (University of California, Los Angeles (UCLA)), **Rapinchuk Ekaterina** (Michigan State University), **Cristina Cardona** (Los Alamos National Laboratory), **Anna Gilbert** (Yale University), **Christal Gordon, Jamie Haddock** (Harvey Mudd College), **Harlin Lee** (University of California, Los Angeles (UCLA)), **Anna Little** (University of Utah), **Yifei Lou** (University of Texas at Dallas), **Deanna Needell** (University of California, Los Angeles (UCLA)), **Rongrong Wang** (Michigan State University)

