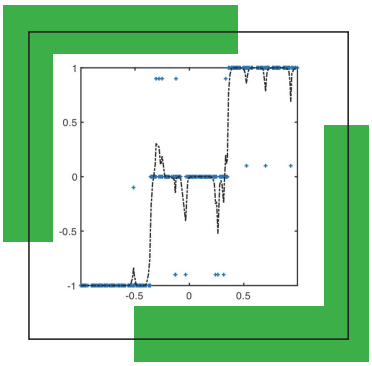
institute for pure & applied mathematics

PDE and Inverse Problem Methods in Machine Learning

April 20-24, 2020



Scientific Overview

Researchers in the areas of Partial Differential Equations and Inverse Problems have recently applied ideas from these fields to problems in Machine Learning. This workshop will bring together researchers with background in PDEs, Inverse Problems, and Scientific Computing who are already working in machine learning, along with researchers who are interested in these approaches.

This workshop will include a poster session; a request for posters will be sent to registered participants in advance of the workshop.

Long Program Schedule

This workshop is part of the long program on "High Dimensional Hamilton-Jacobi PDEs."

- Opening Day: March 9, 2020
- High Dimensional Hamilton-Jacobi PDEs Tutorials: March 10-13, 2020
- Workshop I: High Dimensional Hamilton-Jacobi Methods in Control and Differential Games: March 30-April 3, 2020
- **Workshop II: PDE and Inverse Problem Methods in Machine Learning: April 20-24, 2020**
- Workshop III: Mean Field Games and Applications: May 4-8, 2020
- Workshop IV: Stochastic Analysis Related to Hamilton-Jacobi PDEs: May 18-22, 2020
- Culminating Workshop at Lake Arrowhead: June 7-12, 2020

Participation

Additional information about this workshop including links to register and to apply for funding, 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

Adam Oberman (McGill University), Lorenzo Rosasco (Universita' degli Studi di Genova), Dejan Slepcev (Carnegie Mellon University), Andrew Stuart (California Institute of Technology), and Yunan Yang (New York University).

Speakers

Mikhail Belkin (OSU), Jeff Calder (University of Minnesota, Twin Cities), Pratik Chaudhari (Amazon), Nicolas Garcia Trillos (University of Wisconsin-Madison), Tom Goldstein (University of Maryland), Remi Gribonval (INRIA), Quanquan Gu (UCLA, Computer Science), Eldad Haber (UBC), Michael Jordan (UC Berkeley, Computer Science Division and Department of Statistics), Matti Lassas (University of Helsinki), Jianfeng Lu (Duke University, Mathematics), Hossein Mobahi (Google AI), Max Raginsky (University of Illinois at Urbana-Champaign), Stefano Soatto (UCLA), Silvia Villa (ITT), Irène Waldspurger (Paris-Dauphine), Rebecca Willett (University of Chicago), and Anthony Yezzi (Georgia Tech, ECE).

NSF UCLA

For more information, visit the program webpage:

www.ipam.ucla.edu/hjws2