



Deep Fakery: Mathematical, Cryptographic, Social, and Legal Perspectives

November 15 - 16, 2019

ORGANIZING COMMITTEE: Jacob Foster (UCLA), Mark Green (UCLA), and Alicia Solow-Niederman (UCLA).

Scientific Overview

The authentication of information lies at the core of our legal system, our democracy, and many other aspects of our society. Is a photograph real, or has it been doctored? What about a video? Can we believe what we see? When the apparent authenticity of a piece of information can too easily be cast into doubt—and there is no accepted means to verify its provenance and reliability—we face a society-wide crisis. Coupled with the erosion of trusted sources, and fueled by current developments in machine learning, the proliferation of automated methods for fabricating information (so-called “deep fakes”) represent a new stage in the “arms race for truth.” Indeed, one of the most significant unintended consequences of AI advances may be their use as a powerful weapon in this struggle. Escaping the arms race dynamic will require the development and deployment of technical, social, and legal countermeasures. What should those countermeasures be? And who should deploy them? Our workshop aims to explore such questions.

This workshop will bring together people with a diverse set of expertise to untangle the mathematical, computer science, sociological, legal, and policy issues and begin to craft practical interventions.

Confirmed Speakers

David Chu (Institute for Defense Analyses), **Kristen Eichensehr** (UCLA), **Tim Hwang** (Harvard), **Kristin Lauter** (Microsoft Research), **Kristina Lerman** (USC), **Filippo Menczer** (Indiana University), **Cailin O'Connor** (UC Irvine), **Stanley Osher** (UCLA), **Rafail Ostrovsky** (UCLA), **Mason Porter** (UCLA), **Lars Ruthotto** (Emory University), **Amit Sahai** (UCLA), **Jose Sotelo** (University of Montreal) and **Rebecca Wexler** (Yale).

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.

www.ipam.ucla.edu/ef2019

