UF UNIVERSITY of FLORIDA

CENTER FOR APPLIED OPTIMIZATION

Founded in 1992, the **Center for Applied Optimization (CAO) at the University of Florida** is an interdisciplinary center that promotes collaborative research and applied projects among faculty from engineering, mathematics, and business. Faculty affiliates include members from Industrial and Systems Engineering, Civil Engineering, Aerospace Engineering, Mechanics and Engineering Science, Electrical Engineering, Computer and Information Sciences, Chemical Engineering, Mathematics, and Decision and Information Sciences. The CAO promotes awareness of the growing field of optimization through publications, conferences, collaborative research, and researcher and student exchange programs.

OUR MISSION

To advance theoretical research and develop algorithms for optimization, focusing on continuous, discrete, combinatorial, stochastic, and infinite-dimensional optimization, as well as optimal control.

To integrate optimization techniques with diverse domains, such as artificial intelligence, data science, energy, health, medicine, social networks, environmental planning, and transportation.

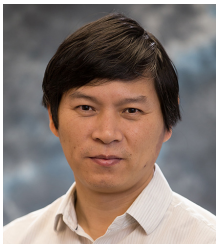
To foster collaboration with researchers at other universities and organizations through student exchange programs. Since its inception, the CAO has hosted visiting scholars from around the world.

DID YOU KNOW

The University of Florida is home to HiPerGator, one of the most powerful high-performance computers at a US public university. UF also recently added the new AI NVIDIA GPU SuperPod.

ise.ufl.edu/cao

CORE FACULTY

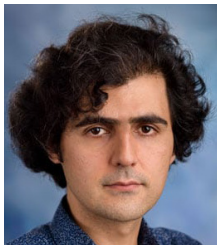


- Stochastic and discrete optimization
- Energy systems
- Healthcare operations
- Supply chain management

Yongpei Guan, Ph.D.
Co-Director

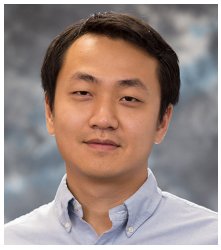
- Numerical Analysis
- Optimization
- Optimal Control
- Lightning

William Hager, Ph.D.
Co-Director



- Quantitative finance
- Stochastic systems
- Complex networks
- Game theory
- Machine learning
- Financial technology
- Risk management
- Systemic risk
- Financial regulation
- Epidemic control

Hamed Amini, Ph.D.
Associate Director



- High-dimensional stochastic optimization
- Statistical/machine learning
- Algorithms
- Medical decision-making
- Traffic operations

Hongcheng Liu, Ph.D.
Associate Director

- Network optimization
- Combinatorial optimization
- Integer programming
- Interdiction games
- Operations research applied to environmental/ urban planning, public policy, and service systems

Jorge A. Sefair, Ph.D.
Associate Director

- Discrete optimization and computational economics, with prior work focusing on cutting plane algorithms, theory of fair allocation of scarce resources, and fair mechanism design for healthcare, humanitarian, and sports analytics.

Aleksandr Kazachkov, Ph.D.
Assistant Director

- Network science
- Data analytics
- Machine learning
- Business Insights from big data
- Machine learning for text analytics
- Healthcare data analytics
- Optimization in communication and social networks

Alexander Semenov, Ph.D.
Assistant Director

- Integer programming
- Continuous optimization theory
- Learning to optimize
- Supply chain
- Logistics
- Radiation therapy

Yu Yang, Ph.D.
Assistant Director