Faculty Name:

John Wright

Faculty Email:

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Lab:

Wright Group

Project Title:

Manifold Denoising with Learned Optimization

Description:

Students will implement models for fast denoising of high-dimensional data using learned Riemannian optimization, and apply these models to signal reconstruction (compressed sensing) and signal generation (diffusion models). Project will be a mix of mathematical modeling, implementation (python), and experimentation with data from imaging, computer vision and materials. This project builds on recent results on fast signal detection using unrolled optimization, which yields neural networks with significantly improved performance-accuracy tradeoffs compared to both classical approaches and generic machine learning architectures.

Location of Research:

On Site

# of hrs/week:

20

Department/Program:

Electrical Engineering

Eligibility:

BS, First Year, BS, Second Year, BS, Third Year, BS, Fourth Year, MS

To apply, please contact:

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