SEN WANG

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EDUCATION

Georgia Institute of Technology, Atlanta, U.S.   *Aug 2018 - Present*
Master of Science in Electrical and Computer Engineering   GPA: 3.85/4.0

Northeastern University, Shenyang, China   *Sept 2014 - June 2018*
Bachelor of Automation, "LangShijun" Automation Experimental Class   GPA: 3.99/5 (A=4.5)

RESEARCH

Robot Calligraphy (M.S.Thesis, advisor: Frank Dellaert)   *Jan 2019 - Present*

- Formulate the problem as a trajectory optimization problem and define the objective function
- Design three virtual brush models to simulate the behavior of true brushes
- Learn and apply psuedo-spectral methods, factor graph and other nonlinear optimization methods to solve the problem
- Program in C++ and Python to implement the whole calligraphy writing system on Fetch robot

Non-Intrusive Load Monitoring (Advisor: Dongsheng Yang)   *Nov 2015 - May 2017*

- Propose a new way to extract features of non-regular electronics power consumption based on stage division and kernel density estimation
- Build a smart meter system with proposed algorithm that can be directly applied to regular houses

Computer Vision Projects

- Serve as **Teaching Assistant** for CS6476 Computer Vision at Georgia Tech (Fall, 2020)
- Propose one algorithm for fast multi-person **action recognition** based on deep learning in undergraduate thesis; By applying human detection to only sampled frames, the algorithm achieves 4.23 times speed up comparing with baseline algorithms with similar performance; (June, 2018)
- Implement a **visual odometry** system according to SOFT-SLAM, learn about basis of visual SLAM, graph optimization and sparsity (Fall, 2019)
- Learn about GPU scheduling in modern operating system

PUBLICATION

1 **Sen Wang**, Dongsheng Yang, Chuchen Guo,Shengxian Du, Non-intrusive Load Disaggregation Based on Kernel Density Estimation. Asia Conference on Power and Electrical Engineering, in ACPEE, 2017

2 **S. Wang** , J. Chen, X. Deng, S. Hutchinson, F. Dellaert, "Robot Calligraphy using Pseudospectral Optimal Controlin Conjunction with a Simulated Brush Model", in IROS 2020.

TECHNICAL STRENGTHS & INTERESTS

Robotics	Motion Planning, SLAM (GTSAM), ROS, **Fetch, Franka**
Computer Vision	Visual Odometry, Action Recognition, Deep/Machine Learning
Control	Optimal control, trajectory optimization, linear control
Programming	**C++**, Python, Swift, Matlab