WENYU HAN, PHD

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RESEARCH EXPERIENCE

AI4CE Laboratory **New York University, Brooklyn NY**
CVPR Project: SPARE3D: A Dataset for SPAtial REasoning on Three-View Line Drawings *Sept 2019 to April 2020*
- Responsible for data generation script and designing experiments using Pytorch
- Managed a undergraduate student for several sub-tasks
- This project led to an CVPR paper in 2020

Mechanical Engineering Department, Integrated DEsign Automation Laboratory **Northwestern University, Evanston IL**
Graduate Research: Deep Adversarial Neural Network for Material Microstructure Design *Dec 2017 to June 2019*
- Built DCGAN, WGAN and WGAN-GP models on TensorFlow
- Modified a descriptor-based method for generating microstructure dataset
- Trained WGAN-GP model on microstructure dataset
- Applied Gaussian-Process Meta-model and Bayesian optimization method for microstructure design

Engineering Mechanics Department **Dalian University of Technology, Dalian, China**
Undergraduate Research: Mechanical Properties and the Establishment of Constitutive Model of PEEK *Oct 2015 to June 2016*
- Tested mechanical properties of PEEK materials under different strain rates and temperatures
- Described stress-strain properties of PEEK materials through DSGZ constitutive model
- Applied regression method to determine unknown parameters in DSGZ model via MATLAB

EDUCATION

- PhD, Mechanical Engineering, New York University, 2019-now
- MS, Mechanical Engineering, Northwestern University, 2017-2019
- BS, Engineering Mechanics, Dalian University of Technology, 2012-2016

TEACHING AND MENTORING EXPERIENCE

- 2020 - Graduate Teaching Assistant for Machine Learning Course
- 2019 - Grader for Heat Transfer Course

AWARDS

Dean's PhD Fellowship in the Department of MAE at the NYU Tandon School of Engineering **2019**
Outstanding Graduate Student of DUT (Rank 9/71) **2016**
2nd Class Academic Excellence Scholarship of DUT **2013-2014**
"Liheng" Scholarship for Engineering Mechanics Major Students **2013-2014**

PUBLICATIONS

- Han, W., Xiang, S., Liu, C., Wang, R., Feng, C. (2020). SPARE3D: A Dataset for SPAtial REasoning on Three-View Line Drawings. In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (pp. 14690-14699).

RESEARCH INTERESTS

- Deep learning and Machine learning with their application in robotics and CV
- Deep reinforcement learning
- Development of simulation method

SKILLS

Languages python, C and MATLAB
Software ANSYS, AutoCAD, Office Software
Programming library Pytorch