HAOZHU WANG

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RESEARCH INTERESTS

Reinforcement learning, computer vision, scientific machine learning.

EDUCATION

University of Michigan   Sep 2016 - Now
Ann Arbor, MI

· Ph.D. in Electrical and Computer Engineering (machine learning). GPA: 3.94/4.00.

Nankai University and Tianjin University   Sep 2011 - July 2015
Tianjin, China

· B.Eng in Optoelectronics. GPA: 3.92/4.00 (2/65).

PUBLICATIONS

Machine Learning Publications:

Haozhu Wang, Zeyu Zheng, Chengang Ji, L. Jay Guo. Automated Design of Optical Multi-Layer Films with Deep Reinforcement Learning. (Submitted to *Reinforcement Learning for Real Life*, 2020)

Jiaxuan Wang, **Haozhu Wang**, Fahad Kamran, Jenna Wiens. Exploiting Spatial and Temporal Invariances when Mining Player Tracking Data in Basketball. (Under review)

Haozhu Wang, Jeeheh Oh, Jenna Wiens. Targeting Interventions: Improving Estimates for Individual Treatment Effects by Explicitly Modeling Intermediate Events. (Under review)

Erkin Otles, **Haozhu Wang**, Suyanpeng Zhang, Brian Denton, Jon Seymour, Jenna Wiens. Return to Work After Injury: A Sequential Prediction & Prescription Problem. *Machine Learning for Healthcare (Clinical Abstract)*, 2019.

(Co-first author) Dejiao Zhang*, **Haozhu Wang***, Mario A.T.Figueiredo, Laura Balzano. Learning to Share: Simultaneous Parameter Tying and Sparsification in Deep Learning, *International Conference on Learning Representations* (ICLR), 2018.

Jiaxuan Wang, Jeeheh Oh, **Haozhu Wang**, Jenna Wiens. Learning Credible Models. *Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. ACM*, 2018.

Scientific Publications:

Zhao, Qing-Yuan, Di Zhu, Niccol Calandri, Andrew E. Dane, Adam N. McCaughan, Francesco Bellei, **Hao-Zhu Wang**, Daniel F. Santavicca, and Karl K. Berggren. Single-photon Imager Based on a Superconducting Nanowire Delay Dine. *Nature Photonics* 11, no. 4 (2017): 247-251.

Wenqi Zhu, Ting Xu, **Haozhu Wang**, Cheng Zhang, Agrawal Amit, Deotare Parag, Henri Lezec. Surface-Plasmon-Polariton Laser based on a Metallic Trench Fabry-Perot Resonator, *Science Advances* (2017).

Che-Hsuan Cheng, **Haozhu Wang**, Zidong Li, Parag Deotare. Highly Sensitive Photodetectors Based on Inorganic and Organic Heterostructure, submitted to *IEEE Photonic Conference* (2017).

Wang Haozhu, Yang Fenghe, Yang Fan, Nie Meitong, Yang Jianjun. Investigation of Femtosecond-Laser Induced Periodic Surface Structure on Molybdenum. *Chinese Journal of Lasers*, 42(1), 0103001 (2015).

TEACHING

Graduate student instructor   Jan 2020 - May 2020
EECS 504 Computer Vision (about 120 students)

· Gave a lecture on optimization and backpropagtion.
· Designed homeworks on signal procesing, scene recognition, and representation learning, etc.
· Mentored students on final projects.

Graduate student instructor   Sep 2017 - Dec 2017
EECS 545 Machine Learning (about 140 students)

· Designed homeworks and held weekly office hours.
· Gave a Python and Jupyter Notebook tutorial.

AWARDS

Rackham Graduate Research Grant ($3000), University of Michigan, 2020

Rackham Graduate Travel Grant ($1200), University of Michigan, 2018

Outstanding Graduate Award, Tianjin University, 2015

National Scholarship, Chinese Ministry of Education, 2014

Kitano Foundation of Lifelong Integrated Education Scholarship, Nankai University, 2013

Grand Prize of Physics Competition for College Students, Tianjin, 2013

First Tier Scholarship, Nankai University, 2012

Outstanding High School Students, Sichuan Provincial Department of Education, China, 2011

National First Prize in Applied Physics Competition for Middle School Students, Chinese Ministry of Education, 2008

MENTORING

Exposure Risk Scoring for COVID-19   Summer 2020
· Mentor 14 master and undergraduate students from University of Michigan and Zhejiang University.
· Lead students to build a COVID-19 exposure risk scoring system based on spatial-temporal modeling.

Deep Visual Domain Adaptation   Summer 2020
· Mentor 1 master and 2 undergraduate students from University of Michigan.
· CT and X-ray domain adaptation.

REVIEWING SERVICE

Reviewer for: NeurIPS 2020, MLHC (Machine Learning for Healthcare) 2018 2019 2020, AMIA 2020
Subreviwer for: KDD 2019 2018, NeurIPS 2018

SKILLS

Programming Languages: Python, C++, Java, Matlab, Julia, R

Deep Learning Frameworks: Pytorch, Tensorflow, Keras

Others: Linux, Bash, SQL, Google Cloud Platform