PEILUN DAI

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EDUCATION

Boston University, Boston, MA, USA   9/2018 - Present
PhD Candidate in Computer Science
Advisor: Prof. Sang "Peter" Chin
Department of Computer Science & Graduate School of Arts and Sciences

Massachusetts Institute of Technology, Cambridge, MA, USA   9/2015 - 9/2018
Master of Science in Brain and Cognitive Sciences
Advisor: Prof. Edward S. Boyden
Department of Brain and Cognitive Sciences

Nanyang Technological University, Singapore   9/2010 - 5/2014
Bachelor of Engineering (1st Class Hons) in Electrical and Electronic Engineering
Final Year Project supervisor: Prof. Gang Wang
School of Electrical and Electronic Engineering

WORK

Boston University, Boston, MA, USA   2/2019 - 7/2020
Teaching Fellow, Graduate School of Arts & Sciences

Teaching undergraduate course in data structures using Java, and graduate courses in machine learning, compressed sensing and game theory

MIT Media Lab, Cambridge, MA, USA   9/2016 - 9/2018
Graduate Research Assistant, Synthetic Neurobiology Group

Optical connectomics theory, zebrafish behavior

Institute for Infocomm Research, Singapore   8/2014 - 7/2015
Research Engineer

Project title: "Reverse Engineering Visual Intelligence for cognitiVe, Enhancement (REVIVE)"

Advanced Digital Sciences Center, Singapore   5/2013 - 8/2013
Research Internship

Project title: "Object detection in videos with supervoxel segmentation and CRF"

Panasonic R&D Center Singapore, Singapore   9/2012 - 12/2012
Industrial Attachment Program

Project title: "Registration of low-resolution depth images with high-resolution RGB images"

Singapore-MIT Alliance for Research and Technology, Singapore   5/2011 - 8/2011
Undergraduate Research Fellowship Program

Project title: "Situation reactive traffic-light control of multi-junctions"

TRAINING

Gaussian Process and Uncertainty Quantification Summer School 2020   9/2020

2020 Intelligent Sensing Summer School 9/2020

2020 Telluride Neuromorphic Workshop 8/2020

AI Summer School 2020 by AI Singapore 8/2020

2020 International Conference on Mathematical Neuroscience 7/2020

MIT Brain, Minds and Machines Summer Course, Woods Hole, MA, USA 8/2015

IEEE SPS Winter School on Visual Image Search and Visual Analytics, Singapore 12/2014

HONORS AND AWARDS

Dean's Fellowship, Graduate School of Arts and Sciences, Boston University 2018-2019

National Science Scholarship, Agency for Science, Technology and Research, Singapore 2015

SM3 Scholarship for Undergraduate Study in Singapore, Ministry of Education, Singapore 2010

VOLUNTEERING AND SERVICES

The Thirty-Seventh International Conference on Machine Learning (ICML) 7/2020
Volunteer

The Eighth International Conference on Learning Representations (ICLR) 4/2020
Volunteer

TEACHING

CS 655 Graduate Computer Networking Fall 2020
Grader

CS 542 Machine Learning Summer 2020
Teaching Fellow

CS 112 Introduction to Computer Science II Spring 2020
Teaching Fellow

CS 591 C1 Computational Game Theory Spring 2020
Grader

CS 112 Introduction to Computer Science II Fall 2019
Teaching Fellow

CS 591 C1 Compressive Sensing and Sparse Recovery Fall 2019
Grader

CS 542 Machine Learning Spring 2019
Teaching Fellow and Grader

9.012 Cognitive Science Fall 2017
Teaching Assistant

9.40 Introduction to Neural Computation Spring 2017
Teaching Assistant

PUBLICATIONS

[1] Young-Gyu Yoon, Zeguan Wang, Nikita Pak, Demian Park, Peilun Dai, Jeong Seuk Kang, Ho-Jun Suk, Panagiotis Symvoulidis, Burcu Guner-Ataman, Kai Wang, and Edward S. Boyden. Sparse decomposition light-field microscopy for high speed imaging of neuronal activity. *Optica*, 7(10):1457–1468, Oct 2020.

[2] Young-Gyu Yoon, Peilun Dai, Jeremy Wohlwend, Jae-Byum Chang, Adam H Marblestone, and Edward S Boyden. Feasibility of 3d reconstruction of neural morphology using expansion microscopy and barcode-guided agglomeration. *Frontiers in computational neuroscience*, 11:97, 2017.

[3] Keng-Teck Ma, Liyuan Li, Peilun Dai, Joo-Hwee Lim, Chengyao Shen, and Qi Zhao. Multi-layer linear model for top-down modulation of visual attention in natural egocentric vision. In *Image Processing (ICIP), 2017 IEEE International Conference on*, pages 3470–3474. IEEE, 2017.

[4] Bappaditya Mandal, Rosary Yuting Lim, Peilun Dai, Mona Ragab Sayed, Liyuan Li, and Joo Hwee Lim. Trends in machine and human face recognition. In *Advances in Face Detection and Facial Image Analysis*, pages 145–187. Springer, Cham, 2016.