



TEXAS A&M
Institute of
Data Science

Texas A&M Institute of Data Science Seminar Series

Image and Graph Deep Learning Methods for Cellular and Molecular Level Science Discoveries



Deep learning has achieved remarkable success on computer vision and natural language tasks. These successes are gradually extending to scientific fields, enabling scientists to make measurements and observations that were previously unobtainable. In this talk, the speaker will present their work on developing novel and advanced deep learning methods on images and graphs. In the image domain, the speaker will show how their methods can be used to perform augmented microscopy in which low-resolution microscopic images are transformed into high-resolution ones. In the graph domain, the speaker will demonstrate how graph neural networks can be used for molecular property prediction and drug discovery. Part of the talk is recently published in Nature Machine Intelligence.

Shuiwang Ji, Ph.D.

Associate Professor
Department of Computer Science &
Engineering
Texas A&M University

Date: Friday, March 12, 2021

Time: 1:00 – 2:00 p.m. US Central Time

Zoom Meeting ID: 998 4499 3279

Passcode: 724615

Faculty host: Yu Ding, TAMIDS

Biography

Dr. Shuiwang Ji is an Associate Professor in the Department of Computer Science & Engineering, Texas A&M University, leading the Data Integration, Visualization, and Exploration (DIVE) Laboratory. He received the Ph.D. degree in Computer Science from Arizona State University in 2010. His research interests include machine learning, deep learning, data mining, and computational biology. Dr. Ji serves as an Associate Editor for IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), ACM Transactions on Knowledge Discovery from Data (TKDD), and ACM Computing Surveys (CSUR). He regularly serves as an Area Chair or equivalent for AAAI Conference on Artificial Intelligence (AAAI), International Conference on Learning Representations (ICLR), International Conference on Machine Learning (ICML), International Joint Conference on Artificial Intelligence (IJCAI), ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), and Annual Conference on Neural Information Processing Systems (NeurIPS). Dr. Ji is a 2014 NSF CAREER Awardee, a Distinguished Member of ACM, and a Senior Member of IEEE.

You can also click this link to join the seminar <https://tamu.zoom.us/j/99844993279?pwd=TkJodWFVRURyMmkwakl4SWZGeVJTQT09>



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For more information about TAMIDS seminar series, please contact Ms. Jennifer South at jsouth@tamu.edu