Xin Huang

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Education

- **Ph.D., Computer Science (GPA 4.0)** Aug. 2021 – present
  - Texas State University, San Marcos, TX
- **Ph.D., Computer Engineering (GPA 4.0)** May 2018 – July 2021
  - Florida Institute of Technology, Melbourne, FL
  - Transferred to Texas State University with the advisor
- **M.S., Electrical Engineering (GPA 3.85)** May 2016 – Dec. 2017
  - Florida Institute of Technology, Melbourne, FL
- **B.E., Electronic Science and Technology** Sept. 2011 – June 2015
  - South China University of Technology, Guangzhou, China

Work Experience

- **Research Assistant, Texas State University, San Marcos, TX** Aug. 2021 – Present
- **Software Intern – NVGraph, NVIDIA Corporation** Feb. 2021 – July 2021
- **Research Assistant, Florida Institute of Technology, Melbourne, FL** Aug. 2018 – Dec. 2020

Publications

- **CAT-GNN: Cost-Efficient and Scalable Distributed Training for Graph Neural Networks**.
  - **X. Huang**, W. Zhuo, M.P. Vuong, S. Li, J. Kim, B. Rees, C.-H. Lee.
  - Under Review.
- **I/O-signature-based feature analysis and classification of high-performance computing applications**.
  - J.-W. Park, **X. Huang**, J.-K. Lee, T. Hong.
  - Cluster Computing, Sept. 2023.
- **Analyzing and predicting job failures from HPC system log**.
  - J.-W. Park, **X. Huang**, C.-H. Lee.
  - The Journal of Supercomputing, June 2023.
- **Controlling Epidemic Spread Under Immunization Delay Constraints**.
  - S. Li, **X. Huang**, C.-H. Lee.
  - IFIP Networking Conference, June 2023.

- Acceptance Rate: 25%

- **Characterizing the Efficiency of Graph Neural Network Frameworks with a Magnifying Glass**.
  - **X. Huang**, J. Kim, B. Rees, C.-H. Lee.
  - IEEE International Symposium on Workload Characterization (IISWC), Nov. 2022.

- **An Efficient and Scalable Algorithm for Estimating Kemeny's Constant of a Markov Chain on Large Graphs**.
  - S. Li*, **X. Huang***, C.-H. Lee.
  - ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Aug. 2021.
  - Acceptance Rate: 15%

- **Estimating Distributions of Large Graphs from Incomplete Sampled Data.**
  - S. Li, **X. Huang**, C.-H. Lee.
  - IFIP Networking Conference, June 2021.
  - Acceptance Rate: 25%

- **CrowdQuake: A Networked System of Low-Cost Sensors for Earthquake Detection via Deep Learning.**
  - **X. Huang***, J. Lee*, Y.-W. Kwon, C.-H. Lee.
  - ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), Aug. 2020.
  - Acceptance Rate: 16%

***Equal contribution**

Presentations

- **Characterizing the Efficiency of Graph Neural Network Frameworks with a Magnifying Glass** Nov. 2022
  - IEEE IISWC 2022, Austin, TX

- **An Efficient and Scalable Algorithm for Estimating Kemeny's Constant of a Markov Chain on Large Graphs** Aug. 2021
  - ACM KDD 2021, Virtual Conference

- **CrowdQuake: A Networked System of Low-Cost Sensors for Earthquake Detection via Deep Learning** Aug. 2020
  - ACM KDD 2020, Virtual Conference

- **Deep Learning for Earthquake Detection using Low-Cost MEMS Sensors** Sept. 2019
  - Kyungpook National University, Daegu, South Korea
  - 4th International Conference on Earthquake Early Warning, Seoul, South Korea

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Awards

- **2023 TXST CS Research Excellence Award** Apr. 2023

- **2022 TXST CS Graduate Academic Excellence Award** Apr. 2022

- **ACM KDD 2020 Student Travel Award** Aug. 2020
- **Doctoral Graduate Research Assistant Tuition Scholarship** Aug. 2018 – Dec. 2020

Skills

- **Programming**
  - Python, C/C++, CUDA Programming, Shell, MATLAB, R
- **Data Mining & Machine Learning**
  - Feature Engineering, Supervised/Unsupervised Learning, Classification, Regression, Clustering, Anomaly Detection, Deep Learning, Interpretability, Time Series Analysis, Federated Learning
- **Network Analysis & Graph Mining**
  - Graph Neural Networks, Graph Properties, PageRank, Monte Carlo Methods, MCMC
- **Software & Libraries**
  - Scikit-learn, PyTorch , TensorFlow, DGL, PyG, Numba, Microsoft Office, LaTeX, Git, Markdown
- **Operating System**
  - Linux, Windows, MacOS
- **Soft Skills**
  - Adaptability, Quick Learner, Confidence, Self-Management, Strong Work Ethic