

HANSHENG XUE

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The National University of Singapore, COM2-04-04, 13 Computing Drive, Singapore 117417

EDUCATION

The Australian National University <i>Ph.D. in Computer Science</i> Supervisor: Yu Lin, Vaibhav Rajan (NUS), and Lexing Xie. Thesis: Graph Representation Learning for Structured Data and Genomic Analysis.	Canberra, Australia Sep. 2019 - Jul. 2024
Harbin Institute of Technology <i>M.Eng. in Computer Technology</i>	Shenzhen, China Sep. 2015 - Jan. 2018
Nanjing Tech University <i>B.M. in E-Commerce</i>	Nanjing, China Sep. 2011 - Jun. 2015

RESEARCH AND INDUSTRY EXPERIENCE

Research Assistant, School of Computing, National University of Singapore, Singapore.	Nov. 2023 - Jul. 2024
Research Intern, Alibaba Group, Hangzhou, China.	May 2020 - Feb. 2021

SELECTED PUBLICATIONS

(†: Co-first author, *: Corresponding author.) [Google Scholar, DBLP]

- [1] Hansheng Xue, Vijini Mallawaarachchi, Lexing Xie, and Vaibhav Rajan, "Encoding Unitig-level Assembly Graphs with Heterophilous Constraints for Metagenomic Contigs Binning", *ICLR*'24.
- [2] Aishwarya Jayagopal, Hansheng Xue, Ziyang He, Robert John Walsh, Krishna Kumar Hariprasannan, David Shao Peng Tan, Tuan Zea Tan, Jason J. Pitt, Anand D Jeyasekharan, and Vaibhav Rajan, "Personalised Drug Identifier for Cancer Treatment with Transformers using Auxiliary Information", *KDD*'24.
- [3] Hansheng Xue, Vaibhav Rajan, and Yu Lin, "Graph Coloring via Neural Networks for Haplotype Assembly and Viral Quasispecies Reconstruction", *NeurIPS*'22.
- [4] Hansheng Xue, Vijini Mallawaarachchi, Yujia Zhang, Vaibhav Rajan, and Yu Lin, "RepBin: Constraint-Based Graph Representation Learning for Metagenomic Binning", *AAAI*'22.
- [5] Hansheng Xue, Luwei Yang, Vaibhav Rajan, Wen Jiang, Yi Wei, and Yu Lin, "Multiplex Bipartite Network Embedding using Dual Hypergraph Convolutional Networks", *WWW*'21.
- [6] Hansheng Xue†, Luwei Yang†, Wen Jiang, Yi Wei, Yi Hu, and Yu Lin, "Modeling Dynamic Heterogeneous Network for Link Prediction using Hierarchical Attention with Temporal RNN", *ECML-PKDD*'20.
- [7] Jiajie Peng†, Hansheng Xue†, Zhongyu Wei, Idil Tuncali, Jianye Hao, and Xuequn Shang, "Integrating Multi-network Topology for Gene Function Prediction using Deep Neural Networks", *Briefings in Bioinformatics*, 2020.

PROFESSIONAL SERVICE

Organizing Committee: ANU Workshop on Computational Genomics, Canberra, Aug. 2023.
Journal Reviewer: Briefings in Bioinformatics(x4), BMC Genomics(x2), BMC Bioinformatics(x2), Artificial Intelligence Review(x1), IEEE/ACM TCBB(x1), BioData Mining(x1), PLOS ONE(x1), Frontiers in Neuroscience(x1).
Program Committee/Reviewer: AAAI'25/24/23, IJCAI'24/23, AISTATS'24, NeurIPS-TGL'23, ECML-PKDD'20.

TEACHING EXPERIENCE

Guest Lecturer for Database Systems, Shandong University (ANU/SDUW Joint Program), China.	Autumn 2023
Tutor for Statistics Machine Learning, Australian National University, Canberra, Australia.	Feb. 2023 - Jun. 2023

SELECTED HONORS AND AWARDS

AAAI Student Scholarship	2022
ANU PhD Scholarship (International)	2019
First Prize Award, Bachelor's Degree Thesis Competition of Jiangsu Province, China (Top 1%)	2015

INVITED TALKS AND POSTER PRESENTATIONS

1. *Encoding Unitig-level Assembly Graphs with Heterophilous Constraints for Metagenomic Contigs Binning*, ICLR, Vienna Austria, May 2024.
2. *Metagenomic Binning using Graph Neural Networks*, ISMB/ECCB Microbiome, Lyon, France, Jul. 2023.
3. *Graph Coloring via Neural Networks for Haplotype Assembly and Viral Quasispecies Reconstruction*, NeurIPS, Virtual, Dec. 2022.
4. *RepBin: Constraint-Based Graph Representation Learning for Metagenomic Binning*, AAAI, Virtual, Feb. 2022.
5. *Multiplex Bipartite Network Embedding using Dual Hypergraph Convolutional Networks*, WWW, Virtual, Apr. 2021.