

# Haiyi Mao

Email : HAM112@pitt.edu

Mobile : +1-617-818-8720

## EDUCATION

---

- **University of Pittsburgh & Carnegie Mellon University** Pittsburgh, PA  
*CMU-Pitt Joint Program in Computational Biology* Sept. 2019 – Present
- **Northeastern University** Boston, MA  
*Master of Science in Computer Science* Sept. 2014 – Dec. 2016
- **Xidian Univerisity** Xi'an, China  
*Bachelor of Engineering in Computer Science and Technology* Sept. 2008 – Jul. 2012

## POSITIONS AND RESEARCH EXPERIENCE

---

- **University of Pittsburgh** Pittsburgh, PA  
*Research Assistance (co-advised by Takis Benos (Pitt) and Kun Zhang (CMU) )* Sept. 2019 - Present
  - Causal Discovery & Inference with Multi-Modal Biological and Medical Data
- **Memorial Sloan Kettering Cancer Center** New York, NY  
*Computational Oncology Research Intern (advised by Sohrab Shah)* May 2021 - August, 2021
  - Predicting copy number variance with scDNA images
- **Philips Research North America** Cambridge, MA  
*Research Intern* Jan 2017 - Oct 2017
  - Designed a clinical early warning algorithm with EHR dataset. The algorithm takes real-time clinical data as inputs to generate alerts for patients in general ward need to be delivered to ICU.

## SELECTED PUBLICATIONS

---

- **Towards Cross-Modal Variational Causal Representation and Structure Learning**  
Haiyi Mao, Hongfu Liu, Jason Dou, Panayiotis V. Benos.  
ML4H Proceeding Track, 2022
- **Towards Causal Representation Learning for Non-stationary Multi-omics Data**  
Haiyi Mao, Minxue Jia, Marrisa Di, Kun Zhang, Panayiotis V. Benos.  
Preprint
- **COEM: Cross-Modal Embedding for MetaCell Identification**  
Haiyi Mao, Minxue Jia, Jason Dou, Panayiotis V. Benos  
ICML Workshop on Computational Biology, 2022
- **Interpretable Factors in scRNA-seq Data with Disentangled Generative Models**  
Haiyi Mao, Matthew J. Broerman, Panayiotis V. Benos.  
IEEE International Conference on BioInformatics And BioEngineering, 2020
- **Deep Decision Tree Transfer Boosting**  
Shuhui Jiang, Haiyi Mao, Zhengming Ding, Yun Fu  
IEEE Transactions on Neural Networks and Learning Systems, 2019
- **Partial Pixelated Image Super Resolution with Convolutional Neural Network**  
Haiyi Mao, Jun Li, Yue Wu, Yun Fu  
ACM Multi-Media, 2016
- **Robust Multi-View Feature Selection**  
Hongfu Liu, Haiyi Mao, Yun Fu  
IEEE International Conference of Data Mining, 2016