

Name: Hongyang Li  
PI Name: Yuanfang Guan

Email: hongyang.li@ibm.com  
PI email: gyuanfan@umich.edu

## **Asymmetric Predictive Relationships Across Histone Modifications**

Hongyang Li<sup>1</sup> and Yuanfang Guan<sup>2</sup>

<sup>1</sup>IBM Thomas J. Watson Research Center, Yorktown Heights, NY 10598; <sup>2</sup>Department of Computational Medicine and Bioinformatics, University of Michigan, Ann Arbor, MI 48105

Decoding the epigenomic landscapes in diverse cell types is fundamental to understanding molecular mechanisms underlying many diseases. We develop a machine learning approach for epigenomic imputation and interpretation. Through dissection of the spatial contributions from six histone marks, we reveal the prevalent and asymmetric cross-prediction relationships among histone marks.