BRIGHAM AND WOMEN'S HOSPITAL
HARVARD MEDICAL SCHOOL

181 Longwood Avenue
Boston, Massachusetts 02115-5804

Department of Medicine
Channing Division of Network Medicine

Channing Network Science Seminar

January 29, 2016, 11am @ 5th floor conference room

Speaker: Abhijeet Sonawane, Ph.D.
Channing Division of Network Medicine
Brigham and Women's Hospital
Harvard Medical School

REDPANDA: The role of epigenetic information in PANDA's message passing model

Abstract: In this work we use PANDA's message-passing framework to further improve gene regulatory network models when integrating epigenetic information. We introduce RED-PANDA (Regulatory Epigenetic Data into PANDA) and demonstrate that this approach results in marked improvement in the underlying transcriptional network as compared with ChIP-seq benchmarks. We hypothesize that this improvement is due to PANDA's ability to optimize the self-consistent "Triad" structures, thereby removing false negatives and improving true positives. Along these lines, we explore how PANDA optimizes edges present in a prior motif-network compared to those absent in the prior.

Bio- Abhijeet Sonawane is a Postdoctoral Researcher with Dr. Kimberly Glass in the Channing Division of Network Medicine, Brigham and Women's Hospital, Harvard Medical School. Abhijeet holds a PhD in physics from the University of Pune, India. He formerly worked as postdoctoral fellow at The University of Tokyo. His research interests are in modeling and statistical analysis of complex networks, Systems biology and data analytics on biological systems.

Hosted by Kimbie Glass