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Channing Network Science Seminar

Sep 18, 2015, 11am @ 5th floor conference room

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Title: **When Data Meet Uncertainty**

Abstract: The emerging interdisciplinary research of dimensionality reduction from data with uncertainties has increased interest in the area of data mining under real-world human-centered scenarios. As a unique computational element, human-centered computing tightly and seamlessly connects human users to the physical or social world that is richly and invisibly interwoven with sensors, actuators, displays, and networks, embedded in the everyday objects, to obtain pleasant interaction experiences, dedicated services or social contexts. Such systems often generate large amount of cross-domain and multi-source data which need advance analytics tools. In this talk, Dr. Fu will mainly present his recent and ongoing research/projects of big data analysis in this field and envision future research trend in multi-source and multi-modality data mining. Particularly, a general computational methodology for graph embedded dimensionality reduction will be introduced as well as solutions for computability, stability, and complexity under uncertain variations.

Bio: Dr. Fu is an interdisciplinary Associate Professor affiliated with College of Engineering and the College of Computer and Information Science at Northeastern University. He received the Ph.D. degree in electrical and computer engineering from the University of Illinois at Urbana-Champaign, respectively. Dr. Fu's research interests are Interdisciplinary research in Machine Learning and Computational Intelligence, Social Media Analytics, Human-Computer Interaction, and Cyber-Physical Systems. He has extensive publications in leading journals, books/book chapters and international conferences/workshops. He serves as associate editor, chairs, PC member and reviewer of many top journals and international conferences/workshops. Dr. Fu is the recipient of 5 best paper awards (SIAM SDM 2014, IEEE FG 2013, IEEE ICDM -LSVA 2011, IAPR ICFHR 2010, IEEE ICIP 2007), 4 young investigator awards (2016 IEEE CIS Outstanding Early Career Award, 2014 ONR Young Investigator Award, 2014 ARO Young Investigator Award, 2014 INNS Young Investigator Award), 2015 National Academy of Engineering US Frontiers of Engineering, 2 service awards (2012 IEEE TCSVT Best Associate Editor, 2011 IEEE ICME Best Reviewer), the 2011 IC Postdoctoral Research Fellowship Award, the 2010 Google Faculty Research Award, the 2008 M. E. Van Valkenburg Graduate Research Award, the 2007-2008 Beckman Graduate Fellowship, 2007 Chinese Government Award for Outstanding Self-Financed Students Abroad, the 2003 Hewlett-Packard Silver Medal and Science Scholarship, Edison Cups of the 2002 GE Fund Edison Cup Technology Innovation Competition, and the 2002 Rockwell Automation Master of Science Award. He is currently an Associate Editor of the IEEE Transactions on Neural Networks and Learning Systems (TNNLS), and IEEE Transactions on Circuits and Systems for Video Technology (TCSVT). His research is broadly supported by NSF, DOD, DARPA, IARPA, ONR, AFOSR, ARL/ARO, NGA, IC, Samsung and Google. He is a Senior Member of IEEE, Lifetime Member of ACM, AAI, SPIE, and Institute of Mathematical Statistics, member of INNS and Beckman Graduate Fellow during 2007-2008.

hosted by Yang-Yu Liu