Abstract:
The concept of Learning Health Systems (LHS) is gaining momentum as more and more electronic healthcare data has become increasingly accessible. The idea is to enable learning from the collective experience of a care delivery network as recorded in the observational data, to iteratively improve care quality as care is being provided in a real world setting. In line with this vision, the health care analytics research group at IBM Research has been developing methodologies that can be used to derive insights from diverse sources of healthcare data to provide personalized decision support for care delivery and care management, with a focus on the identification of at risk patients and early intervention opportunities. These methodologies – collectively called Intelligent Care Delivery Analytics (ICDA), have provided the foundational analytics for the new IBM Patient Care and Insight (IPCI) solution that was just announced in October 2012. In this talk I will review the analytics components in ICDA, and describe some new directions we are taking to develop analytics to support care coordination.

Bio:
Jianying Hu is a research staff member and manager of Healthcare Analytics Research at IBM T. J. Watson Research Center, NY. She received the Ph.D. degree in Computer Science from SUNY Stony Brook in 1993. Prior to joining IBM she was with Bell Labs at Murray Hill, New Jersey. Dr. Hu's main research interests include statistical pattern recognition, signal processing, machine learning and data mining, with applications to healthcare analytics, medical informatics, business analytics, document analysis, and multimedia content analysis and retrieval. For the past three years her group has been focusing on developing advanced machine learning and data mining methodologies for deriving data-driven insights to facilitate “learning health systems”.

Dr. Hu has published over 90 technical articles and holds 23 patents. She has served as associate editor for IEEE Transactions on Pattern Analysis and Machine Intelligence, and IEEE Transactions on Image Processing, and is currently on the editorial board of the journals Pattern Recognition, and International Journal on Document Analysis and Recognition. Dr. Hu is a fellow of the International Association of Pattern Recognition and a senior member of IEEE.