Speaker: Shazia Sadiq

short bio：

Dr Shazia Sadiq FTSE is a Professor of Computer Science. Her research focusses on data quality management and effective information use, including innovative solutions for Business Information Systems that span several areas such as business process management, governance, risk and compliance. She has published over 200 peer-reviewed publications and she is currently the Centre Director for the ARC Industry Transformation Training Centre on Information Resilience 2020-2025.

Speaker: Xingquan Zhu

**Short Bio**

Xingquan Zhu has received the Ph.D degree in Computer Science from Fudan University, Shanghai, China. He is currently a Full Professor of Computer Science. His research interests include data mining, machine learning, and bioinformatics. Since 2000, he has published more than 280 refereed journal and conference papers in these areas, including four Best Paper Awards (PAKDD-21, IRI-18, PAKDD-13, ICTAI-05) and three Best Student Paper Awards (ICDM-20, ICKG-20, ICPR-12). He is the Program Committee Co-Chair for the 22nd IEEE International Conference on Data Mining (ICDM-2022), General Co-chair for the 2021 IEEE International Conference on Big Data (IEEE BigData-2021), and Program Committee Co-Chair for the 33rd International Conference on Scientific and Statistical Database Management (SSDBM-2021). He previously served as an associate editor of the IEEE Trans. on Knowledge and Data Engineering (2008-2012, 2014-2021), and currently serves as an associate editor of the ACM Trans. on Knowledge Discovery from Data (2017 - date), International Journal of Social Network Analysis and Mining SNAM (2010-date), Journal of Big Data (2013-date), and Network Modeling Analysis in Health Informatics and Bioinformatics Journal (2014-date).

**Title：Tackling Unknown Future: Open-World Domain Adaptive Graph Learning**

Speaker: Xingquan Zhu

**Abstract**

Networks/Graphs are convenient tools to model interactions and interdependencies between large-scale data. Graph data analytics, such as node classification which attempts to categorize nodes of graphs into different groups, are often carried out in a closed-world setting where labeled classes (and their training samples) are known, and the learning goal is to correctly classify unlabeled nodes into classes already known. In reality, new trends emerge constantly, and a model unaware of unknown future can hardly work well in real-world applications.

In this talk, we address two fundamental problems in graph learning, open-world graph learning and unsupervised domain adaptive graph learning, in a setting that the learning is to predict test samples whose class label space is only partially known or completely unknown. For open-world graph learning, we propose a new open-world graph learning paradigm, where the learning goal is to not only classify nodes belonging to seen classes into correct groups, but also classify nodes not belonging to existing classes to an unseen class. To tackle unknown label space in a cross-domain learning setting, we propose an unsupervised domain adaptive graph convolutional network, where all nodes in a target domain are unlabeled. Domain adaptation aims to transfer knowledge from the graph of an existing domain with labeled nodes to classify nodes in the target domain.

**Short Bio**

Xingquan Zhu has received the Ph.D degree in Computer Science from Fudan University, Shanghai, China. He is currently a Full Professor of Computer Science. His research interests include data mining, machine learning, and bioinformatics. Since 2000, he has published more than 280 refereed journal and conference papers in these areas, including four Best Paper Awards (PAKDD-21, IRI-18, PAKDD-13, ICTAI-05) and three Best Student Paper Awards (ICDM-20, ICKG-20, ICPR-12). He is the Program Committee Co-Chair for the 22nd IEEE International Conference on Data Mining (ICDM-2022), General Co-chair for the 2021 IEEE International Conference on Big Data (IEEE BigData-2021), and Program Committee Co-Chair for the 33rd International Conference on Scientific and Statistical Database Management (SSDBM-2021). He previously served as an associate editor of the IEEE Trans. on Knowledge and Data Engineering (2008-2012, 2014-2021), and currently serves as an associate editor of the ACM Trans. on Knowledge Discovery from Data (2017 - date), International Journal of Social Network Analysis and Mining SNAM (2010-date), Journal of Big Data (2013-date), and Network Modeling Analysis in Health Informatics and Bioinformatics Journal (2014-date).

**Title：Real-world stream data analysis: challenges and opportunities**

**Abstract**

Recent advances in ICT technologies, including IoT and big data analysis, have made it possible for governments, companies, and individuals to process a large amount of data in real-time, allowing one to extract valuable insights from massive streaming data. These outcomes can be used to improve our society and human wellbeing. In this talk, we will introduce some of our research projects of real-time sensor data analysis for posture recognition and social big data analysis. We will also mention challenges and opportunities in

real-time stream data analysis.

**Short Bio**

Toshiyuki Amagasa received B.E., M.E., and Ph.D from the Department of Computer Science, Gunma University in 1994, 1996, and 1999, respectively. He is currently a full professor of Computer Science. His research interests cover database systems, data mining, and database application in scientific domains. He is a senior member of IPSJ, IEICE, and IEEE, a board member of DBSJ, and a member of ACM.