特邀讲者



■ 李建中　　哈尔滨工业大学教授

报告题目：大数据计算：基本概念、研究问题和部分解

摘要：大数据是目前国内外多学科关注的热点。该报告从计算科学的角度讨论大数据及其计算问题。首先，该报告介绍大数据和大数据计算的基本概念，并给出了很多大数据实例。然后，该报告探讨大数据计算的两个基础理论研究问题：大数据计算的复杂性问题和大数据计算问题求解算法的设计方法学问题。最后，该报告讨论了五个方面的具体研究问题和三个需要思考的问题。在探讨各类研究问题的同时，该报告还介绍了报告人的相关研究结果。

报告人简介：李建中，哈尔滨工业大学教授，1995 年获得国家杰出青年基金，中国计算机学会常务理事、大数据专家委员会副主任、传感器网络专业委员会主任，国家 973 项目“海量信息可用性基础理论与关键技术研究”的首席科学家。他的研究领域包括海量数据计算、无线传感网。他在海量数据获取、传输、存储和计算等方面取得了一系列研究成果，在国内外发表学术论文 200 余篇，其中在 VLDB Journal、 Algorithmica、IEEE Transactions on Knowledge and Data Engineering、IEEE Transactions on Parallel and Distributed Systems、SIGMOD、VLDB、INFOCOM 等国际一流学术刊物和会议发表论文 70 余篇，被他引 11600 余次，3 次获得国际学术会议最佳论文奖，并与 2010 年获得 VLDB 最佳论文奖。他还应用基础研究结果，先后于 1993 年和 1998 年成功地研制了微型计算机集群系统和数据库系统，得到很好应用，获得国家科技进步一等奖 1 项。他的研究结果还获得了省部级自然科学一等奖 1 项、省部级科技进步一等奖 2 项，其他奖励 10 余项。

■ 鲍虎军　浙江大学教授



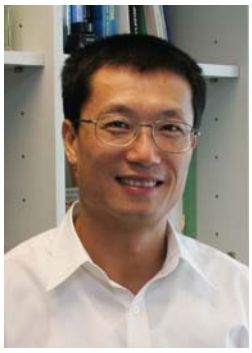
报告题目：复杂场景的多维表达与交互可视分析

报告摘要：随著传感、网络通讯和虚拟现实等技术的迅速发展，人们可以便捷地通过获取或生产多元异构数据来感知或表达复杂对象，由这些海量数据重构而成的信息空间逐渐与物理空间和社会空间相互影响和交融，有效增强了人类对复杂物理环境的感知。由于数据极其复杂，且规模巨大，如何从中高效、精准地分析理解其内涵已成为信息领域的前沿研究热点。本项研究旨在构建复杂物理场景的三维时空模型，通过将各种多源、异构传感数据以离线、在线方式接入、配准或关联到三维环境中，建立起复杂场景的多维表达和准全息计算模型。在此基础上，探寻高效的智能数据分析和交互可视分析方法，以充分发挥机器智能处理和人类交互分析的优势，实现对复杂场景或事件的高效、精准分析理解。本报告将介绍我们在三维时空环境的构建、呈现和交互可视分析技术和系统等方面的研究进展，并展望其今后的研究发展趋势。

报告人简介：鲍虎军，国家杰出青年基金获得者，教育部长江学者特聘教授，浙江大学信息学部主任。现任国家自然科学基金委员会信息学部咨询专家，国际学术期刊《Computers & Graphics》、《Graphical Models》编委，国内核心学术期刊《计算机辅助设计与图形学学报》主编，计算机学会计算机辅助设计和图形学专业委员会主任。

所领导的团队曾获首届国家创新研究群体科学基金的资助，并作为首席科学家，先后二次承担了国家重大基础研究发展规划（973 计划）项目虚拟现实方面的研究。近年来主要从事计算机图形学、计算机视觉和虚拟现实等方面的研究，在微分域几何计算、复杂虚拟场景的实时逼真图形绘制、视频场景的结构恢复和理解等理论和方法方面取得了重要进展，在著名国际学术期刊和学术会议上发表论文 100 余篇，获授权国家发明专利 10 余项，得到了国内外学者广泛引用和高度评价，有关成果分别获高等学校优秀成果奖科技进步一等奖和国家自然科学二等奖。所指导的二篇博士学位论文被评为全国百篇优秀博士论文，三篇博士论文被评为计算机学会优秀博士论文。

■ Xiaohua Jia　香港城市大学教授



报告题目：A Global Storage System for Sharing of User Generated Contents (UGC)

报告简介：

As the advent and growth of social networks in recent years, user generated contents (UGC), such as videos, photos, and blogs, have become an important source for people's social life, information sharing and entertainment. However, the issues, such as ownership of UGC, management of UGC, subscription and publication of UGC, have not been properly addressed and adequately supported by the Internet. As a consequence, users are hijacked by a few giant application service providers (ASP), such as Facebook, Twitter, Tencent, etc. There are two major problems with the current structure of ASPs: 1) User's online social groups are fragmented by ASPs. That is, the members of a user's social group, such as "friends" or "colleagues", are scattered among the ASPs. 2) The ownership of UGC belongs to ASPs. The sharing of the user's data cannot go across different ASPs to reach the user targeted audience.

In this talk, we present a global storage platform as the infrastructure of the Internet. In this platform, users have their own storage to store their data and social relationship, and thus the ownership of users' data and users' social relationship are returned back to the users. The platform is an open structure that it provides standard API to interact with ASPs. Users can publish or share their data with targeted social groups regardless which ASPs the group members are registered to. This global storage platform also acts as the infrastructure of data communication networks. It can support data transmission and inter-person real-time communication, as well as data storage and data management. It integrates both data service and networking service into a versatile file service upon which various network applications can be built. We will also discuss the security issues of the global storage system and the support of global roaming of users.

报告人简介：Xiaohua Jia received his BSc (1984) and MEng (1987) from University of Science and Technology of China, and DSc (1991) in Information Science from University of Tokyo. He is currently Chair Professor with Dept of Computer Science at City University of Hong Kong. His research interests include cloud computing and distributed systems, computer networks, wireless sensor networks and mobile wireless networks. Prof. Jia is an editor of IEEE Internet of Things, IEEE Trans. on Parallel and Distributed Systems (2006-2009), Wireless Networks, Journal of World Wide Web, Journal of Combinatorial Optimization, etc. He is the General Chair of ACM MobiHoc 2008, TPC Co-Chair of IEEE MASS 2009, Area-Chair of IEEE INFOCOM 2010, TPC Co-Chair of IEEE GlobeCom 2010 – Ad Hoc and Sensor Networking Symp, Panel Co-Chair of IEEE INFOCOM 2011, and Local Co-Chair of ACM SIGCOMM 2013. He is fellow of IEEE.

■ 杨天若　华中科技大学计算机学院教授

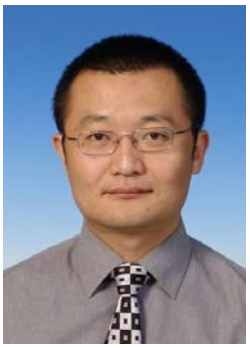


报告题目：A Data-as-a-Service Framework for Cyber-Physical-Social Big Data

报告人简介： 杨天若教授(Laurence T. Yang)，毕业于清华大学计算机系，在加拿大维多利亚大学获计算机科学博士学位，现任华中科技大学计算机学院博导和教授。

他的研究领域包括并行和分布计算、嵌入和普适计算，大数据. 在这些领域的国际顶尖和主流期刊上(例如 IEEE/ACM 汇刊)发表约 200 篇学术论文。作为指导委员会主席或大会主席或程序委员会主席，发起，参与和组织了很多国际主要的学术会议。他曾担任了 IEEE 超级计算与应用 (TCSA)技术委员会的副主席 (2000-2004); IEEE 可扩展计算(TCSC) 委员会主席(2008-2011)和 IEEE 普适计算与智能工作组主 席(2009-至今)。此外，他还是国际顶级会议 IEEE/ACM 超级计算国际会议的指导委员会委员 (2008-2011)，及加拿大计算资源计划委员会委员 (2009-2013) 。另外,曾担任多个国际重要学术期刊的主编,以及多个国际重要学术期刊的编委,同时也是多个国际著名出版社出版的 30 余本学术著作的作者或编者，其中”移动智能”一书获 2010 美国出版协会学术卓越奖(PROSE Award)工程和技术类第二名。他曾获得多项最佳论文奖。在世界 30 多个国际主要学术会议与研讨会上做大会特邀主题报告。

■ Lei Chen　香港科技大学教授



报告题目：Crowdsourcing over Big Data, are we there yet?

报告简介：

Recently, the popularity of crowdsourcing has brought a new opportunity to engage human intelligence into various data analysis tasks. Compared with computer systems, crowds are good at handling items with human-intrinsic values or features. Existing approaches develop sophisticated methods by utilizing the crowd as a new type of processor, a.k.a. HPU (Human Processing Unit). As a consequence, tasks executed on HPU are called HPU-based tasks. Now we are in the Big Data Era, a nature question arises: How about crowdsourcing over Big Data, are we there yet?

In this talk, I will first briefly review the history of crowdsourcing and discuss the key issues related to crowdsourcing. Then, I will demonstrate the power of crowdsourcing in solving the well-known and very hard data integration problem, schema matching, and discuss how to migrate the power of crowdsourcing to a social media platform whose users can serve as a huge reservoir of workers. Finally, I will highlight some research challenges about crowdsourcing over Big Data.

报告人简介：

Lei Chen received the BS degree in computer science and engineering from Tianjin University, Tianjin, China, in 1994, the MA degree from Asian Institute of Technology, Bangkok, Thailand, in 1997, and the PhD degree in computer science from the University of Waterloo, Canada, in 2005. He is currently an associate professor in the Department of Computer Science and Engineering, Hong Kong University of Science and Technology. His research interests include crowdsourcing over social media, social media analysis, probabilistic and uncertain databases, and privacy-preserved data publishing. So far, he published over 200 conference and journal papers. He got the best paper awards in DASFAA 2009 and 2010. He is PC Track chairs for SIGMOD 2014, VLDB 2014, ICDE 2012, CIKM 2012, SIGMM 2011. He has served as PC members for SIGMOD, VLDB, ICDE, SIGMM, and WWW. Currently, he serves as an associate editor for IEEE Transaction on Data and Knowledge Engineering and Distribute and Parallel Databases. He is a member of the ACM and the chairman of ACM SIGMOD China Chapter.

■ 孙利民　　中科院信息工程研究所研究员



报告题目：物联网中的隐私保护技术

报告人简介：孙利民，男，中科院信息工程研究所研究员，博士生导师，物联网安全技术北京市重点实验室主任。在国防科技大学计算机（系）学院分别获得学士、硕士和博士学位，曾在滑铁卢大学、香港理工大学任高级访问学者。目前兼职主要有：中国计算机学会传感器网络专委会副主任，北京市物联网研究会副理事长，中关村物联网联盟副理事长等。承担国家 973 课题、国家自然科学基金重点课题、国家重大专项和先导专项等十多项国家级课题，出版 5 部学术书籍，在 IEEE TPDS、TOSN、TMC、Elsevier Computer Communications、EURASIP Journal of Wireless Communication & Networking 等英文期刊和“计算机学报”“软件学报”、“自动化学报”、“通信学报”等中文期刊，以及 SENSYS、MOBISYS、MOBICOM、ICDCS、INFOCOM、SECON、WCNC 等国际会议上发表相关学术论文 130 余篇；获得或已经申请国家专利和软件著作权登记 30 余项。