

The 9th EAI International Conference on Cloud Computing



EAI CloudComp2019 Conference Program

4th ~ 5th Dec 2019

Sydney, Australia



MACQUARIE
University



Welcome:

On behalf of the Organising Committee and affiliated Conference Chairs, we would like to thank everyone who has made CloudComp2019 possible.

We hope you will find the conference an enjoyable, enlightening and valuable experience and trust it provides you an excellent opportunity for networking.

Welcome, and enjoy the next couple of days.

Dr Xuyun Zhang, Dr Guanfeng Liu, and Prof. Meikang Qiu, Chairs

Wi-Fi Information:

Complimentary Wi-Fi will be available throughout the conference

»Network name: Macquarie Events

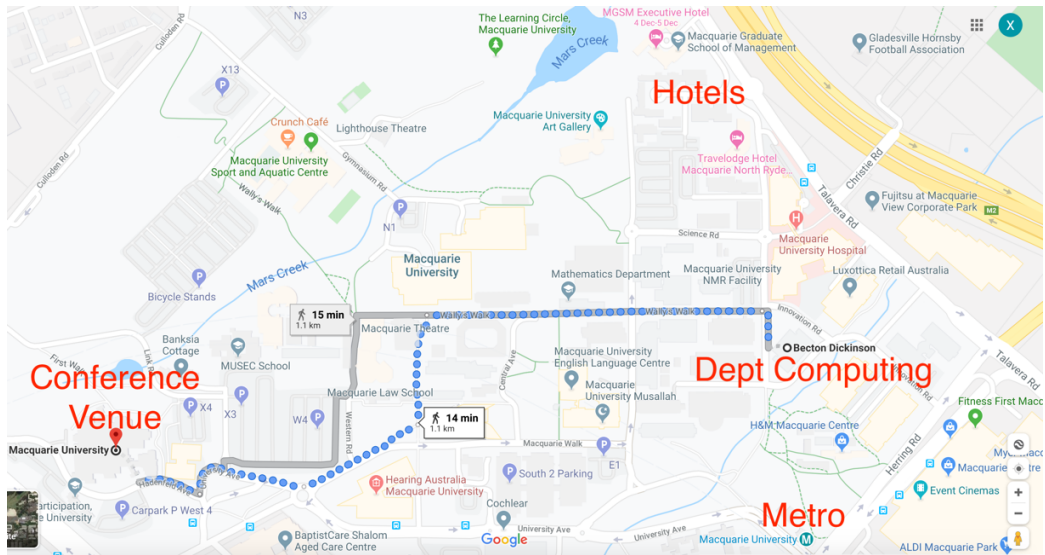
»Browse to www.mq.edu.au

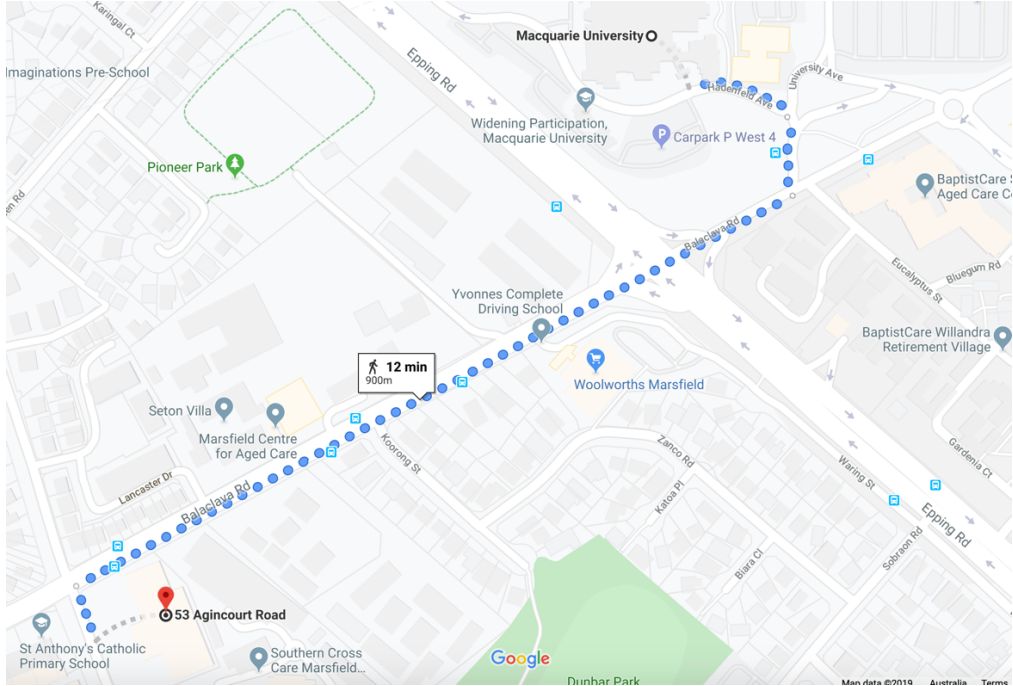

»Passcode: cloudcomp2019

Please note wireless internet is not secure.

Thank you for visiting Macquarie University, Sydney, Australia

CloudComp2019: Day 1 (Dec 4th, 2019)

| Time | Events | |
|-------------|--|---|
| 8:30-17:30 | Registration (Location: 10 Hadenfeld Avenue Foyer)  | |
| 9:30-10:00 | Opening Ceremony (Location: 10 Hadenfeld Avenue Theatre 1) | |
| 10:00-11:00 | Keynote Speech 1 Speaker: Prof. Michael Sheng Title: Searching the Internet of Things: The Next Grand Challenge (Session Chair: Wanchun Dou) (Location: 10 Hadenfeld Avenue Theatre 1) | |
| 11:00-11:30 | Morning Tea (Location: 10 Hadenfeld Avenue Foyer) | |
| 11:30-12:30 | Session 1A Cloud Based Data Analytics (I) Session Chair: Qi Liu (Location: 10 Hadenfeld Avenue Theatre 1) | Session 1B Cloud Applications (I) Session Chair: Lianyong Qi (Location: 10 Hadenfeld (HA) Avenue 212 Tute Room) |
| 12:30-13:30 | Lunch (Location: 10 Hadenfeld Avenue Foyer) | |
| 13:30-14:30 | Session 2A Resource Scheduling Session Chair: Yirui Wu (Location: 10 Hadenfeld Avenue Theatre 1) | Session 2B Cloud Security Session Chair: Dong Yuan (Location: 10 Hadenfeld (HA) Avenue 212 Tute Room) |

| | |
|-------------|---|
| 14:30-15:30 | <p align="center">Keynote Speech 2 Speaker: Prof. Yew-Soon Ong Title: Generalizable Optimization Intelligence for the Cloud & Edge (Session Chair: Michael Sheng) (Location: 10 Hadenfeld Avenue Theatre 1)</p> |
| 15:30-16:00 | <p align="center">Afternoon Tea (Location: 10 Hadenfeld Avenue Foyer)</p> |
| 16:00-17:30 | <p align="center">Distinguished Local Scholar Panel Discussion Speaker: Surya Nepal, Shui Yu, Lina Yao, Dong Yuan, Jia Wu, Qiang He (Session Chair: Guanfeng Liu) (Location: 10 Hadenfeld Avenue Theatre 1)</p> |
| 17:30-18:00 | <p align="center">Walk/Drive to the restaurant</p>  |
| 18:00-22:30 | <p align="center">Gala Dinner Curzon Hall, 53 Agincourt Road, Marsfield, NSW 2122</p>  |

CloudComp2019: Day 2 (Dec 5th, 2019)

| Time | Events | |
|--------------------|---|---|
| 8:30-16:00 | Registration (Location: 10 Hadenfeld Avenue Foyer) | |
| 9:00-10:30 | Session 3A Cloud Based Data Analytics (II) Session Chair: Shoujian Wang (Location: 10 Hadenfeld Avenue Theatre 1) | Session 3B Cloud QoS Session Chair: Qiang He (Location: 10 Hadenfeld (HA) Avenue 212 Tute Room) |
| 10:30-11:00 | Morning Tea (Location: 10 Hadenfeld Avenue Foyer) | |
| 11:00-12:00 | Keynote Speech 3 Speaker: Prof. Longbing Cao Title: Some of Critical Challenges and Opportunities in Data Science (Session Chair: Guanfeng Liu) (Location: 10 Hadenfeld Avenue Theatre 1) | |
| 12:00-13:00 | Lunch (Location: 10 Hadenfeld Avenue Foyer) | |
| 13:00-14:30 | Session 4A Cloud Based Data Analytics (II) Session Chair: Xiaolong Xu (Location: 10 Hadenfeld Avenue Theatre 1) | Session 4B Cloud Architecture Session Chair: Lianyong Qi (Location: 10 Hadenfeld (HA) Avenue 212 Tute Room) |
| 14:30-15:00 | Afternoon Tea (Location: 10 Hadenfeld Avenue Foyer) | |
| 15:00-16:00 | Session 5A Cloud Applications (II) Session Chair: Xuyun Zhang (Location: 10 Hadenfeld Avenue Theatre 1) | Session 5B Cloud Based Data Analytics (III) Session Chair: Xiaolong Xu (Location: 10 Hadenfeld (HA) Avenue 212 Tute Room) |
| 16:00 | Conference End | |

CloudComp2019 Keynote Speeches

Keynote Speech 1

Time: Day 1 (Dec 4th, 2019) 10:00-11:00

Location: 10 Hadenfeld Avenue Theatre 1

Title: Searching the Internet of Things: The Next Grand Challenge

Speaker: Prof. Michael Sheng

Department of Computing

Macquarie University, Australia



Abstract: The Internet of Things (IoT) is widely regarded as an important technology to change the world in the coming decade. Indeed, IoT will play a critical role to improve productivity, operational effectiveness, decision making, and to identify new business service models for social and economic opportunities. While IoT-based digital strategies and innovations provide industries across the spectrum with exciting capabilities to create a competitive edge and build more value into their services, there are still significant technical gaps in making IoT services a reality, specially on effectively managing large volume of IoT devices and information generated from them. In this talk, I will briefly introduce the background of IoT, overview my research team's more than 10-year research and implementation activities on IoT, and also discuss some future research directions.

Biography: Dr. Michael Sheng is a full Professor and Head of Department of Computing at Macquarie University. Before moving to Macquarie, Michael spent 10 years at School of Computer Science, the University of Adelaide (UoA). Michael holds a PhD degree in computer science from the University of New South Wales (UNSW) and did his post-doc as a research scientist at CSIRO ICT Centre. From 1999 to 2001, Sheng also worked at UNSW as a visiting research fellow. Prior to that, he spent 6 years as a senior software engineer in industries.

Prof. Sheng's research interests include Internet of Things (IoT), data analytics, Web technologies, and service computing. He has more than 370 publications as edited books and proceedings, refereed book chapters, and refereed technical papers in journals and conferences including ACM Computing Surveys, ACM TOIT, ACM TOMM, ACM TKDD, VLDB Journal, Computer (Oxford), IEEE TPDS, TMC, TKDE, DAPD, IEEE TSC, WWWJ, IEEE Computer, IEEE Internet Computing, Communications of the ACM, VLDB, ICDE, ICDM, IJCAI, CIKM, EDBT, WWW, ICSE, ICSOC, ICWS, and CAiSE. His research has been highly cited by his international peers (9,760+ citations, 15 research papers received 100+ citations. The highest cited single paper received 1,530+ citations). Prof. Sheng has been invited to give keynotes at a number of international conferences and served as Conference General Chair or Program Chair for several top international conferences in his areas.

Prof. Michael Sheng is the recipient of AMiner Most Influential Scholar in IoT Award (2019), ARC Future Fellowship (2014), Chris Wallace Award for Outstanding Research Contribution (2012), and Microsoft Research Fellowship (2003). For more information, please check his homepage: <http://web.science.mq.edu.au/~qsheng/>.

Keynote Speech 2

Time: Day 1 (Dec 4th, 2019) 14:30-15:30

Location: 10 Hadenfeld Avenue Theatre 1

Title: Generalizable Optimization Intelligence for the Cloud and Edge

Speaker: Prof. Yew-soon Ong

School of Physical and Mathematical Science

Nanyang Technological University, Singapore



Abstract: Traditional Optimization tends to start the search from scratch by assuming zero prior knowledge about the task at hand. Generally speaking, the capabilities of optimization solvers do not automatically grow with experience. In contrast however, humans routinely make use of a pool of knowledge drawn from past experiences whenever faced with a new task.

This is often an effective approach in practice as real-world problems seldom exist in isolation. Similarly, practically useful artificial systems are expected to face a large number of problems in their lifetime, many of which will either be repetitive or share domain-specific similarities. This view naturally motivates advanced optimizers that can replicate human cognitive capabilities, leveraging on lessons learned from the past to accelerate the search towards optimal solutions of never before seen tasks. With the above in mind, this talk aims to shed light on recent research advances in the field of global black-box optimization that champion the general theme of ‘Generalizable Optimization Intelligence for the Cloud and Edge’. A brief overview of associated algorithmic developments in memetic computation and Bayesian optimization shall be considered, with illustrative examples of adaptive knowledge transfer across problems from diverse areas, including, operations research, engineering design, and neuro-evolution.

Biography: Yew-soon Ong received a PhD degree for his work on Artificial Intelligence in complex design from the University of Southampton, United Kingdom in 2003. He is currently a President’s Chair Professor of Computer Science, Professor (Cross Appointment) with School of Physical and Mathematical Science at the Nanyang Technological University, Singapore, and holds the position of Chief Artificial Intelligence Scientist at the Agency for Science, Technology and Research of Singapore. Concurrently he is Director of the Data Science and Artificial Intelligence Research Center, co-Director of the Singtel-NTU Cognitive & Artificial Intelligence Joint Lab and co-Director of the A*Star SIMTECH-NTU Joint Lab on Complex Systems. He was Chair of the School of Computer Science and Engineering, Nanyang Technological University from 2016-2018, Lead of the Data Analytics & Complex System Programme in the Rolls-Royce@NTU Corporate Lab from 2013-2016 and Director of the Centre for Computational Intelligence from 2008-2015. His research interest lies in artificial & computational Intelligence, mainly optimization intelligence and machine learning. He is a Fellow of the IEEE and Editor-In-Chief of the IEEE Transactions on Emerging Topics in Computational Intelligence. He was listed among the World’s Most Influential Scientific Minds and a Thomson Reuters Highly Cited Researcher. Several of his research publications have received IEEE outstanding paper awards.

Keynote Speech 3

Time: Day 2 (Dec 5th, 2019) 11:00-12:00

Location: 10 Hadenfeld Avenue Theatre 1

Title: Some of Critical Challenges and Opportunities in Data Science

Speaker: Prof. Longbing Cao

Faculty of Engineering and IT

University of Technology Sydney (UTS), Australia



Abstract: While the concept ‘data science’ has been introduced for half a century, what fundamentally challenges today’s early stage of data science research and applications? This talk attempts to explore several of them: how to learn from real-life data, behaviors and problems that are (1) not independent and identically distributed (non-IID), (2) massive yet extremely sparse, (3) ultrahigh-dimensional, (4) dynamic, and (5) of low quality? Recent work will be illustrated to explore the above challenges in terms of non-IID learning, large-scale statistical learning, and light-weighted deep representation and learning for outlier detection, recommender systems, and enterprise data science.

Biography: Longbing Cao is a professor at the University of Technology Sydney (UTS) and an ARC Future Fellow (Level 3). He holds a PhD in Computing Science from UTS and another PhD in Pattern Recognition and Intelligent Systems from Chinese Academy of Sciences. In addition to over 300 publications and four monographs, his recent book on Data Science Thinking was published in 2018 by Springer. Since 2005, he started to promote data science research, education, development and enterprise applications and bridge the gaps between cutting-edge research on original real-life problems and impactful business transformation, where he has dedicated to areas including actionable knowledge discovery, agent mining, behavior informatics, complex intelligent systems, and non-IID learning, in addition to more general issues in artificial intelligence, knowledge discovery, machine learning, and recommender systems. In data science and analytics, he established the Data Science and Knowledge Discovery lab at UTS in 2007, the university’s research institute Advanced Analytics Institute and the degrees Master of Analytics (Research) and PhD in Analytics at UTS in 2011, the IEEE Task Force on Data Science and Advanced Analytics (DSAA) in 2013, the IEEE Conference on Data Science and Advanced Analytics (DSAA) and the ACM SIGKDD Australia and New Zealand Chapter in 2014, and the International Journal of Data Science and Analytics with Springer in 2015. He served as program and general chairs of conferences such as KDD. His enterprise data science innovation work has contributed to government and business in over 10 domains, resulting in billions of dollars in savings for industry and government and special mentions in government, industry, media and OECD reports. His leadership in data science was recognized by the 2019 Eureka Prizes for Excellence in Data Science. More about his Data Science Lab at www.Datasciences.org.

CloudComp2019 Technical Program

Note: Paper presentation time is 15 minutes including Q&A time

Session 1A -- Cloud based Data Analytics (I)

Distributed Stochastic Alternating Direction Method of Multipliers for Big Data Classification

Huihui Wang (Nanjing University of Science and Technology), Xinwen Li (Nanjing University of Posts and Telecommunications), Xingguo Chen (Nanjing University of Posts and Telecommunications), Lianyong Qi (Qufu Normal University), Xiaolong Xu (Nanjing University of Science and Technology)

Personalized Recommendation Algorithm Considering Time Sensitivity

Fuzhen Sun (Shandong University of Technology), Haiyan Zhuang (Railway Police College), Jin Zhang (Shandong University of Technology), Zhen Wang (Shandong University of Technology), Kai Zheng (Shandong University of Technology)

Cloud-based Master Data Platform for Smart Manufacturing Process

Lei Ren (Beihang University), Ziqiao Zhang (Beihang University), Chun Zhao (Beijing Information Science and Technology University), Guojun Zhang (Beihang University)

A Semi-supervised Classification for Hyperspectral Image by Triple Classifiers with Data Editing and Deep Learning

Guoming Zhang (Nanjing University), Junshu Wang (Nanjing Normal University), Ge Shi (Nanjing Normal University), Jie Zhang (Nanjing University), Wanchun Dou (Nanjing University)

Session 1B -- Cloud Applications (I)

A Parallel Drone Image Mosaic Method based on Apache Spark

Yirui Wu (Hohai University), Lanbo Ge (Hohai University), Yuchi Luo (Hohai University), Deqiang Teng (Hohai University), Jun Feng (Hohai University)

CycleSafe: Safe Route Planning for Urban Cyclists

Mehdi Shah (University of Auckland), Tianqi Liu (Northeastern University), Sahil Chauhan (University of Auckland), Lianyong Qi (Qufu Normal University), Xuyun Zhang (The University of Auckland)

Prediction of Future Appearances via Convolutional Recurrent Neural Networks Based on Image Time Series in Cloud Computing

Zao Zhang (State University of New York at Binghamton, US), Xiaohua Li (State University of New York at Binghamton, US)

Video Knowledge Discovery Based on Convolutional Neural Network

Jinjiao Lin (Shandong University of Finance and Economics), Chunfang Liu (Shandong University of Finance and Economics), Lizhen Cui (Shandong University), Weiyuan Huang (Shandong University of Finance and Economics), Rui Song (Shandong University), Yanze Zhao (Shandong University of Finance and Economics)

Session 2A -- Resource Scheduling

A Self-Adaptive PSO-based Dynamic Scheduling Method on Hierarchical Cloud Computing

Shunmei Meng (Nanjing University of Science and Technology), Weijia Huang (Nanjing University of Science and Technology), Xiaolong Xu (Key Laboratory of Intelligent Perception and Systems for High-Dimensional Information of Ministry of Education, Nanjing University of Science and Technology), Qianmu Li (Nanjing University of Science and Technology), Wanchun Dou (Nanjing University), Bowen Liu (Nanjing University)

Application of Bluetooth Low Energy Beacons and Fog Computing for Smarter Environments in Emerging Economies

Mingxu Sun (School of Electrical Engineering University of Jinan, Jinan, China), Kondwani Kamoto (Jiangsu Collaborative Innovation Center of Atmospheric Environment and Equipment Technology (CICAET), Nanjing University of Information Science and Technology, Nanjing, China), Qi Liu (Shandong Beiming Medical Technology Ltd., Jinan, China), Xiaodong Liu (Edinburgh Napier University), Lianying Qi (Qufu Normal University)

Near-Data Prediction Based Speculative Optimization in a Distribution Environment

Qi Liu (Shandong Beiming Medical Technology Co., Ltd.), Mingxu Sun (University of Jinan), Xueyan Wu (Nanjing University of Information Science & Technology), Dandan Jin (Nanjing University of Information Science & Technology), Xiaolong Xu (Nanjing University of Information Science & Technology), Xiaodong Liu (Edinburgh Napier University Edinburgh)

Rendering of Three-Dimensional Cloud based on Cloud Computing

Yonghua Xie (Nanjing University of Information Science and Technology), Xiaoyong Kou (Nanjing University of Information Science and Technology), Ping Li (Nanjing University of Information Science and Technology), Xiaolong Xu (Nanjing University of Information Science and Technology)

Session 2B -- Cloud Applications (II)

An Intelligent System Security Event Description Model

Qianmu li (Nanjing University of Science and Technology), Yini Chen (Nanjing University of Science and Technology), Shunmei Meng (Nanjing University of Science and Technology), Huaqiu Long (Wuyi University), Jun Hou (Nanjing Institute of Industry Technology), Zhe Sun (Jiangsu Zhongtian Technology Co. Ltd.)

Designing a Bit-Based Model to Accelerate Query Processing Over Encrypted Databases in Cloud

Sultan Almakdi (University of Arkansas), Brajendra Panda (University of Arkansas)

Review of Network Flow Watermarking for Intrusion Tracing

Qianmu Li (Nanjing University of Science and Technology), Hui Chen (Nanjing University of Science and Technology), Shunmei Meng (Nanjing University of Science and Technology), Zhen Ni (Nanjing Xiaozhuang University), Zhe Sun (Jiangsu Zhongtian Technology Co., Ltd)

A Multi-Objective Virtual Machine Scheduling Algorithm in Fault Tolerance aware Cloud Environments

Heyang Xu (Henan University of Technology), Pengyue Cheng (Henan University of Technology), Yang Liu (Henan University of Technology), Wei Wei (Henan University of Technology), Wenjie Zhang (Information Engineering University)

Session 3A – Cloud based Data Analytics (II)

Time-varying Water Quality Analysis with Semantical Mining Technology

Jun Feng (Hohai University), Qinhan Yu (Hohai University), Yirui Wu (Hohai University)

Data-driven Fast Real-time Flood Forecasting Model for Processing Concept Drift

Le Yan (Hohai University), Jun Feng (Hohai University), Yirui Wu (Hohai University), Tingting Hang (Hohai University)

A Survey on Dimension Reduction Algorithms in Big Data Visualization

Zheng Sun (Chinese University of Hong Kong, Shenzhen), Weiqing Xing (Shenzhen Institute of Pharmacovigilance and Risk Management), Wenjun Guo (Shenzhen Research Institute of Big Data), Seungwook Kim (Shenzhen Research Institute of Big Data), Hongze Li (Shenzhen Research Institute of Big Data), Jianru Wu (Shenzhen Institute of Pharmacovigilance and Risk Management), Yiwen Zhang (Anhui University), Bin Cheng (Shenzhen Institute of Pharmacovigilance and Risk Management), Shenghui Cheng (Shenzhen Research Institute of Big Data & The Chinese University of Hong Kong, Shenzhen), Wenye Li (Shenzhen Research Institute of Big Data & The Chinese University of Hong Kong, Shenzhen)

Quantum Searchable Encryption for Cloud Data Based on Delegating Quantum Computing

Yinsong Xu (Nanjing University of Information Science & Technology), Wenjie Liu (Nanjing University of Information Science & Technology), Junxiu Chen (Nanjing University of Information Science & Technology), Lian Tong (Jiangsu Maritime Institute)

Quantum Solution for the 3SAT Problem based on IBM Q

Ying Zhang (NARI Information and Communication Technology Co., Ltd.), Yu-xiang Bian (NARI Group Corporation/State Grid Electric Power Research Institute), Qiang Fan (NRGD Quantum Technology Co., Ltd.), Junxiu Chen ()

Cloud Grazing Management and Decision System Based on WebGIS

Dong Li (College of Information Science and Technology), Chuanjian Wang (College of Information Science and Technology), Tianying Yan (College of Information Science and Technology), Qilei Wang (College of Information Science and Technology), Ju Wang (College of Information Science and Technology), Wanlong Bing (College of Information Science and Technology)

Session 3B -- Cloud QoS

PSVM: Quantitative Analysis Method of Intelligent System Security Risk in Independent Host Environment

Qianmu Li (Nanjing University of Science and Technology), Shanming Wei (Nanjing University of Science and Technology), Shunmei Meng (Nanjing University of Science and Technology), Mahardhika Pratama (Nanyang Technological University), Yi Xia (PT.Sinoma Engineering Indonesia)

Coordinated Placement of Meteorological Workflows and Data with Privacy Conflict Protection

Tao Huang (Silicon Lake College), Jun Xue (Nanjing University of Information Science and Technology), Mei Hu (Shanghai HuanAn Environmental Management Limited Company), Qing Yang (Silicon Lake College), Chong Tian (Silicon Lake College), Dan Zeng (Wuhan University of Technology)

Method and Application of Homomorphic Subtraction of The Paillier Cryptosystem in Secure Multi-party Computational Geometry

Meng Liu (Shandong University, Weihai), Yun Luo (University of Technology Sydney), Chi Yang (Beijing Institute of Technology), Dongliang Xu (Shandong University, Weihai)

A Secure Data Access Control Scheme Without Bilinear Pairing in Edge Computing

Xiaofei Sheng (Qufu Normal University), Junhua Wu (Qufu Normal University), Guangshun Li (Qufu Normal University), Qingyan Lin (Qufu Normal University), Yonghui Yao (Qufu Normal University)

Simulations on the Energy Consumption of WRF on Meteorological Cloud

Junwen Lu (Xiamen University of Technology), Yongsheng Hao (NUIST), Kesou Wu (Xiamen University of Technology), Yingyue Chen (Xiamen University of Technology)

A Survey of Information System Risk Assessment Models Standards and Methods

Qianmu Li (Nanjing University of Science and Technology), Zijian Ying (Nanjing University of Science and Technology), Shunmei Meng (Nanjing University of Science and Technology), Zhen Ni (Nanjing Xiaozhuang University), Zhe Sun (Jiangsu Zhongtian Technology Co., Ltd)

Session 4A -- Cloud Based Data Analytics (II)

Topic Detection from Arabic Social Media in Smart Cities

Yu Zheng (Nanjing University of Information Science and Technology), QianXiong Xu (Nanjing University of Information Science & Technology)

Design and Development of an Intelligent Semantic Recommendation System for Websites

Zhiqiang Zhang (National Meteorological Information Center), Heping Yang (National Meteorological Information Center), Di Yang (National Meteorological Information Center), Xiaowei Jiang (National Meteorological Information Center), Nan Chen (National Meteorological Information Center), Mingnong Feng (National Meteorological Information Center), Ming Yang ()

A Lightweight Neural Network Combining Dilated Convolution and Depthwise Separable Convolution

Wei Sun (Nanjing University of Information Science & Technology), Jie Zhou (Nanjing University of Information Science & Technology), Rui Zhang (Nanjing University of Information Science & Technology Nanjing), Zheng He (Rensselaer Polytechnic Institute)

Resource Management Framework Based on Stacelberg Game in Vehicular Edge Computing

Ying Zhang (Qufu Normal University), GuangShun Li (Qufu Normal University), JunHua Wu (Qufu Normal University), XiaoFei Sheng (Qufu Normal University), Jiahe Yan (Qufu Normal University),

Research on Coordination Control Theory of Greenhouse Cluster Based on Cloud Computing

Xiangnan Zhang (China Agriculture University), Wenwen Gong (China Agricultural University), Yifei Chen (China Agriculture University), Dan Li (China Agriculture University), Yawei Wang (China Agriculture University)

Anomalous Taxi Route Detection System based on Cloud Services

Yu Gu (University of Auckland), Yun Luo (University of Technology Sydney), Zihao Guang (University of Auckland), Lianyong Qi (Qufu Normal University), Taoran Wu (Guizhou University of Finance and Economics), Xuyun Zhang (University of Auckland)

Session 4B -- Cloud Architecture

MCOPSSPM: Multi-Constrained Optimized Path Selection Based Spatial Pattern Matching in Social Networks

Ying Guo (Qingdao University of Science and Technology), Lianzhen Zheng (Qingdao University of Science and Technology), Yuhan Zhang (Qingdao University of Science and Technology), Guanfeng Liu (Macquarie University)

A Multi-objective Computation Offloading Method in Multi-cloudlet Environment

Kai Peng (Huaqiao University), Shuaiqi Zhu (Huaqiao University), Lixin Zheng (Huaqiao University), Xiaolong Xu (Nanjing University of Science and Technology), Victor Leung (The University of British Columbia)

A Survey of QoS Optimization and Energy Saving in Cloud, Edge and IoT

Yilin Wang (Nanjing University of Information Science & Technology), Zheng Li (Nanjing University of Information Science & Technology), Dandan Peng (Nanjing University of Information Science & Technology), Le Sun (Nanjing University of Information Science & Technology), Zhiguo Qu (Nanjing University of Information Science & Technology)

A Multi-objective Computation Offloading Method for Hybrid Workflow Applications in Mobile Edge Computing

Kai Peng (Huaqiao University), Bohai Zhao (Huaqiao University), Xingda Qian (Huaqiao University), Xiaolong Xu (Nanjing University of Science and Technology), Lixin Zheng (Huaqiao University), Victor Leung (The University of British Columbia)

An Introduction and Comparison of the Application of Cloud and Fog in IoT

Zheng Li (Nanjing University of Information Science & Technology), Yilin Wang (Nanjing University of Information Science & Technology)

Distributed Cloud Monitoring Platform based on Log Insight

Haihong E (Beijing University of Posts and Telecommunications), Yuanxing Chen (Beijing University of Posts and Telecommunications), Meina Song (Beijing University of Posts and Telecommunications), Meijie Sun (Beijing University of Posts and Telecommunications)

Session 5A -- Cloud Applications (II)

Application Design of Provincial Meteorological Service System Based on National Unified Meteorological Data Environment

Qing Chen (Zhejiang Provincial Meteorological Information and Network Center), Ming Yang (), You Zeng (Zhejiang Meteorological Information Network Center), Shucheng Wu (Zhejiang Meteorological Information Network Center), Yun Xiao (Zhejiang Meteorological Information Network Center), Yueying Hong (Zhejiang Meteorological Information Network Center)

Moving Vehicle Detection Based on Optical Flow Method and Shadow Removal

Wei Sun (Nanjing University of Information Science & Technology), Min Sun (Nanjing University of Information Science & Technology), Xiaorui Zhang (Nanjing University of Information Science & Technology), Zhengguo Zhu (Nanjing University of Information Science & Technology), Mian Li (Nanjing University of Information Science & Technology)

Refactor Business Process Models for Efficiency Improvement

Fei Dai (Yunnan University), Qi Mo (Yunnan University), Miao Liu (Yunnan University), Bi Huang (Southwest Forestry University), Tong Li (Yunnan Agricultural University),

A New Model of Cotton Yield Estimation based on AWS

Quan Xu (), Peng Guo ()

Session 5B -- Cloud Based Data Analytics (III)

Collaborative Recommendation Method based on Knowledge Graph for Cloud Services

Weijia Huang (Nanjing University of Science and Technology), Shunmei Meng (Nanjing University of Science and Technology), Qianmu li (Nanjing University of Science and Technology), Xiaoqian Liu (Jiangsu Police Institute)

Efficient Multi-User Computation Scheduling Strategy based on Clustering in Mobile-Edge Computing

Qingyan Lin (Qufu Normal University), Guangshun Li (Qufu Normal University), Junhua Wu (Qufu Normal University), Jiahe Yan (Qufu Normal University), Ying Zhang (Qufu Normal University)

Grazing Trajectory Statistics and Visualization Platform Based on Cloud GIS

Dong Li (Shihezi University), Chuanjian Wang (Shihezi University), Qilei Wang (Shihezi University), Tianying Yan (Shihezi University), Ju Wang (Shihezi University), Wanlong Bing (Shihezi University)

Cloud-based AGV Control System

Xiangnan Zhang (China Agriculture University), Wenwen Gong (China Agricultural University), Haolong Xiang (University of Auckland), Yifei Chen (China Agriculture University), Dan Li (China Agriculture University), Yawei Wang (China Agriculture University)