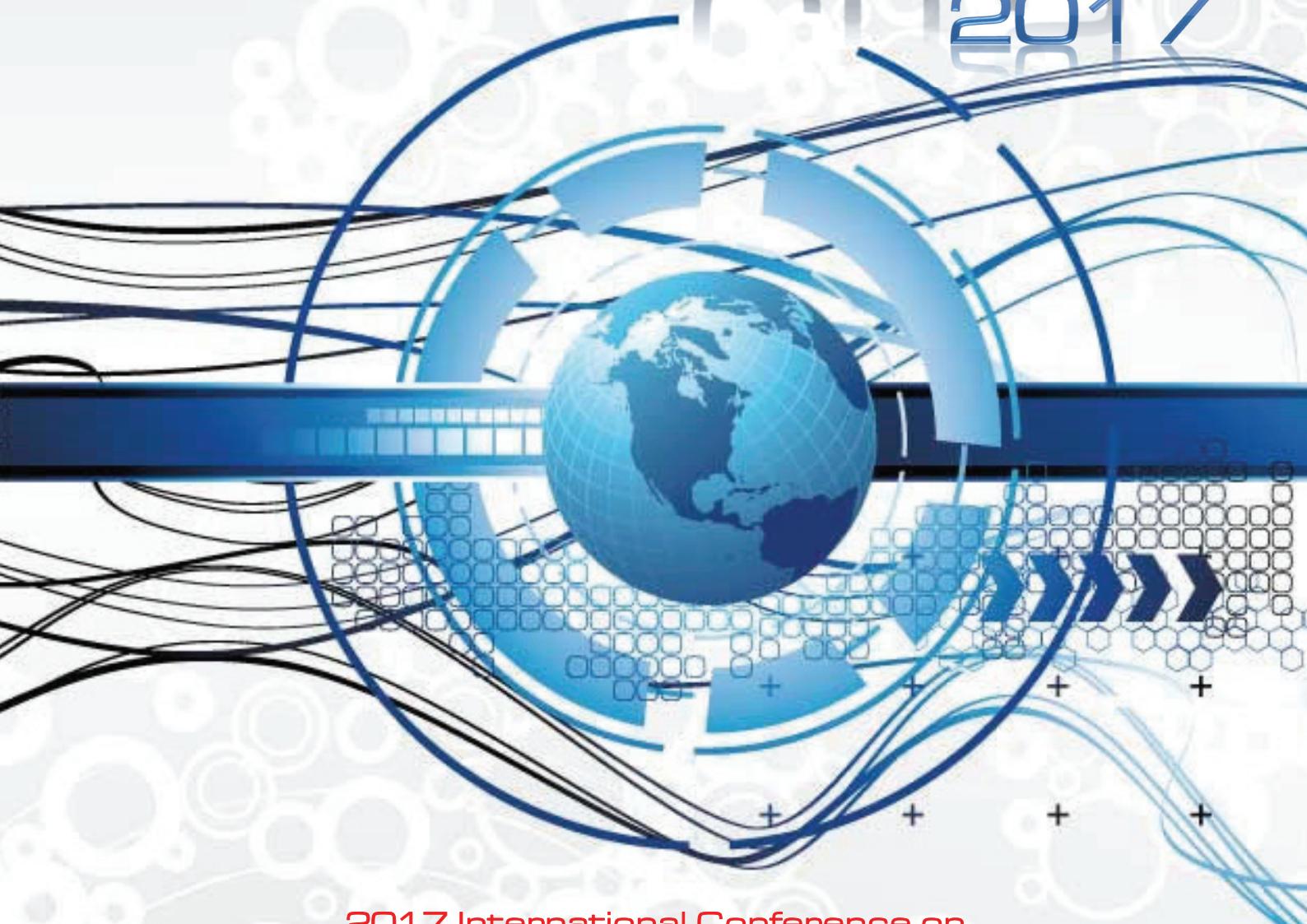


IEEE CITS 2017



2017 International Conference on
Computer, Information and Telecommunication Systems

July 21-23, 2017, Dalian, China

Technical Sponsors:



CITS 2017 is sponsored by Dalian University of Technology, China.



CITS 2017 General Chairs' Message

Welcome to the 2017 International Conference on Computer, Information and Telecommunication Systems (CITS 2017). This year's conference marks the sixth CITS, which is being held on annual basis.

CITS 2017 offers a unique forum for researchers and practitioners from academia, industry, business, and government to share their expertise results and research findings in all areas of Computer, Information and Telecommunication Systems.

This year's conference includes an outstanding technical program, and four distinguished keynote speakers and two invited speakers. We have chosen the campus of the Dalian University of Technology, DUT, China as the site for our conference.

The city of Dalian is famous in its great weather, food, beaches, parks, museums, and historical significance. The site provides excellent meeting facilities and will be a comfortable setting for our conference.

The CITS 2017 technical program consists of several parallel tracks and will last for three days. Each track consists of several sessions of top quality papers. The topics covered in the program include, among others, wireless networks, wireless sensor networks, computer networks and telecommunications, admission control in networking, cyber security, information security, cell networks, 4G and 5G systems, data analytics, parallel and distributed computing, databases and data mining, hardware/architecture/real-time systems, MIMO systems, modeling and simulation, performance evaluation, digital signal processing, image processing, pattern recognition, multimedia systems and video processing, character and pattern recognition, artificial intelligence, neural networks, fuzzy logic, genetic algorithms, learning automata, cloud computing, web systems, security and information assurance, cryptography, algorithms, biometrics, e-services and e-business, and collaborative learning systems, among others.

This year, we received a large number of quality papers. Only very high quality papers have been accepted. The acceptance ratio is 40.5%. This is indicative of the diligent work of the technical program committee chairs, technical program committee members and reviewers. The accepted papers come from all over the World with representation from academia, industry, business and government.

Many individuals have contributed to the success of this high caliber international conference. Our sincere appreciation goes to all authors including those whose papers were not included in the program. Many thanks are also due to our distinguished keynote speakers for their valuable contribution to the conference.

Special thanks are also due to the senior program chair, Prof. Petros Nicopolitidis, for his superior role in leading the technical program efforts. Thanks also are due to the other program chairs. Many thanks also go to the technical program committee members and reviewers for their timely work and efforts.

Special thanks go to the publication chair, Prof. Daniel Cascado Caballero, for his outstanding work and dedication. Thanks to our dedicated Webmaster Antonio Bueno. Special thanks go to the international publicity committee members for their excellent work.

We would like to also thank other members of the organizing committee. Special thanks are due to the international steering committee of the CITS.

We would like to thank the IEEE Communication Society, and SCS for their technical co-sponsorship of the conference. We like to thank the leadership, faculty, staff and students of the Dalian University of Technology for their help and support and for hosting the conference.

Finally, on behalf of the 2017 IEEE International Conference on Computer, Information and Telecommunication Systems (CITS 2017), IEEE ComSoc, and Society for Modeling and Simulation International (SCS), we invite all of you to join us in Dalian, China, at CITS 2017. Enjoy the program and your stay in the gorgeous city of Dalian.

Prof. Mohammad S. Obaidat, General Chair, Fellow of IEEE, Fellow of SCS, Past President of the Society for Modeling & Simulation International (SCS), Founding Editor in Chief, Wiley Security and Privacy Journal, Editor in Chief, International Journal of Communication Systems
Fordham University, USA

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Executive General Chair
Ming-Chuan University, Taiwan

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Prof. Kuei-Fang (Leila)
Hsiao



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Liang Zou, University of British Columbia

Program At a Glance

Friday, July 21		Saturday, July 22		Sunday, July 23	
08:30 09:00	Registration	08:30 10:10	Networking Systems 3 Inf. Technology 2	08:30 10:30	Security Systems Inf. Technology 5 Networking Systems 7
09:00 09:30					
09:30 10:20	Opening Session	10:10 10:25	Coffee break	10:30 11:00	Coffee break
10:20 10:35	Coffee break	10:25 12:05	Networking Systems 4 Inf. Technology 3	11:00 12:00	Closing Session
10:35 11:25	Keynote Speech 2				
11:25 12:45	Lunch	12:05 13:25	Lunch		
12:45 14:05	Networking Systems 1 Computer Systems Telecomm. Systems 1	13:25 14:45	Networking Systems 5 Inf. Technology 4		
14:05 14:20	Coffee break	14:45 15:00	Coffee break		
14:20 15:40	Networking Systems 2 Inf. Technology 1	15:00 16:20	Networking Systems 6 Telecomm. Systems 2		
17:00 21:00	Awarding Ceremony & Banquet				

Registration Desk Opening Time:

Keynote Sessions at Library Hall: 21 JUL 08:30 – 09:30 Open

Presentation Sessions at Teaching Building A (Venue: A210, A212, A216): 21-22 JUL 13:00 – 14:00 and 22-23 JUL 08:30 – 09:30 Open

Luncheon (noon, 21 & 22 July):

Time: Please check the details in Program

Place: The Restaurant in DUT campus close to Teaching Building A (Venue) and Library Hall

Banquette (evening, 21 JUL):

Time: 17:00-21:00 on July 21, 2017 (Meeting Point: Venue; Departure at 17:00)

Place: Jiulongwan International Hotel (大连九龙湾国际海景酒店 : 大连开发区海滨路 98 号 , 近松苑街)

Transportation: Only one free shuttle service available from Venue for Banquette departing at 17:00; if by taxi: 9.6km, around 19 minutes and 24RMB from Venue

Schedule

FRIDAY, July 21

08:30 – 09:00

Registration

09:00 – 09:30

Opening Session

9:30 - 10:20

Keynote Speech 1

Blockchain: The Distributed Trust Technology

Session Chair: Prof. Mohammad S. Obaidat (Fordham University, USA)



Distinguished Keynote Speaker: Raj Jain
Washington University in Saint Louis, U.S.A.

Blockchain is a new disruptive technology and is expected to transform the way we do banking, contracts, manufacturing, and others. It is a new distributed trust technology. We will discuss what it is and how it opens new opportunities for entrepreneurs and researchers in networking, security, and computing.

Short Bio

Raj Jain is a Life Fellow of IEEE, a Fellow of ACM, A Fellow of AAAS, a winner of ACM SIGCOMM Award 2017, 2015 A. A. Michelson Award from Computer Measurement Group, CDAC-ACCS Foundation Award 2009, Distinguished Alumni award from Indian Institute of Science Alumni Association, and ACM SIGCOMM Test of Time award 2006. Dr. Jain is currently a Professor of Computer Science and Engineering at Washington University in St. Louis. Previously, he was one of the Co-founders of Nayna Networks, Inc - a next generation telecommunications systems company in San Jose, CA. Further information is at <http://www.cse.wustl.edu/~jain/>

10:20 – 10:35

Coffee Break

Keynote Speech 2

Information and Communications Technologies for Smart Homes for Elderly Healthcare

Session Chair: Prof. Laurence T. Yang (St. Francis Xavier University, Canada)



Distinguished Keynote Speaker: Jamal Deen
McMaster University, Canada

In the past several decades, we have witnessed a dramatic increase in life expectancy that was driven, in a large measure, by improvements in public health, nutrition, medicine and education. This has resulted in the aging population demographics, which when coupled with falling birth rates, are now posing significant burdens to the socio-economic well-being of many countries. In fact, never before in human history have we been confronted with such a large aging population, nor have we developed solid, cost-effective solutions for the healthcare and social needs and well-being of the elderly. Here, we will describe the role of smart sensors and smart homes in addressing several of the needs in elderly health and well-being. First, we will discuss our non-invasive, non-intrusive and user friendly electrocardiogram (ECG) system towards long term monitoring of heart problems. Second, we describe our walking pattern analysis system based on signals from inertial sensors acquired from straight walking combined with direction changes and turns. From the walking signals, features such as speed, acceleration, swing, roll, yaw, turn ratio, bipedal behavior and asymmetry are extracted and used to characterize and classify individuals in distinct walking ages. The walking analyzer system has also proven to be a reliable and precise predictive and comparative measure for determining falls and other health issues in individuals. Third, we discuss a smart joint monitoring system to provide quantitative assessment on the recovery of an injured joint such as a knee or an ankle. Through this quantitative monitoring, the rehabilitation process can be shortened or adjusted to the state and rate of the recovery, thus resulting in an optimized and fast recovery process. These on-body sensors as well as other sensor systems in the environment, such as for a smart sleeping environment, can be used in a smart medical home for elderly healthcare applications. Further, by integrating information technology, wireless communication, web-based technologies and autonomies, we will be able to develop new, smart and cost-effective solutions for the health wellness of the elderly. Such a solution would enable elderly to lead independent lifestyles in their own homes while being continuously monitored for the early detection of symptoms, so diseases can be treated earlier than in later stages as is currently done; to promote health wellness; as well as to treat chronic illnesses. Finally, future perspectives and research challenges related to heart monitoring, walking and falling analyser, joint monitoring and rehabilitation, optimized sleeping environment, and autonomic computing will be discussed.

Short Bio

Dr. M. Jamal Deen is currently Distinguished University Professor and Senior Canada Research Chair in Information Technology, McMaster University. His current research interests are nanoelectronics, optoelectronics, nanotechnology and their emerging applications to health and environmental sciences. Dr. Deen's research record includes more than 540 peer-reviewed articles (about 20% are invited and an h-index of 53), two textbooks on "Silicon Photonics- Fundamentals and Devices" and "Fiber Optic Communications: Fundamentals and Applications", 6 awarded patents that have been used in industry, and 17 best paper/poster/ presentation awards. Over his career, he has won more than fifty-five awards and honors as an undergraduate student at the University of Guyana, Dr. Deen was the top ranked mathematics and physics student and the second ranked student at the university, winning the Chancellor's gold medal and the Irving Adler prize. As a graduate student, he was a Fulbright-Laspau Scholar and an American Vacuum Society Scholar. He is a Distinguished Lecturer of the IEEE Electron Device Society for

more than a decade. His awards and honors include the Callinan Award as well as the Electronics and Photonics Award from the Electrochemical Society; the Distinguished Researcher Award from the Province of Ontario; a Humboldt Research Award from the Alexander von Humboldt Foundation; the Eadie Medal from the Royal Society of Canada; McNaughton Gold Medal (highest award for engineers), the Fessenden Medal and the Ham Education Medal, all from IEEE Canada. In addition, he was awarded the four honorary doctorate degrees in recognition of his exceptional research and scholarly accomplishments, professionalism and service. Dr. Deen has also been elected Fellow status in ten national academies and professional societies including The Royal Society of Canada - The Academies of Arts, Humanities and Sciences (the highest honor for academics, scholars and artists in Canada), IEEE, APS (American Physical Society) and ECS (Electrochemical Society). Currently, he is serving as the elected President of the Academy of Science, The Royal Society of Canada.

11:25 – 12:45

Lunch

12:45 - 14:05

Networking Systems 1

Session Chair: J.Gao (Dalian University of Technology, P.R. China) & Y.Ma (Nanchang Institute of Technology, P.R. China)

An Energy-Based Weight Selection Algorithm of Monitor Node in MANETs

Yongcheng Li (CEMEE, P.R. China); Jinfeng Gao and Yao Yu (Northeastern University, P.R. China); Ting Cao (Shenyang International Engineering Consulting Center, P.R. China)

Performance Analysis of VoWIFI on RAN

Yan Yang, Yong Qiu and Tao Zhang (China Unicorn Network Technology Research Institute, P.R. China)

On Achieving Optimal Congestion Control for Elastic Traffic in Cognitive Radio Ad Hoc Networks under Predictable Contact

Long Zhang (University of Science and Technology Beijing, P.R. China); Yuqiong Cao (China Academy of Information and Communications Technology, P.R. China); Haitao Xu (University of Science and Technology Beijing, P.R. China)

Clustering Energy-Efficient Transmission Protocol for Wireless Sensor Networks Based on Ant Colony Path Optimization

Huahongzi Chen (Ocean University of China, P.R. China); Ye Tao (Qingdao University of Science and Technology, P.R. China); Lv Ze and Ruichun Tang (Ocean University of China, P.R. China)

Deadline-Constraint Services in Cloud with Heterogeneous Servers

Sampa Sahoo (NIT, Rourkela, India); Sambit Kumar Mishra and Bibhudatta Sahoo (National Institute of Technology Rourkela, India); Deepak Puthal (UTS, Australia); Mohammad S. Obaidat (Fordham University, USA)

12:45 - 14:05

Computer Systems

Session Chair: R.Ma (Dalian University of Technology, P.R. China) & Y.Li (Hosei University, Japan)

An Advanced Internet of Thing based Security Alert System for Smart Home

Sudeep Tanwar (Institute of Technology Nirma University Ahmedabad Gujarat, India); Pinakin Patel and Kevin Patel (Institute of Technology, Nirma University, Ahmedabad, India); Sudhanshu Tyagi (G. B. Pant University of Agriculture; Technology, Pantnagar, India); Neeraj Kumar (Thapar University Patiala, India); Mohammad S. Obaidat (Fordham University, USA)

Translating OpenACC Program for HAS Environment

Han-Ping Lo and Jean Jyh-Jiun Shann (National Chiao Tung University, Taiwan)

An Investigation for the Design of the Metal Barcode Label with Patterns Read by the Eddy Current Testing

Yin Zhao (HIT, P.R. China); Hongguang Xu (Harbin Institute of Technology, Shenzhen Graduate School, P.R. China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, P.R. China)

A Simple Method to Obtain Relations among Factor Basis Elements for Special Hyperelliptic Curves

Zhu Jie and Xu Mao Zhi (Peking University, P.R. China)

12:45 - 14:05

Telecomm. Systems 1

Session Chairs: K.Xu (PLA University of Science and Technology, P.R. China) & F. Xia (Dalian University of Technology, P.R. China)

Sequence Relay Selection Strategy Based On the Optimal Stopping Theory for Relay Assisted Network

Rui Zhu and Yangchao Huang (Air Force Engineering University, P.R. China); HongWei Liu (5111 Mail Drop, P.R. China); Lei Jiang (The Information and Navigation Institute, P.R. China); Xu Hua (The Air Force Engineering School, P.R. China)

Enhanced-Accuracy Phase-Equalizer Using Conic-plus-Nonlinear Optimizations

Tian-Bo Deng (Toho University, Japan)

Research on the Third-order Intermodulation Signal Characteristic and Demodulation Product of Communication Radio

Yuan Shiji (Luoyang Electronic Equipment Test Center (LEETC), P.R. China); Dong Jun (State Key Laboratory of CEMEE, P.R. China); Qiu Bingyi (Luoyang Electronic Equipment Test Center (LEETC), P.R. China)

14:05 - 14:20

Coffee break

14:20 - 15:40

Networking Systems 2

Session Chairs: M.Toapanta (Universidad Politécnica Salesiana, Ecuador) & T.Qiu (Dalian University of Technology, P.R. China)

Genetic Algorithm and Probability based Routing Protocol for Opportunistic Networks

Deepak Kumar Sharma (University of Delhi, India); Sanjay Kumar Dhurandher (NSIT, University of Delhi, India); Mohammad S. Obaidat (Fordham University, USA); Aman Bansal (University of Delhi; Netaji Subhas Institute of Technology, India); Apoorv Gupta (University Of Delhi; Netaji Subhas Institute of Technology, India)

A Load Balancing Algorithm based on Key-Link and Resources Contribution Degree for Virtual Optical Networks Mapping

Guoqiang Zhao and Zhanqi Xu (Xidian University, P.R. China); Zilong Ye (California State University, Los Angeles, USA); Kai Wang and Jie Wu (Xidian University, P.R. China)

Design and Simulation of Address Management Protocol Based on DHCPv6 for Large-Scale Wireless Sensor Networks

Xia Wang, Fei Gao and Haifeng Wu (Yunnan Minzu University, P.R. China)

Link Congestion and Lifetime Based In-Network Caching Scheme in Information Centric Networking

Jiahui Kong, Lanlan Rui, Haoqiu Huang and Suijia Yang (Beijing University of Posts and Telecommunications, P.R. China)

14:20 - 15:40

Inf. Technology 1

Session Chair: J.Shann (National Chiao Tung University, Taiwan) & C.Lin (Dalian University of Technology, P.R. China)

An Active Contour for Segmentation of Images of Low Contrast and Blurred Boundaries

Yong Tan (Yangtze Normal University, P.R. China)

A Connected Dominating Set Construction Algorithm Based on Power Selection

Jianguo Yan, Yu Guo and Zhenqiang Mi (University of Science and Technology Beijing, P.R. China); Yang Yang (University of Science and Technology, P.R. China)

Detecting the Internet Water Army via Comprehensive Behavioral Features Using Large-scale E-commerce Reviews

Bo Guo and Hao Wang (Meizu Inc., P.R. China); Yu Sun (California State Polytechnic University, Pomona, USA); Zhaojun Yu (Meizu Inc., P.R. China)

Application of Deep Learning to Sentiment Analysis for Recommender System on Cloud

Preethi G and P. Venkata Krishna (Sri Padmavati Mahila University, India); Mohammad S. Obaidat (Fordham University, USA); V Saritha (Sree Vidyaniketan Engineering College, India); Sumanth Yenduri (Columbus State University, USA)

17:00 - 21:00

Awarding ceremony and banquet

SATURDAY, JULY 22

8:30 - 10:10

Networking Systems 3

Session Chair: T.Qiu (Dalian University of Technology, P.R. China) & Z.Ning (Dalian University of Technology, P.R. China)

A Dynamic Topological Potential and Social Relationship Based Routing Protocol for Mobile Social Delay Tolerant Networks

Xuening Qin (Beijing University of Posts and Telecommunications, P.R. China); Gang Xie (Beijing University of Posts and Telecommunications, P.R. China); Jinchun Gao (Beijing University of Posts and Telecommunications, P.R. China)

Channel Bonding for Next Generation Passive Optical Network Stage 2 (NG-PON2)

Liang Zhang (New Jersey Institute of Technology, USA); Yuanqiu Luo (Huawei Technologies USA, USA); Nirwan Ansari (New Jersey Institute of Technology, USA); Bo Gao (Huawei, USA); Xiang Liu (Futurewei Technologies, USA); Frank Effenberger (Huawei Technologies, USA)

Comparative Analysis of SDN and Conventional Networks using Routing Protocols

Deepthi Gopi (University of Oklahoma, USA); Samuel Cheng (Tongji University, P.R. China); Robert C Huck (University of Oklahoma, USA)

Genetically Inspired Contact Plan Design in Small Satellite Networks

Cui-Qin Dai and Huang Tang (Chongqing University of Posts and Telecommunications, P.R. China)

LMKS: An Efficient Scheme over POF Switch to Improve Latency and Throughput

Li Ding (University of Science and Technology of China, P.R. China); Wang Jinlin (Institute of Acoustics, CAS, P.R. China); Lingfang Wang (Institute of Acoustics, CAS., P.R. China); Yiqiang Sheng (Chinese Academy of Sciences, P.R. China)

8:30 - 10:10

Inf. Technology 2

Session Chairs: X.Lai (Dalian University of Technology, P.R. China) & H.Yan (Insititute of Spacecraft System Engineering, China Academy of Space Technology, P.R. China)

Trust-enhanced Matrix Factorization using Page Rank for Recommender System

Jiawei Lu, Yu Guo and Zhenqiang Mi (University of Science and Technology Beijing, P.R. China); Yang Yang (University of Science and Technology, P.R. China)

Texture-based Treatment Prediction by Automatic Liver Tumor Segmentation on Computed Tomography

Shyi-Chyi Cheng and Chao-Lun Kuo (National Taiwan Ocean University, Taiwan); Chih-Lang Lin (Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Taiwan); Kuei-Fang Hsiao and Shang-Hung Lee (Ming Chuan University, Taiwan)

Research on Personalized Hybrid Recommendation System

Yannan Song (University of Inner Mongolia, P.R. China)

An OpenFlow-Assisted Framework for Peer-to-Peer Live Streaming

Jianwei Zhang (Shandong Computer Science Center (National Supercomputer Center in Jinan, P.R. China); Chunling Yang (Zhejiang University, P.R. China)

A Method of Low-rank Decomposition with Feature Point Detection for Moving Target Tracking

Hui Wang (Hezhou University, P.R. China)

10:10 - 10:25

Coffee break

10:25 - 12:05

Networking Systems 4

Session Chairs: Y.Luo (Huawei Technologies USA, USA) & M.Toapanta (Universidad Politécnica Salesiana, Ecuador)

WBAN on Hardware: Implementation and Optimization based on IEEE 802.15.6

Xiaonan Su, Chang Li, Yueyang Song and Xiaoming Yuan (Xidian University, P.R. China)

Performance Evaluation of Reliable Communications for Wireless In-body Sensor Networks

Liting Zhang, Mark S Leeson, Yangzhe Liao and Matthew D Higgins (University of Warwick, United Kingdom (Great Britain))

Cross-layer Collaborative Interconnecting for Multi-domain Software Defined Optical Network

Qinghai Ou (State Grid Information; Telecommunication Group Co., LTD.); Shanshan Liu (University of Science and Technology Beijing, P.R. China); Zhu Liu (State Grid Information; Telecommunication Group Co., LTD.); Wenjing Li (State Grid Information; Telecommunication Group Co., LTD., P.R. China); Xiaolong Yang (University of Science; Technology Beijing, P.R. China)

Time-Efficient Dynamic Threshold-Based Load Balancing Technique for Cloud Computing.

Sambit Kumar Mishra, Md Khan and Bibhudatta Sahoo (National Institute of Technology Rourkela, India); Deepak Puthal (UTS, Australia); Mohammad S. Obaidat (Fordham University, USA); Kuei-Fang Hsiao (Ming Chuan University, Taiwan)

10:25 - 12:05

Inf. Technology 3

Session Chairs: R.Ma (Dalian University of Technology, P.R. China) & J.Shann (National Chiao Tung University, Taiwan)

GATA: GPS-Arduino Based Tracking and Alarm System for Protection of Wildlife Animals

Maharshi Gor (Institute of Technology, Nirma University, Ahmedabad, Gujarat, India); Jayneel Vora (Nirma University, India); Sudeep Tanwar (Institute of Technology Nirma University Ahmedabad Gujarat, India); Sudhanshu Tyagi (G. B. Pant University of Agriculture; Technology, Pantnagar, India); Neeraj Kumar

(Thapar University Patiala, India); Mohammad S. Obaidat (Fordham University, USA); Balqes Sadoun (Al-Balqa' Applied University, Jordan)

The Study of Segmentation of Rubbings Image Based on OTSU&Histogram Differential Algorithm

Yongli Ma (Nanchang Institute of Technology; P.R. China); Zhikai Huang (Nanchang Institute of Technology, P.R. China)

Text Genre Classification Research

Zhijuan Xu and Lizhen Liu (Capital Normal University, P.R. China); Wei Song (Capital Normal University, P.R. China); Chao Du (Capital Normal University, P.R. China)

Web Service Framework to Translate Text into Sign Language

Teranai Vichyaloetsiri (King Mongkut's University of Technology North Bangkok, Thailand); Pongpisit Wuttidittachotti (Faculty of Information Technology, King Mongkut's University of Technology North Bangkok, Thailand)

A Fast Algorithm Based on Human Visual System for Abnormal Event Detection

Fengchang Fei (School of Information Technology, Jiangxi University of Finance and Economics, P.R. China); Zhijun Fang (Jiangxi University of Finance and Economics, P.R. China); Lei Shu (School of Information Technology; Jiangxi University of Finance and Economics, P.R. China)

12:05 - 13:25

Lunch

13:25 - 14:45

Networking Systems 5

Session Chairs: Y.Luo (Huawei Technologies USA, USA) & Dr. J.Gao (Dalian University of Technology, P.R. China)

Spectrum Sensing With Random Arrivals of Primary Users by Using Multiple Antennas

Jun Wang (Fuzhou University & College of Electrical Engineering and Automation, P.R. China); Zhe Chen, Yang Xu and Zhenyi Song (Fuzhou University, P.R. China); Riqing Chen (Fujian Agriculture and Forestry University, P.R. China)

A Network Traffic Shunt System in SDN Network

Chia-Wei Tseng and Yu-Kai Huang (Taiwan National Central University, Taiwan); Yao-Tsung Yang, Chien-Chang Liu, Deng-Yang Huang and Li-Der Chou (National Central University, Taiwan)

GSM Timeslot Detection and Switching for Power Amplifier Duty Cycling in Community Cellular Networks

Adrian Vidal and Miguel Carlo Purisima (University of the Philippines, Diliman, Philippines); Maria Theresa Perez (Research Associate, Philippines); Cedric Angelo Festin (Networks and Distributed Systems Lab, Philippines); Matthew G Podolsky and Eric Brewer (University of California, Berkeley, USA)

Lifetime Enhanced Relay Selection Scheme in Wireless Body Area Networks

Yu Zhang, Bing Zhang and Shi Zhang (Xidian University, Xi'an, P.R. China)

13:25 - 14:45

Inf. Technology 4

Session Chairs: Z.Ning (Dalian University of Technology, P.R. China) & H.Yan (Institute of Spacecraft System Engineering, China Academy of Space Technology, P.R. China)

The Effect of Spatial Autocorrelation on Spatial Co-Location Pattern Mining

Jiangli Duan and Lizhen Wang (Yunnan University, P.R. China); Hu Xin (Beijing Normal University, P.R. China)

Risk Early Warning and Evaluation Method for Electric Power SDH Networks Based on BP Neural Network Algorithm

Huicong Fan, Zhijiang Fu and Hua Shao (State Grid Hebei Company, P.R. China); Xiaomei Wang and Xiaotong Wang (Beijing University of Posts and Telecommunications, P.R. China)

Using Single Conspiracy Number to Analyze Game Progress Patterns

Zhang Song and Hiroyuki Iida (Japan Advanced Institute of Science and Technology, Japan)

Quality Management System of GMAW Based on Network

Xiaoxiao Zhou (Nanjing University of Science and Technology, P.R. China); Kehong Wang, Yuehai Feng and Yong Huang (Nanjing University of Science and Technology, P.R. China)

14:45 - 15:00

Coffee break

15:00 - 16:20

Networking Systems 6

Session Chairs: X.Lai (Dalian University of Technology, P.R. China) & J.Gao (Dalian University of Technology, P.R. China)

An Adaptive Routing Algorithm Based on Network Partitioning for 3D Network-on-Chip

Jindun Dai (Waseda University; Shanghai Jiao Tong University, Japan); Xin Jiang (Graduate School of Information Production and Systems, Waseda University, Japan); Takahiro Watanabe (The Graduate School of Information, Production and Systems Of Waseda University, Japan)

OCTMAC: A VLC Based MAC Protocol Combining Optical CDMA with TDMA for VANET.

Qian Mao, Peng Yue, Menghao Xu, Yao Ji and Zongmin Cui (Xidian University, P.R. China)

An Improved Changing-Topology Moving Mesh Method in OpenFOAM.

Jinyu Wang (State Key Laboratory of High Performance Computing, National University of Defense Technology, P.R. China); Xin hai Xu, Chao Li and Yuhua Tang (National University of Defense Technology, P.R. China)

Dynamic Adjusting Time Synchronization for Sensor Networks.

Hongcheng Yan (Institute of Spacecraft System Engineering, China Academy of Space Technology, P.R. China); Wenyi Liu (School of Instrument and Electronics, North University of China, Taiyuan, China); Xianghui Wang and Rui Zhang (Institute of Spacecraft System Engineering, China Academy of Space Technology, P.R. China)

15:00 - 16:20

Telecomm. Systems 2

Session Chairs: C.Lin (Dalian University of Technology, P.R. China) & T.Qiu (Dalian University of Technology, P.R. China)

A method of blind separation for coherent source based on single vector sensor

Shumin Dong (Qingdao University, P.R. China); Bo Zhao (The 92330 Force of PLA, P.R. China); Ying Wang and Tong Zou (Qingdao University, P.R. China)

Performance Evaluation of OFDM Transmission Over Impulsive Noisy Channels

Chol Ho Ri (Pyongyang University of Science and Technology, North Korea); Steven Eisenbarth (Pyongyang University of Science and Technology, USA); Yong Chan Ri (Kim Il Sung University, North Korea); Yu-Taik Chon (Pyongyang University of Science and Technology, North Korea)

IMWBF Decoding Algorithm with Dynamic Magnitude Update for LDPC Codes

Hui Zhao and Jianping Zheng (Xidian University, P.R. China)

Energy Efficient Pre-coder under Time-varying Channel Assumption

Yangchao Huang (Air Force Engineering University, P.R. China); Zan Li (Xidian University, P.R. China); Rui Zhu (Air Force Engineering University, P.R. China); Jianxin Guo and Wenzhun Huang (School of Information Engineering Xijing University, P.R. China)

8:30 - 10:30

Security Systems

Session Chairs: B.Sadoun (Al-Balqa' Applied University, Jordan) & R.Ma (Dalian University of Technology, P.R. China)

A Chaotic Convolutional Encryption Scheme Based on Multiple Chaos Mapping, Dr. Xiaozhong Zhang (Institute of Information Engineering, Chinese Academy of Sciences; School of Cyber Security, University of Chinese Academy of Sciences, P.R. China); Ying Wang and Yongming Wang (Institute of Information Engineering, Chinese Academy of Sciences, P.R. China)

A Practical Identity Authentication Scheme for Measurement-Device-Independent Quantum Key Distribution

Shuquan Ma (Xidian University); Changhua Zhu and Changxing Pei (Xidian University, P.R. China)

Performance Analysis of Polarization Coding BB84 Quantum Key Distribution System Under non-Markovian Channel

Wei Liu (Xidian University); Changhua Zhu, Linxi Zhang and Changxing Pei (Xidian University, P.R. China)

An Effective Semi-supervised Model for Intrusion Detection Using Feature Selection Based LapSVM

Xiaofeng Zhang (National University of Defense Technology, P.R. China); Jianwei Tian (State Grid Hunan Electric Power Corporation Research Institute, P.R. China); Peidong Zhu (NUDT, P.R. China); Jiexin Zhang (National University of Defense Technology, P.R. China)

A Security Algorithms Approach to Apply to the Civil Registry Database of the Ecuador Segundo Moisés Toapanta Toapanta (Universidad Politécnica Salesiana; CUCEA - Universidad de Guadalajara, Ecuador); Luis Enrique Mafla Gallegos (Escuela Politécnica Nacional, Ecuador); José Antonio JO Orizaga Trejo (CUCEA - Universidad de Guadalajara, Mexico)

A Survey of the Current State of Lightweight Cryptography for the Internet of Things

Julian Okello Wanican, Qingling Liu, Faizan Siddiqui and Chaozhu Zhang (Harbin Engineering University, P.R. China)

8:30 - 10:30

Inf. Technology 5

Session Chairs: X.Lai (Dalian University of Technology, P.R. China) & H.Shi (Yunnan Minzu University, P.R. China)

3D Face Reconstruction based on Progressive Cascade Regression

Lihua Han and Quan Xiao (Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences; University of Chinese Academy of Sciences, P.R. China); Xianyang Liang (Shenzhen Wave Group, P.R. China)

Extended Core-based Community Detection for Directed Networks

Anubhuti Garg and Mohammad Rehaan (University of Ottawa, Canada); Amiya Nayak (SITE, University of Ottawa, Canada)

The Fast Calculation of the Metal Barcode Label Read by the Eddy Current Testing with the Dyadic Green Function Method

Yin Zhao (HIT, P.R. China); Hongguang Xu (Harbin Institute of Technology, Shenzhen Graduate School, P.R. China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, P.R. China)

An Improved CSIR Information Propagation Model in Social Networks

Feng Ding, Bingxin He and Chao Li (Dalian University of Technology, P.R. China); Lan Lan (School of International Studies, Shenyang University, P.R. China)

KMS-Cube --- A General Alternative to Hypercubes for Reducing the Node Degree

Yamin Li (Hosei University, Japan); Wanming Chu (University of Aizu, Japan)

E-commerce Purchase Prediction Approach By User Behavior Data

Ru Jia, Ru LI, Meiju Yu and Shanshan Wang (Inner Mongolia University, P.R. China)

8:30 - 10:30

Networking Systems 7

Session Chairs: Z.Ning (Dalian University of Technology, P.R. China) & G.Wu (Dalian University of Technology, P.R. China)

Efficient Scheduling for Multicasting Hard Deadline Constrained Prioritized Data via Two Interfaces

Guojie Hu and Kui Xu (PLA University of Science and Technology, P.R. China); Youyun Xu (Nanjing University of Posts and Telecommunications; Shanghai Jiao Tong University, P.R. China)

Multi-Controller Collaborative Interconnecting for Multilayer Heterogeneous SDON

Qinghai Ou (State Grid Information; Telecommunication Group Co., LTD.); Jing Wang (University of Science; Technology Beijing, P.R. China); Xiao Liao (State Grid Information; Telecommunication Group Co., LTD.); Wenjing Li (State Grid Information; Telecommunication Group Co., LTD., P.R. China); Xiaolong Yang (University of Science; Technology Beijing, P.R. China)

Hierarchical Fairness Based Re-provisioning in Post-Disaster Telecom Networks

Ning-Hai Bao, Ya-Kun Wu, Guo-Qing Su, Yuan Yuan and Da-Yong Luo (Chongqing University of Posts and Telecommunications (CQUPT), P.R. China)

Reliability-Sustainable Network Survivability Scheme Against Disaster Failures

Ning-Hai Bao, Guo-Qing Su, Ya-Kun Wu, Ming Kuang and Da-Yong Luo (Chongqing University of Posts and Telecommunications (CQUPT), P.R. China)

10:30 - 11:00

Coffee break

11:00-12:00

Closing Session

