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Welcome Message from the Chairman

On behalf of the Technical and Local Committee of the 2017 IEEE International Conference on Imaging Systems and Techniques (IST 2017) and IEEE International School on Imaging, I welcome you to Beijing, China.

This year, scientists and engineers from all over the world meet to explore the design principles, development and applications of new imaging technologies, image analysis and processing methodologies, computer vision systems, clinical diagnostic devices, and material inspection and monitoring measurements, systems, and techniques.

In a rapidly changing global economy, experiencing an unparalleled integration of science and technology towards the development of efficient, high-resolution, high-specificity imaging technologies: let us see this event as unique opportunity not only to exchange and disseminate knowledge but also bridge multidisciplinary areas like engineering with health science leading to the creation of new knowledge, and establish global collaborative multidisciplinary opportunities by tightening collaborations among industry, academia, and healthcare industry.

Historically, this is the thirteenth consecutive year, following the successful IST events held previously in Stresa, Italy, Niagara Falls, Canada, Minori, Italy, Krakow, Poland, Chania, Greece, Shenzhen, China, Thessaloniki, Greece, Penang Island, Malaysia, Manchester, UK, Beijing, China, Santorini, Greece, Macau, China, Chania, Greece, where experts from all over the world meet to trigger an in-depth discussion of imaging methodologies and its applications shaping the future, and identifying emerging imaging trends.

I would like to thank the organizers of the Conference and distinguished colleagues, Professor Lijun Xu, Dean of the School of Instrument Science and Opto-Electronic Engineering, Beihang University, China, Professor Lihui Peng, Tsinghua University, China, Professor Wuqiang Yang, University of Manchester, UK, Professor Zhang Cao, Beihang University, China, Professor Yixin Ma, Shanghai Jiao Tong University, China, Professor Na Ying, Hangzhou Dianzi University, China as well as the IST Technical and Steering Committee, and the Technical Committee TC-19 on Imaging Systems and Techniques, for the outstanding organization of the event; Professor Zervakis for his always enthusiastic support of the IST; all the young but promising engineers, specially, Konstantina Kottari, University of Central Greece, Greece, Suman Shrestha, Manhattan College, USA, George Livanos, Technical University of Crete, Greece, and Michael Surovich, Manhattan College, USA, for their significant contributions towards the dissemination of this event worldwide and promotion of quality and standards. Special thanks are extended to Brianna Orr and Chris Dyer, Conference Catalysts, LLC, Administrators of the IST and the School of Imaging for their outstanding and dedicated efforts to successfully administrate these two major events. Many thanks go to the dedicated reviewers which did an excellent job to preserve quality and promote academic excellence.

I hope you enjoy your stay in Beijing, China, and find the 2017 IEEE International Conference on Imaging Systems and Techniques (IST2017) and the IEEE International School on Imaging a rewarding opportunity for advancement of knowledge as well as a way to generate unique global collaborative opportunities among industry, academia, and healthcare professionals.

George C. Giakos, Fellow of the IEEE
General Chairman IEEE IST Conference
Director, IEEE International School on Imaging
New York, United States

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International School of Imaging: Lecture Series

Wednesday, October 18

09:30 – 10:10

Lecture 1: Neuromorphic Imaging

Ballroom A

George C. Giakos, Ph.D., Fellow of the IEEE (Manhattan College, New York, USA)

10:10 – 10:50

Lecture 2: Recent development in combustion monitoring via TDLAS Tomography

Ballroom A

Lijun Xu, Ph.D. (Beihang University, Beijing, China)

11:10 – 11:50

Lecture 3: Advanced Methods of Biomedical Image Analysis

Ballroom A

Michalis Zervakis (Technical University of Crete, Greece)

11:50 – 12:30

Lecture 4: Development of key technology and equipment for deep resources geophysical exploration

Ballroom A

Qingyun Di (Institute of Geology & Geophysics, CAS, China)

13:50 – 14:20

Lecture 5: A Decision Tree Approach for Vegetation Classification Using Polarimetric SAR Features

Ballroom A

Wen Hong (Institute of Electronics, CAS, China)

14:20 - 14:50

Lecture 6: Cardiovascular MR Imaging: From Bench to Bedside

Ballroom A

Qi Yang (Xuanwu Hospital, China)

14:50 – 15:20

Lecture 7: Direct image reconstruction and real-time ECT system

Ballroom A

Zhang Cao (Beihang University, China)

15:20 – 15:50

Lecture 8: Object Detection based on Deep Learning

Ballroom A

Na Ying (Hangzhou Dianzi University, China)

15:50 – 16:20

Lecture 9: Electrical tomography imaging and data fusion for oil-gas-water three flow measurement applications

Ballroom A

Yi Li (Tsinghua Shenzhen Graduate School)

Tuesday, October 17

15:00 - 18:00

Registration (Venue: Lobby of Vision Hotel)

18:30 - 21:00

Reception Dinner (Venue: Beihang Training Center Restaurant)

Wednesday, October 18

08:00 - 08:45

Registration (Venue: Beihang New Main Building Conference Center)

09:00 – 09:10

Welcome Message from the Vice President of Beihang University

Haijun Huang, Vice President of Beihang University, China

Room: Ballroom A

09:10 – 09:20

Welcome Message from the Local Chair

Lijun Xu, Ph.D., Dean of School of Instrument Science and Opto-electronic Engineering, Beihang University, China

Room: Ballroom A

09:20 – 09:30

Welcome Message from the General Chair

George C. Giakos, Ph.D., Fellow of the IEEE

Room: Ballroom A

09:30 – 10:10

Lecture 1: Neuromorphic Imaging

Ballroom A

George C. Giakos, Ph.D., Fellow of the IEEE (Manhattan College, New York, USA)

10:10 – 10:50

Lecture 2: Recent development in combustion monitoring via TDLAS Tomography

Ballroom A

Lijun Xu, Ph.D. (Beihang University, Beijing, China)

10:50 – 11:00

Photograph (Main Entrance of New Main Building, Beihang University)

11:00 – 11:10

Coffee/Tea Break

11:10 – 11:50

Lecture 3: Advanced Methods of Biomedical Image Analysis

Ballroom A

Michalis Zervakis (Technical University of Crete, Greece)

11:50 – 12:30

Lecture 4: Development of key technology and equipment for deep resources geophysical exploration

Ballroom A

Qingyun Di (Institute of Geology & Geophysics, CAS, China)

Wednesday, October 18

12:30 – 13:50

Lunch (Beihang Training Center Restaurant)

13:50 – 14:20

Lecture 5: A Decision Tree Approach for Vegetation Classification Using Polarimetric SAR Features

Ballroom A

Wen Hong (Institute of Electronics, CAS, China)

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15:50 – 16:20

Lecture 9: Electrical tomography imaging and data fusion for oil-gas-water three flow measurement applications

Ballroom A

Yi Li (Tsinghua Shenzhen Graduate School)

16:20 – 16:30

Coffee/Tea Break

16:30 - 17:30

Imaging Sensors and Detectors I

Meeting Room 2

Chair: Lihui Peng (Tsinghua University, P.R. China)

Xingyu, Xie (Khalifa University of Science and Technology, United Arab Emirates)

16:30 Dynamic Segmentation using a Novel Neuromorphic Polarimetric Imaging System

Michael Surovich (Manhattan College, USA)

Suman Shrestha (Manhattan College, USA)

George C Giakos (Manhattan College, USA)

Nicolas Douard (Manhattan College, USA)

Zoe Giakos (University of Akron, USA)

Wednesday, October 18

16:45 Surface Defects Mapping Using Microwaves and Ultrasonic Phased Array Imaging

Abdallah Yassin (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)

Mohamed A Abou-Khousa (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)

Mohammad Ramzi (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)

17:00 Demosaicking based on dual-CFA pattern

Xiangdong Chen (Nanjing University of Posts and Telecommunications, P.R. China)

Haoran Wu (Nanjing University of Posts and Telecommunications, P.R. China)

Bo Yang (Nanjing University of Posts and Telecommunications, P.R. China)

Gwanggil Jeon (Incheon National University, Korea)

17:15 Research on CCERT Under Two Different Excitation Patterns

Yandan Jiang (Zhejiang University, P.R. China)

Zhen Xu (Zhejiang University, P.R. China)

Baoliang Wang (Zhejiang University, P.R. China)

Zhiyao Huang (Zhejiang University, P.R. China)

Haifeng Ji (Zhejiang University, P.R. China)

Haiqing Li (Zhejiang University, P.R. China)

16:30 - 17:30

Image Analysis and Image Quality Assessment

Meeting Room 3

Chair: Naim Dahnoun (University of Bristol, United Kingdom (Great Britain)),

Ze Liu (Beijing Jiaotong University, P.R. China)

16:30 AVRDB: Annotated Dataset for Vessel Segmentation and Calculation of Arteriovenous Ratio

Shahzad Akbar (COMSATS Institute of Information Technology, Wah, Pakistan)

Taimur Hassan (CASE - University of Engineering & Technology, Pakistan)

Muhammad Usman Akram (CEME NUST, Pakistan)

Ubaid Yasin and Imran Basit (Armed Forces Institute of Ophthalmology, Pakistan)

16:45 A Pen Locating Scheme for large-size electronic whiteboards

Wenjie Zhou (Peking University, P.R. China)

Xiaohui Duan (Peking University, P.R. China)

17:00 Sampling Method for GMM Curve Fitting in Multi Object Tracking

Rui Wang (Beihang University, P.R. China)

Ran Huang (Beihang University, P.R. China)

Yuan Gao (Beihang University, P.R. China)

Haiyan Sun (Beihang University, P.R. China)

Wednesday, October 18

17:15 Effect of Media Permittivity on Imaging Quality of Electrical Capacitance Tomography

Shiguo Liang (Institute of Engineering Thermophysics, Chinese Academy of Sciences, P.R. China)

Jiamin Ye (Institute of Engineering Thermophysics, Chinese Academy of Sciences, P.R. China)

Haigang Wang (University of Chinese Academy of Sciences, P.R. China)

Meng Wu (Institute of Engineering Thermophysics, Chinese Academy of Sciences, P.R. China)

16:30 - 17:30

Image Segmentation I

Meeting Room 8

Chair: Baoliang Wang (Zhejiang University, P.R. China)

16:30 An EIT Image Segmentation Method Based on Projection Distance Minimization

Guanghui Liang (Tianjin University, P.R. China)

Shangjie Ren (Tianjin University, P.R. China)

Feng Dong (Tianjin University, P.R. China)

16:45 Segmentation of Touching Seeds Based on Shape Feature and Multiple Concave Point Detection

Lu Gao (Shanghai Jiao Tong University, P.R. China)

Manhua Liu (Shanghai Jiao Tong University, P.R. China)

Zhao Chunyu (Shanghai Jiao Tong University, P.R. China)

17:00 A Study of Image Segmentation Algorithms Combined with Different Image Preprocessing Methods for Thyroid Ultrasound Images

Junyong Chen (South China University of Technology, P.R. China)

Feng Li (South China University of Technology, P.R. China)

Yixuan Fu (South China University of Technology, P.R. China)

Qun Liu (South China University of Technology, P.R. China)

Jiajun Huang (South China University of Technology, P.R. China)

Kai Li (The Third Affiliated Hospital of Sun Yat-Sen University, P.R. China)

17:15 3D Simultaneous Segmentation and Registration of Vertebral Bodies for Accurate BMD Measurements

Lisa Boneta (Manhattan College, USA)

Ahmed Shalaby (University of Louisville, USA)

Ahmed Refaey (Manhattan College, USA & Western University, Canada)

Khaled Loukhaoukha (Laval University, Canada)

George C Giakos (Manhattan College, USA)

Wednesday, October 18

17:30 – 18:30

Pattern Recognition and Image Enhancement

Meeting Room 2

Chair: Jie Chen (Beihang University, P.R. China)

Koushendra Kumar Singh (PDPM IITDM Jabalpur, India)

17:30 Land Cover Classification from ICESat/GLAS Waveform Data

Qunchong Zhao (Beihang University, P.R. China)

Xiaolu Li (Beihang University, P.R. China)

Lijun Xu (Beihang University, P.R. China)

17:45 Comparison of Two Approaches for Land Cover Classification from ICESat/GLAS Waveform Data

Qunchong Zhao (Beihang University, P.R. China)

Xiaolu Li (Beihang University, P.R. China)

Lijun Xu (Beihang University, P.R. China)

18:00 Fractional Order Savitzky-Golay Differentiator based Approach for Mammogram Enhancement

Koushendra Kumar Singh (PDPM IITDM Jabalpur, India)

Binod Singh (National Institute of Technology, India)

Manish Bajpai (IITDM Jabalpur, India)

18:15 Joint of Discrete Curvelet Transform and Nonlocal Tensor Sparse Regularization for SAR Image Despeckling

Gao Chen (Tsinghua University, P.R. China)

Gang Li (Tsinghua University, P.R. China)

17:30 – 18:30

MRI, CT, SPECT, PET, ET, and Microscopy

Meeting Room 3

Chair: Michalis Zervakis (Technical University of Crete, Greece)

Feng Dong (Tianjin University, P.R. China) &

17:30 Investigation of Relaxation Factor in Landweber Iterative Algorithm for Electrical Capacitance Tomography

Wenbin Tian (University of Manchester, United Kingdom (Great Britain))

Jiangtao Sun (Beihang University, P.R. China)

Mimi Faisyalini Ramli (University of Manchester, United Kingdom (Great Britain))

Wuqiang Yang (The University of Manchester, United Kingdom (Great Britain))

17:45 The GVF measurement and flow regime study of gas-water flows by ERT sensor

Yuchi Deng (Tsinghua University, P.R. China)

Yinyan Liu (Tsinghua University, P.R. China)

Yi Li (Tsinghua University, P.R. China)

Wednesday, October 18

18:00 Liver Sub-Pixel Detection Method on Magnetic Resonance Images

Qinghua Su (Beijing Wuzi University, P.R. China)

Yang Xuedong (Guang'anmen Hospital, China Academy of Chinese Medical Sciences, P.R. China)

Li Juntao (Beijing Wuzi University, P.R. China)

Yan Zhao (Beihang University, P.R. China)

18:15 Multiresolution Bioinspired Cross-Polarized Imaging and Biostatistics of Lung Cancer Tissue Samples

Gloria Bauman (Manhattan College, USA)

Suman Shrestha (Manhattan College, USA)

Kiera Mallinson (Manhattan College, USA)

Michael Surovich (Manhattan College, USA)

Yi Wang (Manhattan College, USA)

George Livanos (Technical University of Crete, Greece)

Michalis Zervakis (Technical University of Crete, Greece)

Ying Na (Hangzhou Dianzi University, P.R. China)

George C Giakos (Manhattan College, USA)

Zoe Giakos (University of Akron, USA)

17:30 – 18:45

Deep Learning I

Meeting Room 8

Chair: Junwen Chen (Southwest Jiaotong University, P.R. China)

Ammarah Farooq (College of Electrical and Mechanical Engineering, NUST, Pakistan)

17:30 High-speed Railway Catenary Components Detection Using the Cascaded Convolutional Neural Networks

Junwen Chen (Southwest Jiaotong University, P.R. China)

Zhigang Liu (Southwest Jiaotong University, The Netherlands)

Hongrui Wang (Delft University of Technology, The Netherlands)

Kai Liu (Southwest Jiaotong University, P.R. China)

17:45 A Deep CNN based Multi-class Classification of Alzheimer's Disease using MRI

Ammarah Farooq (College of Electrical and Mechanical Engineering, NUST, Pakistan)

Syed Muhammad Anwar (University of Engineering and Technology Taxila & Signal, Image, Multimedia Processing and Learning, Pakistan)

Muhammad Awais Rana (Surrey University, United Kingdom (Great Britain))

Saad Rehman (NUST COLLEGE OF EME, Pakistan)

18:00 Combining Convolutional and Recurrent Neural Networks for Alzheimer's Disease Diagnosis Using PET Images

Danni Cheng (Shanghai Jiao Tong University, P.R. China)

Manhua Liu (Shanghai Jiao Tong University, P.R. China)

Wednesday, October 18

- 18:15** **People detection in crowded scenes using hierarchical features**
Qiang Zeng (Peking University, P.R. China)
Yule Yuan (Shenzhen Graduate School of Peking University, P.R. China)
Canmiao Fu (Peking University, P.R. China)
Yong Zhao (Peking University, P.R. China)

- 18:30** **Classification of Cataract Fundus Image Based on Deep Learning**
Yanyan Dong (Beijing University of Posts and Telecommunications, P.R. China)
Qinyan Zhang (Beijing University of Posts and Telecommunications, P.R. China)
Zhiqiang Qiao (Beijing University of Posts and Telecommunications, P.R. China)
Ji-Jiang Yang (Tsinghua University, P.R. China)

19:30 - 22:00

Banquet Dinner (Dongfanghong restaurant)

Thursday, October 19

09:00 - 10:00

Tomographic Scanners: ECT, Inverse scattering, Industrial Scanners I
Meeting Room 2

Chair: Lihui Peng (Tsinghua University, P.R. China)
Jiangtao Sun (Beihang University, P.R. China)

09:00 Research on Gas/Solid Two-phase Flow Imaging System Based on ECT Technology

Chaoqi Yan (Civil Aviation University of China, P.R. China)
Min Ma (Civil Aviation University of China, P.R. China)

09:15 A Platform for Electrical Capacitance Tomography Large-scale Benchmark Dataset Generating and Image Reconstruction

Jin Zheng (Tsinghua University, P.R. China)
Lihui Peng (Tsinghua University, P.R. China)

09:30 Modelling of electrical capacitance array for water leakage imaging inside porous slab

Rui Li (Tsinghua University, P.R. China)
Lihui Peng (Tsinghua University, P.R. China)

09:45 Experimental investigation of gas-oil two-phase flow using electrical capacitance tomography

Yinyan Liu (Tsinghua University, P.R. China)
Yuchi Deng (Tsinghua University, P.R. China)
Yi Li (Tsinghua University, P.R. China)

09:00 – 10:00

SPECIAL SESSION: Computer Vision: Measurements, Analysis and Processing Techniques I

Meeting Room 3

Chair: Anqi Huang (Hefei University of Technology, P.R. China)
Yang Cai (University of Shanghai for Science and Technology, P.R. China)

09:00 Dynamic Path Planning Algorithm for Wearable Visual Navigation System Based on the Improved A*

Yidou Zhang (Beihang University, P.R. China)
Yan Zhao (Beihang University, P.R. China)
Tong Wei (Beihang University, P.R. China)
Jiemin Chen (Beihang University, P.R. China)

09:15 Automatic Measurement Based on Stereo Vision System Using a Single PTZ Camera

Rui Wang (Beihang University, P.R. China)
Suizhou Feng (Beihang University, P.R. China)

Thursday, October 19

09:30 Digital Image Correlation Using Ring Template for 3D Reconstruction

Anqi Huang (Hefei University of Technology, P.R. China)

Yonghong Wang (Hefei University of Technology, P.R. China)

Xizuo Dan (Hefei University of Technology, P.R. China)

Yue Hu (Hefei University of Technology, P.R. China)

Siyuan Bao (Hefei University of Technology, P.R. China)

09:45 An Improved Image Processing Method for Particle Measurement

Yang Cai (University of Shanghai for Science and Technology, P.R. China)

Mingxu Su (University of Shanghai for Science and Technology, P.R. China)

09:00 – 10:00

SPECIAL SESSION: Image processing and pattern recognition I

Meeting Room 8

Chair: Fu Feiran (Changchun University of Science and Technology, P.R. China)

09:00 Automated identification of colorectal glands morphology from benign images

Ammara Nasim (Bahria University, Pakistan)

Taimur Hassan (Bahria University, Islamabad, Pakistan)

Muhammad Usman Akram (CEME NUST, Pakistan)

Bilal Hassan (College of EME, NUST, Pakistan)

Muhammad Ali Shami (Bahria University, Islamabad Campus, Pakistan)

09:15 Temporal Difference Method Based on Positive and Negative Energy Distribution in Moving Objects Detection

Fu Feiran (Changchun University of Science and Technology, P.R. China)

Fang Ming (Changchun University of Science and Technology, P.R. China)

Yang Huamin (Changchun University of Science and Technology, P.R. China)

09:30 Subsurface Object Classification of Hyperspectral Imaging: Inversion and Regularization Under Lack of Precise Knowledge and Measurements

Luis O. Jimenez-Rodriguez (University of Puerto Rico Mayaguez Campus, Puerto Rico)

Emmanuel Carpena (University of Puerto Rico Mayaguez Campus)

Emmanuel Arzuaga (University of Puerto Rico Mayaguez, Puerto Rico)

Sujeily Fonseca (University of Puerto Rico Mayaguez Campus, Puerto Rico)

Thursday, October 19

10:00 - 11:00

Tomographic Scanners

Meeting Room 2

Chair: Mohohlo Tsoeu (University of Cape Town, South Africa)

Nan Li (Northwestern Polytechnical University & Beijing University of Technology, China)

10:00 A Modified Conjugate Gradient Reconstruction Algorithm for Electromagnetic Tomography

Xianglong Liu (Beijing Jiaotong University, P.R. China)

Ze Liu (Beijing Jiaotong University, P.R. China)

Sheng Zhu (Beijing Jiaotong University, P.R. China)

Jiawei Wang (Beijing Jiaotong University, P.R. China)

10:15 Simulation study on Ultrasonic Tomography in Bubbly Gas/Liquid Two-phase Flow

Nan Li (Northwestern Polytechnical University & Beijing University of Technology, P.R. China)

Kun Xu (Beijing University of Technology, P.R. China)

10:30 An Improved Normalized Model of Electrode Capacitance Tomography

Lifeng Zhang (Tianjin University, P.R. China)

Feng Zhu (North China Electric Power University, P.R. China)

Qin Zhang (North China Electric Power University, P.R. China)

10:45 Capabilities of Code Division Multiplexed Electrical Impedance Tomography

Mohohlo Tsoeu (University of Cape Town, South Africa)

Michael R Inngs (University Cape Town, South Africa)

10:00 – 11:00

Sensors for Aerospace Applications I

Meeting Room 3

Chair: Yan Zhao (Beihang University, P.R. China)

Manguo Huang (AVIC Beijing Changcheng Aeronautic Measurement and Control Technology Research Institute, P.R. China)

10:00 Globally Optimal Filtering for Systems with Nonideal Measurements, Stochastic Nonlinearities and Correlated Noises

Qunsheng Li (Beihang University, P.R. China)

Yan Zhao (Beihang University, P.R. China)

Yidou Zhang (Beihang University, P.R. China)

10:15 An Optimized Layout Method Based on Genetic Algorithm for DPOS

Xiaolin Gong (Beihang University)

Haojie Liu (Beihang University)

Gang Liu (Beihang University, P.R. China)

Xiaolu Li (Beihang University, P.R. China)

Thursday, October 19

- 10:30 Design of temperature compensation for silicon-sapphire pressure sensor**
Manguo Huang (AVIC Beijing Changcheng Aeronautic Measurement and Control Technology Research Institute, P.R. China)
Liu Defeng (AVIC Beijing Changcheng Aeronautic Measurement and Control Technology Research Institute, P.R. China)
Lu Chao (Beihang University, P.R. China)
Guo Zhanshe (Beihang University, P.R. China)
Li Xin (AVIC Beijing Changcheng Aeronautic Measurement and Control Technology Research Institute, P.R. China)

- 10:45 Influence of Ray-tracing Step on Aero-Optics Imaging Deviation Computation**
Liang Xu (Tianjin University of Technology, P.R. China)
DeTing Xue (Tianjin University of Technology, P.R. China)
XiaoYi Lv (Xinjiang University, P.R. China)

10:00 – 11:00

SPECIAL SESSION: Image processing and pattern recognition II

Meeting Room 8

Chair: Yuanchi Ma (University of Shanghai for Science and Technology, P.R. China)
Rui Fan (University of Bristol, United Kingdom (Great Britain))

- 10:00 An Adaptive Wavelet Transform Application to Multiple Targets Tracking in the Air**
Rui Wang (Beihang University, P.R. China)
Jingwen Xu (Beihang University, P.R. China)
Yan Zhao (Beijing Institute of Remote Sensing Equipment, P.R. China)

- 10:15 A Depth Estimation Algorithm of Plenoptic Camera for the Measurement of Particles**
Yuanchi Ma (University of Shanghai for Science and Technology, P.R. China)
Wu Zhou (University of Shanghai for Science and Technology, P.R. China)
Tianlei Qian (University of Shanghai for Science and Technology, P.R. China)
Xiaoshu Cai (University of Shanghai for Science and Technology, P.R. China)

- 10:30 Real-Time User Selected Dynamic Template Tracking For UAV**
Fabio Mendez (University of Bristol, United Kingdom (Great Britain))
Mark Ferguson (University of Bristol, United Kingdom (Great Britain))
Naim Dahnoun (University of Bristol, United Kingdom (Great Britain))
Scott Tancock (University of Bristol, United Kingdom (Great Britain))

- 10:45 Real-Time Implementation of Stereo Vision Based on Optimised Normalised Cross-Correlation and Propagated Search Range on a GPU**
Rui Fan (University of Bristol, United Kingdom (Great Britain))
Naim Dahnoun (University of Bristol, United Kingdom (Great Britain))

11:00 - 11:20

Coffee/Tea Break

Thursday, October 19

11:20 - 12:20

Embedded Imaging, Mobile and Communication applications and Cybersecurity and Imaging

Meeting Room 2

Chair: Alavikunhu Panthakkan (University of Dubai, United Arab Emirates)
Falın Wu (Beihang University, P.R. China)

11:20 An INS-aided GPS Fast Acquisition Algorithm for High Dynamic Applications

Falin Wu (Beihang University, P.R. China)
Shan Xu (Beihang University, P.R. China)
Zhendian Wu (BOE, P.R. China)
Jiemin Chen (Beihang University, P.R. China)

11:35 A BeiDou Weak Signal Acquisition Method with INS-aiding

Falin Wu (Beihang University, P.R. China)
Shan Xu (Beihang University, P.R. China)
Yong Fu (Chinese Academy of Sciences, P.R. China)
Jiemin Chen (Beihang University, P.R. China)
Tahir Jan (Beihang University, P.R. China)

11:50 Two-stage Hough Transform Algorithm for Lane Detection System Based on TMS320DM6437

Houqiang Li (University of Science and Technology Beijing, P.R. China)
Zhaohui Zhang (University of Science and Technology Beijing, P.R. China)
Xiaoyan Zhao (University of Science and Technology Beijing, P.R. China)
Mengzhong He (University of Science and Technology Beijing, P.R. China)

12:05 A New Reversible Watermarking Technique using Turbo Product Code and Adaptive Prediction Algorithm for Satellite Images

Alavikunhu Panthakkan (University of Dubai, United Arab Emirates)
Sara Ahmed AlMaeeni (Mohammed Bin Rashid Space Center, United Arab Emirates)
Hussain Al-Ahmad (University of Dubai, United Arab Emirates)

11:20 - 12:20

Image Reconstruction

Meeting Room 3

Chairs: Yong Bao (University of Edinburgh, United Kingdom (Great Britain))
Shengheng Liu (University of Edinburgh, United Kingdom (Great Britain))

11:20 Image Reconstruction Algorithm for Electrical Impedance Tomography Based on Block Sparse Bayesian Learning

Shengheng Liu (University of Edinburgh, United Kingdom (Great Britain))
Jiabin Jia (University of Edinburgh, United Kingdom (Great Britain))
Yunjie Yang (University of Edinburgh, United Kingdom (Great Britain))

Thursday, October 19

11:35 Nonlinear temperature field reconstruction using acoustic tomography

Yong Bao (University of Edinburgh, United Kingdom (Great Britain))

Jiabin Jia (University of Edinburgh, United Kingdom (Great Britain))

11:50 An image reconstruction method for improving resolution of capacitive wire mesh tomography

Weimin Lao (Tsinghua University, P.R. China)

Lihui Peng (Tsinghua University, P.R. China)

Yi Li (Tsinghua University, P.R. China)

12:05 Local Integrated Absorbance Tomography Based on Revised Iterative Reconstruction-Reprojection Algorithm

Wenqiang Zhang (Beihang University, P.R. China)

Lijun Xu (Beihang University, P.R. China)

Qianwei Qu (Beihang University, P.R. China)

Zhang Cao (Beihang University, P.R. China)

Jiangtao Sun (Beihang University, P.R. China)

11:20 - 12:20

SPECIAL SESSION: Image processing and pattern recognition III

Meeting Room 8

Chair: Ali AISuwaidi (University of Manchester, United Kingdom (Great Britain))

Pengfei Shi (Shanghai Jiao Tong University, P.R. China)

11:20 HEVC based Mixed-resolution Stereo Video Coding for Low Bitrate Transmission

Bruhanth Mallik (Leeds Beckett University, United Kingdom (Great Britain))

Akbar Sheikh Akbari (Leeds Beckett University, United Kingdom (Great Britain))

Ah-Lian Kor (Leeds Beckett University, United Kingdom (Great Britain))

11:35 Spectral-Texture Approach to Hyperspectral Image Analysis for Plant Classification with SVMs

Ali AISuwaidi (University of Manchester, United Kingdom (Great Britain))

Bruce Grieve (University of Manchester, United Kingdom (Great Britain))

Hujun Yin (University of Manchester, United Kingdom (Great Britain))

11:50 Fast Shape Matching and Retrieval with Dynamic Angular Partition Descriptor

Pengfei Shi (Shanghai Jiao Tong University, P.R. China)

Yongkun Wang (Shanghai Jiao Tong University, P.R. China)

Ying Hu (Shanghai Jiao Tong University, P.R. China)

Yaohui Jin (Shanghai Jiaotong University, P.R. China)

Thursday, October 19

12:05 Analysis of Pool Characteristics and Correlation Using Auxiliary Optical Imaging during High Power Laser Welding

Guiqian Liu (Guangdong University of Technology, P.R. China)

Xiangdong Gao (Guangdong University of Technology, P.R. China)

Deyong You (Guangdong University of Technology, P.R. China)

Yaowu Song (Guangdong University of Technology, P.R. China)

Nanfeng Zhang (Guangdong University of Technology, P.R. China)

12:20 – 13:30

Lunch (Beihang Training Center Restaurant)

13:30 - 14:30

Sensors for Aerospace Applications II and Imaging

Meeting Room 2

Chair: Christian Pfaab (Universität Bremen, Germany)

Jianli Li (Beihang University, P.R. China)

13:30 An Airborne Position and Orientation System (POS) for Remote Sensing

Fengguang Zhai (Beihang University, P.R. China)

Jianli Li (Beihang University, P.R. China)

Haitao Qiu (Aerospace Control Devices, P.R. China)

Wen Ye (Beihang University, P.R. China)

Bin Gu (Beihang University, P.R. China)

Zhaoxing Lu (Xi'an Institute of High-tech, P.R. China)

13:45 Application of Spatial Heterodyne Spectroscopy Interferometer in Velocity Measurement and Error Analysis

Yanghao Lin (Beihang University, P.R. China)

Yan Zhao (Beihang University, P.R. China)

Falin Wu (Beihang University, P.R. China)

14:00 A comparison of feature detection in low atmospheric pressure using thermal and visible images

Helia Sharif (German Aerospace Center (DLR) & Universität Bremen, Germany)

Christian Pfaab (Universität Bremen, Germany)

Matthew Hölzel (Universität Bremen, Germany)

14:15 Research on SNR prediction technology based on reservoir computing in wireless transmission of satellite communication system

Bowen Sun (Harbin Engineering University, P.R. China)

Thursday, October 19

13:30 - 14:30

Deep Learning II

Meeting Room 3

Chair: Fuqiang Zhou (Beihang University, P.R. China)

Na Ying (Hangzhou Dianzi University, China)

13:30 Blur Image Classification based on Deep Learning

Rui Wang (Beihang University, P.R. China)

Wei Li (Beihang University, P.R. China)

Runnan Qin (Beihang University, P.R. China)

JinZhong Wu (The Third Research Institute of China Electronics Technology

Group Corporation, P.R. China)

13:45 Stereo Matching and Depth Map Collection Algorithm Based on Deep Learning

Hao Xu (Beihang University, P.R. China)

14:00 Fast Vehicle Detection Based on Evolving Convolutional Neural Network

Fengbin Zhu (HangzhouDianZi University, USA)

Youfei Lu (Hangzhou Dianzi University, P.R. China)

Ying Na (Hangzhou Dianzi University, P.R. China)

George C Giakos (Manhattan College, USA)

14:15 Visual saliency-based vehicle manufacturer recognition using autoencoder pre-training deep neural networks

Jiang Zhang (Beihang University, P.R. China)

Yao Zhao (Beihang University, P.R. China)

Fuqiang Zhou (Beihang University, P.R. China)

Ming Chi (Beihang University, P.R. China)

13:30 - 14:30

SPECIAL SESSION: Image Analysis and Processing

Meeting Room 8

Chair: Dangxiao Wang (Beihang University, P.R. China)

Fuqiang Zhou (Beihang University, P.R. China)?

13:30 Analysis of Correlation Between Image Texture and Friction Coefficient of Materials

Pengzhi Zhang (Beihang University, P.R. China)

Dangxiao Wang (Beihang University, P.R. China)

Yuru Zhang (Beihang University, P.R. China)

Thursday, October 19

13:45 Global Calibration Approach for 3D Vision System Carried by Moving Robot Used for Measuring Inner Surface of Long Pipeline

Ming Chi (Beihang University, P.R. China)

Haishu Tan (Foshan University, P.R. China)

Fuqiang Zhou (Beihang University, P.R. China)

Xin Chen (Beihang University, P.R. China)

14:00 Train Wheel Tread Defects Detection Based on Image Registration

Shoulu Lv (Beihang University, P.R. China)

Fuqiang Zhou (Beihang University, P.R. China)

Zhenzhong Wei (Beihang University, P.R. China)

14:30 - 15:45

SPECIAL SESSION: Tomographic Devices: Clinical and Industrial Applications

Meeting Room 2

Chair: Hancong Wu (University of Edinburgh, United Kingdom (Great Britain))

Xinwu Li (Chinese Academy of Sciences, P.R. China)

14:30 Phase aberration correction by bent-ray tracing method for ultrasound computed tomography

Xiaolei Qu (Beihang University, P.R. China)

Takashi Azuma (The University of Tokyo, Japan)

Shangchun Fan (Beihang University, P.R. China)

14:45 Imaging cell-drug response in 3D bioscaffolds by electrical impedance tomography

Hancong Wu (Agile Tomography Group, School of Engineering, University of Edinburgh, United Kingdom (Great Britain))

Yunjie Yang (University of Edinburgh, United Kingdom (Great Britain))

Pierre Bagnaninchi (The University of Edinburgh, United Kingdom (Great Britain))

Jiabin Jia (University of Edinburgh, United Kingdom (Great Britain))

15:00 Imaging and detection of cracks based on a multi-frequency electromagnetic scanning instrument and SVM

Liyuan Yin (Kunming University of Science and Technology, P.R. China)

Jiande Wu (Kunming University of Science and Technology, P.R. China)

Bo Ye (Kunming University of Science and Technology, P.R. China)

Jorge Salas Avila (The University of Manchester, United Kingdom)

Hanyang Xu (The University of Manchester, United Kingdom)

Kin Yau How (The University of Manchester, United Kingdom)

Yang Tao (The University of Manchester, United Kingdom)

Wuliang Yin (The University of Manchester, United Kingdom)

Thursday, October 19

15:15 A New Discontinuous Synthetic Aperture Radar Imaging Framework

Yan Wang (Tsinghua University, P.R. China)

Jian Yang (Tsinghua University, P.R. China)

Jingwen Li (Beihang University, P.R. China)

15:30 Sparse reconstruction-based SAR Tomography and It's Application

Xinwu Li (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, P.R. China)

Xing Peng (Institute of Remote Sensing and Digital Earth, Chinese Academy of Sciences, P.R. China)

Lei Liang (the Institute of Remote Sensing and Digital Earth, CAS, P.R. China)

14:30 – 15:45

Imaging Sensors and Detectors II

Meeting Room 3

Chair: Xinguo Wei (Beijing University of Aeronautics & Astronautics, P.R. China)

Nvjie Ma (Guangdong University of Technology, P.R. China)

14:30 Magneto-Optical Imaging Characteristics of Weld Defects under Alternating Magnetic Field Excitation

Nvjie Ma (School of Electromechanical Engineering, Guangdong University of Technology, P.R. China)

Xiangdong Gao (Guangdong University of Technology, P.R. China)

Yaowu Song (Guangdong University of Technology, P.R. China)

Nanfeng Zhang (Guangdong University of Technology, P.R. China)

14:45 Rapid Preprocessing of FMCW GB-SAR Echo Based on FPGA

Hesheng Pu (Chongqing Three Gorges University, P.R. China)

Zefu Tan (China University of Mining and Technology, P.R. China)

Tian Weiming (Beijing Institute of Technology, P.R. China)

Cheng Hu (Beijing Institute of Technology, P.R. China)

15:00 SAR Imaging of Thick Composite Structures using Circular Aperture Probe

Xingyu Xie (Khalifa University of Science and Technology, United Arab Emirates)

Mohammed Rahman (Khalifa University-The Petroleum Institute, United Arab Emirates)

Mohamed A Abou-Khousa (Khalifa University of Science and Technology & Petroleum Institute, United Arab Emirates)

15:15 Parameters optimization of image sensor for star sensors

Yuan Fang Liao (Beihang University, P.R. China)

Xinguo Wei (Beijing University of Aeronautics & Astronautics, P.R. China)

Gangyi Wang (Beihang University, P.R. China)

Jian Li (Beihang University, P.R. China)

Thursday, October 19

14:30 – 15:45

Super Resolution Imaging

Meeting Room 8

Chair: Junaid Ahmed (Eastern Mediterranean University, Gazimagusa, via Mersin 10, Turkey)

Ningchao Diao (Tsinghua University, P.R. China)

14:30 Improving Fourier Ptychographic Microscopy by Spatially Distributed Exposure Time

Ningchao Diao (Tsinghua University, P.R. China)

14:45 Coupled K-SVD Dictionary Learning Algorithm in Wavelet Domain for Single Image Super-Resolution

Junaid Ahmed (Eastern Mediterranean University, Gazimagusa, via Mersin 10, Turkey)

Gulsher Baloch (Eastern Mediterranean University, Turkey)

Huseyin Ozkaramanli (Eastern Mediterranean University, Turkey)

15:00 Coupled Directionally Structured Dictionaries for Single Image Super-Resolution

Junaid Ahmed (University of Electronic Science and Technology, P.R. China)

Gulsher Baloch (Eastern Mediterranean University, Turkey)

Anam Bhatti (Liaquat University of Medical and Health Sciences, Pakistan)

Reinhard Klette (Auckland University of Technology, New Zealand)

15:15 Improved Dictionary Learning Algorithm with Mappings for Single Image Super-Resolution

Fayaz Ali Dharejo (University of Electronic Science and Technology, P.R. China & Indus University, Karachi, Pakistan)

Zongbo Hao (University of Electronic Science and Technology, P.R. China)

Anam Bhatti (Liaquat University of Medical and Health Sciences, Pakistan)

Mairaj Nabi Bhatti (Shaheed Benazir Bhutto University, Pakistan)

Junaid Ahmed (Sukkur IBA University, Pakistan)

Munsif Ali Jatoti (Indus University Karachi Pakistan, P.R. China)

15:30 Wavelet Domain Based Directional Dictionaries for Single Image Super-Resolution

Junaid Ahmed (University of Electronic Science and Technology, P.R. China)

Bin Gao (University of Electronic Science and Technology, P.R. China)

Gui Yun Tian (University of Electronic Science and Technology, P.R. China)

Thursday, October 19

15:45 - 16:45

Autonomous Aerial and Underwater Imaging Systems and Compressive Sensing Imaging

Meeting Room 2

Chair: Scott Tancock (University of Bristol, United Kingdom (Great Britain))

Zelong Xiao (Nanjing University of Science and Technology, P.R. China)

15:45 Real-Time Stereo Vision for Collision Detection on Autonomous UAVs

Aleksandar Stanoev (University of Bristol, United Kingdom (Great Britain))

Nicolas Audinet (University of Bristol, United Kingdom (Great Britain))

Scott Tancock (University of Bristol, United Kingdom (Great Britain))

Naim Dahnoun (University of Bristol, United Kingdom (Great Britain))

16:00 A Coding Method for Single-channel Passive Millimeter Wave Imaging Based on Cyclic S Matrix

Zelong Xiao (Nanjing University of Science and Technology, P.R. China)

Caoyang Fan (Nanjing University of Science and Technology, P.R. China)

Ruoling Xiao (Nanjing University of Science and Technology, P.R. China)

Yuankai Wang (Nanjing University of Science and Technology, P.R. China)

Xuan Lu (NanJing University of Science And Technology, P.R. China)

16:15 Distributed Compressive Sensing for Multi-Baseline Circular SAR Image formation

Masoud Farhadi (School of Electronic and Information Engineering, Beihang University, P.R. China)

Jie Chen (School of Electronics and Information Engineering, Beihang University, P.R. China)

16:30 Designing a Small-sized Autonomous Underwater Vehicle Architecture for Regular Periodic Fish-cage Net Inspection

Vaggelis Chalkiadakis (Hellenic Centre for Marine Research, Greece)

Nikos Papandroulakis (Hellenic Centre for Marine Research, Greece)

George Livanos (Technical University of Crete, Greece)

Konstantia Moirogiorgou (TUC/Electronic and Computer Engineering, Greece)

George C Giakos (Manhattan College, USA)

Michalis Zervakis (Technical University of Crete, Greece)

Thursday, October 19

15:45 – 16:45

Simulations and Measurements II

Meeting Room 3

Chair: Panagiotis Koulountzios (Technical University of Crete, Greece)

Yijie Huang (Guangdong University of Technology, P.R. China)

15:45 Visual Inspection of Pulsed Nd:YAG Laser Welding of PMMA and Stainless Steel 304

Yijie Huang (Guangdong University of Technology, P.R. China)

Xiangdong Gao (Guangdong University of Technology, P.R. China)

Yaowu Song (Guangdong University of Technology, P.R. China)

Nanfeng Zhang (Guangdong University of Technology, P.R. China)

Nvjie Ma (School of Electromechanical Engineering, Guangdong University of Technology, P.R. China)

16:00 A semi-automatic algorithm for reconstruction and NURBS surface generation of thoracic aorta

Panagiotis Koulountzios (Technical University of Crete, Greece)

Michalis Zervakis (Technical University of Crete, Greece)

Panagiotis Karakitsios (National Technical University of Athens, Greece)

George Stavroulakis (Technical University of Crete, Greece)

16:15 Convolutional neural network and adaptive guided image filter based stereo matching

Sihan Wen (Beihang University, P.R. China)

16:30 Applied Microwave Imaging of Composite Structures Using Open-Ended Circular Waveguides

Muhammed Shafi K. T. (Khalifa University-The Petroleum Institute, United Arab Emirates)

Mohammed Rahman (Khalifa University-The Petroleum Institute, United Arab Emirates)

Mohamed A Abou-Khousa (Khalifa University-The Petroleum Institute, United Arab Emirates)

Mohammad Ramzi (Khalifa University-The Petroleum Institute, United Arab Emirates)

Thursday, October 19

15:45 – 16:45

Simulations and Measurements I

Meeting Room 8

Chair: Yixin Ma (Shanghai Jiao Tong University, P.R. China)

Sihan Wen (Beihang University, P.R. China)

15:45 Simulation on applying Gabor filtering method to direct laser absorption spectroscopy

HaiBin Cui (Zhejiang University & College of Energy Engineering, P.R. China)

Fei Wang (Zhejiang University, P.R. China)

16:00 Correcting Ionospheric and Orbital Errors in Spaceborne SAR Differential Interferograms

Kamel Hasni (Center of Space Techniques, Algeria)

Jie Chen (School of Electronics and Information Engineering, Beihang University, P.R. China)

Wei Guo (Beihang University, P.R. China)

16:15 Thoracic Impedance Measurement for Lung Function Evaluation

Yixin Ma (Shanghai Jiao Tong University, P.R. China)

Hua Li (Shanghai Jiao Tong University, P.R. China)

Hang Xu (Shanghai Jiao Tong University, P.R. China)

Peng Qin (Shanghai Jiao Tong University, P.R. China)

Xiaojun Ji (Shanghai Jiao Tong University, P.R. China)

Tao Han (Shanghai Jiao Tong University, P.R. China)

Ping Cai (Shanghai Jiao Tong University, P.R. China)

Hui Qin (Shanghai Jiao Tong University, P.R. China)

16:30 Sparse inverse covariance network-based modeling for mild cognitive impairment classification

Jie Huang (Beihang University, P.R. China)

Yang Li (Beihang University, P.R. China)

16:00 – 18:00

Poster Session

Face Illumination Invariant Feature Extraction Based on Edge Detection Operator

Wenyi Xiong (Chongqing Three Gorges University, P.R. China)

Xiangfei Nie (Chongqing Three Gorges University, P.R. China)

Xing Zou (Chongqing Three Gorges University, P.R. China)

Xue He (Yunnan Water Resources Hydropower Vocational College China, P.R. China)

Zhijun Yang (Chongqing Three Gorges University, P.R. China)

Thursday, October 19

Real time imaging processing of ground-based SAR based on multicore DSP

Zhijun Yang (Chongqing Three Gorges University, P.R. China)

Xiangfei Nie (Chongqing Three Gorges University, P.R. China)

Tian Weiming (Beijing Institute of Technology, P.R. China)

Wenyi Xiong (Chongqing Three Gorges University, P.R. China)

Xiaowei Niu (Chongqing Three Gorges University, P.R. China)

16:45 - 17:00

Coffee/Tea Break

17:00 - 17:45

Image Segmentation II

Room: Meeting Room 2

Chair: Sotirios Diamantas (University of Nevada, Reno, USA)

Jinyu Yang (Beihang University, P.R. China)

17:00 The Research of Face Detection Method Based on Adaboost Algorithm and Skin Color Segmentation

Chang Liu (Beihang University, P.R. China)

17:15 Localize Car Door Handles with Image Segmentation and Saliency Detection

Fan Zhang (Beihang University, P.R. China)

Mengchao Hao (Beihang University, P.R. China)

Muyang Liu (Beihang University, P.R. China)

Jinyu Yang (Beihang University, P.R. China)

17:30 Modeling Pixel Intensities with Log-Normal Distributions for Background Subtraction

Sotirios Diamantas (University of Nevada, Reno, USA)

Kostas Alexis (University of Nevada, Reno, USA)

17:00 – 17:45

Applications of Medical Image Processing

Meeting Room 3

Chair: George C Giakos (Manhattan College, USA)

Fengying Xie (Image Processing Center, Beihang University, P.R. China)

17:00 Application of SVM Based on Genetic Algorithm in Classification of Cataract Fundus Images

Zhiqiang Qiao (Beijing University of Posts and Telecommunications, P.R. China)

Qinyan Zhang (Beijing University of Posts and Telecommunications, P.R. China)

Yanyan Dong (Beijing University of Posts and Telecommunications, P.R. China)

Ji-Jiang Yang (Tsinghua University, P.R. China)

Thursday, October 19

- 17:15 A tissue classification approach for brain tumor segmentation using MRI**
Vasileios Pezoulas (Technical University of Crete, Greece)
Ifigeneia Pologiorgi (Technical University of Crete, Greece)
Stavros Seferlis (Chania General Hospital Agios Georgios, Greece)
Georgios Tsalikis (Chania General Hospital Agios Georgios, Greece)
Georgios Zarifis (Chania General Hospital Agios Georgios, Greece)
George C Giakos (Manhattan College, USA)
Michalis Zervakis (Technical University of Crete, Greece)
- 17:30 Multi-classification of skin diseases for dermoscopy images using deep learning**
Hangning Zhou (Image Processing Center, Beihang University, P.R. China)
Fengying Xie (Image Processing Center, Beihang University, P.R. China)
Zhiguo Jiang (Image Processing Center, Beijing University of Aeronautics and Astronautics, P.R. China)
Jie Liu (Peking Union Medical College Hospital, P.R. China)
Shiqi Wang (Peking Union Medical College Hospital, P.R. China)
Chenyu Zhu (Peking Union Medical College Hospital, P.R. China)

17:00 – 17:45

Feature Extraction and Classification

Meeting Room 8

Chair: Syed Muhammad Anwar (University of Engineering and Technology Taxila, Pakistan) & Chang Xiao Min (Tianjin University of Science and Technology, P.R. China)

- 17:00 Homogeneity Patch Search Method for Efficient Vehicle Color Classification Using Front-of-Vehicle Image**
Daejin Park (Kyungpook National University (KNU), Korea)
Yooseo Jeong (Kyungpook National University (KNU), Korea)
Kil Houm Park (Kyungpook National University (KNU), Korea)
- 17:15 Electrocardiogram Signal Classification to Detect Arrhythmia with Improved Features**
Maheen Gul (University of Engineering and Technology, Taxila, Pakistan)
Syed Muhammad Anwar (University of Engineering and Technology Taxila & Signal, Image, Multimedia Processing and Learning, Pakistan)
Muhammad Majid (University of Engineering and Technology Taxila, Pakistan)
- 17:30 Feature Extraction of Lung Ventilation by Biomedical Electrical Impedance Tomography**
Chen Xiao Yan (Tianjin University of Science and Technology, P.R. China)
Chang Xiao Min (Tianjin University of Science and Technology, P.R. China)

18:00 - 21:00

Dinner (Beihang Training Center Restaurant)

Friday, October 20

08:45 – 10:00

**SPECIAL SESSION: Medical Imaging: Devices, Image Analysis and Processing
Meeting Room 2**

Chair: Andrzej Skalski (AGH University of Science and Technology, Poland) & Jianguo Ma (Beihang University, P.R. China)

- 08:45 Breast Cancer Detection by Microwave Imaging System using Wearable Conformal Antenna Array**
Fengzhou Wang (University of Edinburgh, United Kingdom (Great Britain))
Tughrul Arslan (University of Edinburgh & Sensewhere Ltd., United Kingdom (Great Britain))
Guohua Wang (Beihang University, P.R. China)
- 09:00 An algorithm for evaluating inter- and intra-observer variability of boundary delineation providing local information about deviation for anisotropic image data**
Andrzej Skalski (AGH University of Science and Technology, Poland)
- 09:15 Ultrasonic Spectral Analysis for Biomedical Imaging**
Jianguo Ma (Beihang University, P.R. China)
Min Wei (Beihang University, P.R. China)
Boya Chen (Beijing Anzhen Hospital of Capital Medical University, P.R. China)
Zijie Fang (Beihang University, P.R. China)
Yulin Liu (Beijing Anzhen Hospital of Capital Medical University, P.R. China)
Jie Du (Beijing Anzhen Hospital of Capital Medical University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
- 09:30 A CNN Based Volumetric Imaging Method With Single X-ray Projection**
Ran Wei (Beihang University, P.R. China)
Fugen Zhou (Beihang University, P.R. China)
Bo Liu (Beihang University, P.R. China)
Bin Liang (Beihang University, P.R. China)
Bin Guo (Beihang University, P.R. China)
Xuangang Xu (Beihang University, P.R. China)
- 09:45 Fully automated identification of heart sounds for the analysis of cardiovascular pathology**
Sidra Ghafoor (Bahria University, Pakistan)
Muhammad Usman Akram (CEME NUST, Pakistan)
Ammara Nasim (Bahria University, Pakistan)
Taimur Hassan (Bahria University, Islamabad, Pakistan)

Friday, October 20

08:45 – 10:00

SPECIAL SESSION: Tomographic Devices: Clinical and Industrial Applications I
Meeting Room 3

Chair: Yunjie Yang (University of Edinburgh, United Kingdom (Great Britain)) & Yanbin Xu (Tianjin University, P.R. China)

08:45 Effect of Parasitic Resistance in Electrical Resistance Tomography with Voltage Excitation

Marco Antonio Rodriguez Frias (University of Manchester, United Kingdom (Great Britain))

Wuqiang Yang (The University of Manchester, United Kingdom (Great Britain))

09:00 Simulation Study of Scaffold 3D Cell Culture Imaging Using A Miniature Planar EIT Sensor

Yunjie Yang (University of Edinburgh, United Kingdom (Great Britain))

Hancong Wu (Agile Tomography Group, School of Engineering, University of Edinburgh, United Kingdom (Great Britain))

Jiabin Jia (University of Edinburgh, United Kingdom (Great Britain))

09:15 A New Regularization Method for Electrical Impedance Tomography

Bing Han (Tianjin University, P.R. China)

Yanbin Xu (Tianjin University, P.R. China)

Feng Dong (Tianjin University, P.R. China)

09:30 A fast iterative p-thresholding algorithm for sparse reconstruction of electrical tomography

Zheng Wang (Tianjin University, P.R. China)

Yanbin Xu (Tianjin University, P.R. China)

Feng Dong (Tianjin University, P.R. China)

09:45 Construction of Sensitivity Matrix Involving Location Information for Ultrasound Modulated Electrical Impedance Tomography

Shengnan Zhang (Tianjin University, P.R. China)

Yanbin Xu (Tianjin University, P.R. China)

Feng Dong (Tianjin University, P.R. China)

08:45 – 10:00

Remote Sensing, Ladars, Lidars and Electromagnetic Scattering
Meeting Room 8

Chair: Xiaolu Li (Beihang University, P.R. China)

Ekin Arabal (University of Bristol, United Kingdom (Great Britain))

08:45 Leaf Moisture Content Measurement using Polarized Active Imaging LiDAR

Xinhao Xie (Beihang University, P.R. China)

Lijun Xu (Beihang University, P.R. China)

Xiaolu Li (Beihang University, P.R. China)

Friday, October 20

09:00 Variable Parameter Estimation of SAR Signal Based on Compression Sensing

Shuai Gao (Beihang University, P.R. China)

Huaping Xu (Beihang University, P.R. China)

Xue Qiu (National University of Defense Technology, P.R. China)

Bo Yang (Beihang University, P.R. China)

09:15 Polarimetric SAR Oil Spill Detection based on Deep Networks

Guandong Chen (Beijing University of Technology, P.R. China)

Yu Li (Beijing University of Technology, P.R. China)

Guangmin Sun (Beijing University of Technology, P.R. China)

Yuanzhi Zhang (National Astronomical Observatories, P.R. China)

09:30 Precise Multi-Channel Timing Analysis System for Multi-Stop LIDAR Correlation

Ekin Arabul (University of Bristol, United Kingdom (Great Britain))

Ayoub Girach (University of Bristol, United Kingdom (Great Britain))

John Rarity (University of Bristol, United Kingdom (Great Britain))

Naim Dahnoun (University of Bristol, United Kingdom (Great Britain))

09:45 3-D SAR Imaging Algorithm Application in Blast Furnace Stock Lines

Jiangying Li (University of Science and Technology Beijing, P.R. China)

Xianzhong Chen (University of Science and Technology Beijing, P.R. China)

Qingwen Hou (University of Science and Technology Beijing, P.R. China)

Zhengpeng Wang (Beihang University, P.R. China)

10:00 - 10:45

Modeling and Applications in imaging

Meeting Room 2

Chair: Deming Wang (Tianjin Polytechnic University, P.R. China)

10:00 Application of self-adaptive generalized predictive control in the spinning process of absorbable suture

Xiuwu Sui (School of Mechanical Engineering, Tianjin Polytechnic University, P.R. China)

Deming Wang (Tianjin Polytechnic University, P.R. China)

Shuo Wang (School of Mechanical Engineering, Tianjin Polytechnic University, P.R. China)

Yang Zhang (Tianjin Polytechnic University, P.R. China)

Yao Li (Tianjin Polytechnic Ucaniversity, P.R. China)

10:22 An Image Processing Approach for Characterizing Working Frequency of Pulse Combustion

Lijun Xu (Beihang University, P.R. China)

Fangyan Li (Beihang University, P.R. China)

Friday, October 20

10:00 – 10:45

Image Registration and Image Restoration

Meeting Room 3

Chair: Manhua Liu (Shanghai Jiao Tong University, P.R. China)

Jie Jiang (Beihang University, P.R. China)

10:00 Remote Sensing Image Registration Based on Feature Points of Global Edge

Siyang Liu (Beihang University, P.R. China)

Jie Jiang (Beijing University of Aeronautics & Astronautics, P.R. China)

10:15 A motion deblurring method of a light field camera

Lijuan Su (Beihang University, P.R. China)

Tiansheng Zhang (Beihang, P.R. China)

Yan Yuan (Beihang University, P.R. China)

10:30 Alzheimer's Disease Classification Based on Combination of Multi-model Convolutional Networks

Fan Li (Shanghai Jiao Tong University, P.R. China)

Danni Cheng (Shanghai Jiao Tong University, P.R. China)

Manhua Liu (Shanghai Jiao Tong University, P.R. China)

10:45 Face Recognition Based in Geodesic Distance Approximations Between Multivariate Normal Distributions

John Soldera (UFRGS, Brazil)

Kit Dodson (University of Manchester, Brazil)

Jacob Scharcanski (UFRGS, Brazil)

11:00 - 11:30

Student Awards and Closing Ceremony

Room: Meeting Room 8