

2019 IEEE International Conference on Imaging Systems and Techniques (IST 2019)

**Abu Dhabi, United Arab Emirates
9 – 10 December 2019**



**IEEE Catalog Number: CFP19IMG-POD
ISBN: 978-1-7281-3869-5**

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IEEE Catalog Number:	CFP19IMG-POD
ISBN (Print-On-Demand):	978-1-7281-3869-5
ISBN (Online):	978-1-7281-3868-8
ISSN:	1558-2809

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Saturday, December 7th

19:00 – 22:00

Reception Dinner at the ADNEC

Room: Capital Suite 5

Sunday, December 8th

7:30 - 8:30

Registration

Room: Foyer

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UAE National Anthem & a short video about Abu Dhabi University

9:00 - 9:15

Welcome Message from the IST General Chair - George Giakos

Room: Thamama - Capital Suite 7

9:15 - 9:30

Welcome Message from the Chancellor of Abu Dhabi University – Prof. Waqar Ahmed

Room: Thamama - Capital Suite 7

INTERNATIONAL SCHOOL OF IMAGING KEYNOTES

9:30 AM - 10:10 AM

Keynote 1:

Mohamed Al Mutawa

Abu Dhabi National Oil Company (ADNOC)

UAE

Room: Thamama - Capital Suite 7

10:10 AM-10:50 AM

Keynote 2:

Dr. Manuel F. Casanova

University Of South Carolina School of Medicine

USA

Room: Thamama - Capital Suite 7

10:50 AM-11:30 AM

Keynote 3:

Dr. Anant Madabhushi

Case Western Reserve University

USA

Room: Thamama - Capital Suite 7

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Coffee Break

12:00 PM-12:40 PM
Keynote 4:
Dr. Ayman El-Baz
University of Louisville
USA
Room: Thamama - Capital Suite 7

INTERNATIONAL SCHOOL OF IMAGING OPEN DISCUSSIONS

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Technical University of Crete,
Greece
Room: Thamama - Capital Suite 7

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Lunch Break
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Dr. George Giakos
Manhattan College
USA

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Room: Capital Suite 5

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Room: Marban - Capital Suite 4
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Chairs: Wael Elmedany (University of Bahrain)

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Iacob Crucianu (SIVECO, Romania)

Aymen Mtibaa (Télécom SudParis, France)

Mohamed Hmani (Télécom SudParis, France)

Marcel Kockmann (Lumenvox, Germany)

Christian Narr (Lumenvox, Germany)

Elnar Hajiyev (Real Eyes, Hungary)

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Tutorial - Machine Learning in Medicine – Part 1 – Sponsored by ADNOC

Room: *Um LULU - Capital Suite 06*

Dr. Ayman El-Baz

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Room: Capital Suite 5

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Room: Marban - Capital Suite 4

Chairs: Reem Salim (Abu Dhabi University)

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Room: Thamama - Capital Suite 7

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Room: *Um LULU - Capital Suite 06*

Dr. Ayman El-Baz

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Dinner at the ADNEC

Room: Capital Suite 5

Monday, December 9th

INTERNATIONAL SCHOOL OF IMAGING (ISI) PANEL DISCUSSION

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Dr. Kostas Marias, FORTH, Greece

Room: Marban - Capital Suite 4

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Novel Tomographic Imaging Techniques

Room: Thamama - Capital Suite 7

Chairs: Anas Altarabsheh (Abu Dhabi University)

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Daniel Rodrigues Pipa (Universidade Tecnológica Federal do Paraná, Brazil)

Marco Jose Da Silva (Universidade Tecnológica Federal do Paraná, Brazil)

10:30 - 11:00

Coffee Break

Room: Capital Suite 5

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Machine Learning Approaches in Imaging

Room: Marban - Capital Suite 4

Chairs: Reem Salim (Abu Dhabi University)

Kostas Marias (FORTH, Greece)

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Room: Thamama - Capital Suite 7

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Novel Imaging Systems

Room: Marban - Capital Suite 4

Chairs: Montasir Qasymeh (Abu Dhabi University)

Stelios Sfakianakis (FORTH, Greece)

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Nikos Papandroulakis (Hellenic Centre for Marine Research, Greece)

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Room: Thamama - Capital Suite 7

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Chairs: Huma Zia (Abu Dhabi University)

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Room: Marban - Capital Suite 4

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Thomai Karamitsou (Agrosense, Greece)
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Nikos Tsitsiokas (ASEPOP, Greece)

15:00 - 16:00

Quantitative Imaging Methods and Techniques

Room: Thamama - Capital Suite 7

Chairs: Mohammed Ghazal (Abu Dhabi University)
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Fractional Order Savitzky-Golay Differentiator based Approach for Mammogram Enhancement.....295

Koushendra Kumar Singh (NIT Jamshedpur, India)
Manish Bajpai (IIITDM Jabalpur, India)

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An Accurate System for Prostate Cancer Localization from Diffusion-Weighted MRI.....300

Islam R. Abdelmaksoud (Mansoura University, Egypt)

Mohammed Ghazal (University of Abu Dhabi, United Arab Emirates)

Ahmed Shalaby (University of Louisville, USA)

Mohammed M. Elmogy (Faculty of Computers and Information & Mansoura University, Egypt)

Ahmed Aboufotouh (Mansoura University, Egypt)

Mohamed Abou El-Ghar (Urology and Nephrology Center, University of Mansoura, USA)

Robert Keynton (University of Louisville, USA)

Ayman ElBaz (University of Louisville, United Arab Emirates)

15:45

A CNN-Based Framework for Automatic Vitreous Segmentation from OCT Images.....305

El Sayed Hussein Haggag (Mansoura University, Egypt)

Fahmi Khalifa (University of Louisville, USA)

Hisham Abdeltawab (University of Louisville, USA)

Ahmed Elnakib (University of Mansoura, Egypt)

Mohamed Mohamed (--Mansoura University, Egypt)

Mohammed Ghazal (Abu Dhabi University, United Arab Emirates)

Harpal Sandhu (UofL, USA)

Ayman Sabry El-Baz (University of Louisville, USA)

16:00 - 16:30

Coffee Break

Room: Capital Suite 5

16:30 - 17:30

Real Life Imaging Applications and Challenges

Room: Marban - Capital Suite 4

Chairs: Chairs: EIFadl Ibrahim (ADNOC)

Jiangtao Sun (Beihang University, China)

Yi Li (Tsinghua University, China)

16:30

Effect of stimulation patterns on bladder volume measurement based on fringe effect of EIT sensors.....331

Xiaofeng Liang (Beihang University, China)

Lijun Xu (Beihang University, China)

Wenbin Tian (Beihang University, China)

Yuedong Xie (Beihang University, China)

Jiangtao Sun (Beihang University, China)

16:45

Imaging of flow pattern of gas-oil flows with convolutional neural network.....336

Zhuoqun Xu (Tsinghua University, China)

Xinmeng Yang (Tsinghua University, China)

Bing Chen (CNPC Beijing Richfit Information Technology Co. Ltd, China)

Maomao Zhang (Shenzhen Leengstar Co. Ltd., China)

Yi Li (Tsinghua University, China)

17:00

Classification System with Capability to Reject Unknowns.....342

Soma Shiraishi (NEC Corporation, Japan)

Katsumi Kikuchi (NEC Corporation, Japan)

Kota Iwamoto (NEC Corporation, Japan)

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Identifying clusters and themes from incidents related to health information technology in medical imaging as a basis for improvements in practice.....348

Md Shafiqur Rahman Jabin (University of South Australia, Australia)

Farah Magrabi (Macquarie University, Australia)

Peter Hibbert (Macquarie University, Australia)

Tim Schultz (University of Adelaide, Australia)

William Runciman (University of South Australia, Australia)

17:30 PM

Application of Imaging in the Oil and Gas Industry.....N/A

Abdulla Alqemzi (ADNOC) and EIFadl Ibrahim (ADNOC)

16:30 – 17:30

Medical Diagnostic Techniques

Room: Thamama - Capital Suite 7

Chairs: Diwei Zhou (Loughborough University, United Kingdom (Great Britain))

Ayman ElBaz (University of Louisville, United Arab Emirates)

16:30

Autism Spectrum Disorder Diagnosis framework using Diffusion Tensor Imaging.....310

Yaser A ElNakieb (University of Louisville, USA)

Ahmed Soliman (University of Louisville, USA)

Ali Mahmoud (University of Louisville, USA)

Ahmed Shalaby (University of Louisville, USA)

Omar Dekhil (CECS, USA)

Mohammed Ghazal (University of Abu Dhabi, United Arab Emirates)

Ashraf Khalil (University of Abu Dhabi, United Arab Emirates)

Andy Switala (University of Louisville, USA)

Robert Keynton (University of Louisville, USA)

Gregory Barnes (University of Louisville Autism Center, USA)

Ayman ElBaz (University of Louisville, United Arab Emirates)

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Brain Fibre Tracking Improved by Diffusion Tensor Similarity using Non-Euclidean Distances.....315

Lei Ye (Loughborough University, United Kingdom (Great Britain))

Eugenie Hunsicker (Loughborough University, United Kingdom (Great Britain))

Baihua Li (Loughborough University, United Kingdom (Great Britain))

Diwei Zhou (Loughborough University, United Kingdom (Great Britain))

17:00

Chronic Wound Healing Assessment System Based on Color and Texture Analysis.....321

Mohammed M. Elmogy (Faculty of Computers and Information & Mansoura University, Egypt)

Ashraf Khalil (Abu Dhabi University, United Arab Emirates)

Mohammed Ghazal (University of Abu Dhabi, United Arab Emirates)

Ayman ElBaz (University of Louisville, United Arab Emirates)

17:15

A Machine Learning Approach for Grading Autism Severity Levels Using Task-based Functional MRI.....326

Reem Haweel (Faculty of Computers and Information Sciences, Ain Shams University & University of Louisville, Egypt)

Omar Dekhil (CECS, USA)

Ahmed Shalaby (University of Louisville, USA)

Ali Mahmoud (University of Louisville, USA)

Mohammed Ghazal (Abu Dhabi University, United Arab Emirates)

Robert Keynton (UofL, USA)

Gregory Barnes (University of Louisville Autism Center, USA)

Ayman ElBaz (University of Louisville, United Arab Emirates)

17:30 - 18:30

Image Analysis and Processing

Room: Marban - Capital Suite 4

Chairs: Luay Fraiwan (Abu Dhabi University)

Ming Liu (The Hong Kong University of Science and Technology, Hong Kong),

Haogang Zhu (Beihang University, China)

17:30

A Deep Learning-Based Approach for Accurate Segmentation of Bladder Wall using MR Images.....354

Kamal Hammouda (University of Louisville, USA)

Fahmi Khalifa (University of Louisville, USA)

Ahmed Soliman (University of Louisville, USA)

Mohammed Ghazal (Abu Dhabi University, United Arab Emirates)

Mohamed Abou El-Ghar (Urology and Nephrology Center, University of Mansoura, USA)

Ahmed Haddad (University of Louisville, USA)

Mohammed M. Elmogy (Faculty of Computers and Information & Mansoura University, Egypt)

Hanan Darwish (Mansoura University, Egypt)

Robert Keynton (University of Louisville, USA)

Ayman Sabry El-Baz (University of Louisville, USA)

17:45

PT-ResNet: Perspective Transformation-Based Residual Network for Semantic Road Image Segmentation.....360

Rui Fan (The Hong Kong University of Science and Technology, Hong Kong)
Yuan Wang (the Hong Kong University of Science and Technology, Hong Kong)
Lei Qiao (Shanghai Jiao Tong University, China)
Ruiwen Yao (Shanghai Jiao Tong University, China)
Peng Han (Shanghai Jiao Tong University, China)
Weidong Zhang (Shanghai Jiao Tong University, China)
Ioannis Pitas (Aristotle University of Thessaloniki, Greece)
Ming Liu (The Hong Kong University of Science and Technology, Hong Kong)

18:00

A New System for Lung Cancer Diagnosis Based on The Integration of Global and Local CT Features.....365

Ahmed Shaffie (University of Louisville, USA)
Ahmed Soliman (University of Louisville, USA)
Hadil Abu Khalifeh (Abu Dhabi University, United Arab Emirates)
Fatma Taher (Dubai, UAE & Zayed University, United Arab Emirates)
Mohammed Ghazal (University of Abu Dhabi, United Arab Emirates)
Neal Dunlap (University of Louisville, USA)
Adel S Elmaghraby (University of Louisville, USA)
Robert Keynton (University of Louisville, USA)
Ayman Sabry El-Baz (University of Louisville, USA)

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Learning Adversarially Enhanced Heatmaps for Aorta Segmentation in CTA.....371

Wenji Wang (Beihang University, China)
Haogang Zhu (Beihang University, China)

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Imaging Devices and Techniques

Room: Thamama - Capital Suite 7

Chairs: Huma Zia (Abu Dhabi University)

Lijun Xu (Beihang University, China)

Salah Al-Majeed (University of Gloucestershire, United Kingdom (Great Britain))

17:30

Sliding Mode Control based Support Vector Machine RBF Kernel Parameter Optimization.....376

Maryam Yalsavar (Shiraz University, Iran)
Paknoosh Karimaghaee (Shiraz University, Iran)
Akbar Sheikh-Akbari (Leeds Beckett University, United Kingdom (Great Britain))
Jamshid Dehmeshki (Kingdon University, United Kingdom (Great Britain))
Mohammad-Hassan Khooban (Aarhus University, Denmark)
Salah Al-Majeed (University of Gloucestershire, United Kingdom (Great Britain))

17:45

Automatic Calibration of Dual-LiDARs Using Two Poles Stickered with Retro-Reflective Tape.....382

Bohuan Xue (The Hong Kong University of Science and Technology, Hong Kong)

Jianhao Jiao (The Hong Kong University of Science and Technology, Hong Kong)

Yilong Zhu (HKUST, Hong Kong)

Linwei Zheng (The Hong Kong University of Science and Technology, Hong Kong)

Dong Han (University of Chinese Academy of Sciences, China)

Ming Liu (The Hong Kong University of Science and Technology, Hong Kong)

Rui Fan (The Hong Kong University of Science and Technology, Hong Kong)

18:00

Autonomous UAV Landing System Based on Visual Navigation.....388

Zhixin Wu (Shanghai Jiao Tong University, China)

Peng Han (Shanghai Jiao Tong University, China)

Ruiwen Yao (Shanghai Jiao Tong University, China)

Lei Qiao (Shanghai Jiao Tong University, China)

Weidong Zhang (Shanghai Jiao Tong University, China)

Min Sun (Shanghai Jiao Tong University, China)

Tielong Shen (Sophia University & Japan, Japan)

Yilong Zhu (HKUST, Hong Kong)

Ming Liu (The Hong Kong University of Science and Technology, China)

Rui Fan (The Hong Kong University of Science and Technology, China)

15:00-18:00 PM

Student Research Poster Session

Room: Um LULU - Capital Suite 6

19:30 - 22:30

Gala Dinner

Room: Aloft Abu Dhabi Hotel (Location of the Dinner: Brick)

Tuesday, December 10th

8:00 - 9:00

Advances in Imaging Technology

Room: Thamama - Capital Suite 7

Chairs: Anas Altarabsheh (Abu Dhabi University)

Yi Yang (Shenzhen LUSTER Vision Technology Co., Ltd., China)

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

8:00

One-stage object detection networks for inspecting the surface defects of magnetic tiles.....394

Jiaqi Wei (Tsinghua University, China)

Peiyuan Zhu (Shenzhen HAN Industrial Technologies CO. LTD., China)

Xiang Qian (Tsinghua University, China)

Shidong Zhu (Tsinghua University, China)

8:15

Frequency-difference imaging for multi-frequency complex-valued ECT.....400

Haokun Wang (University of Edinburgh, United Kingdom (Great Britain))

Maomao Zhang (Shenzhen Leengstar Co. Ltd., China)

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

8:30

A Deconvolutional Bottom-up Deep Network for multi-person pose estimation.....405

Meng Li (Tsinghua University, China)

Haoqian Wang (Tsinghua University, China)

Yongbing Zhang (Tsinghua University, China)

Yi Yang (Shenzhen LUSTER Vision Technology Co., Ltd., China)

8:45

Renyi divergence and non-deterministic subsampling in Rigid Image Registration.....410

Constantinos Spanakis (Technical University of Crete & Foundation for Research and Technology-Hellas, Greece)

Emmanuel Mathioudakis (Technical University of Crete, Greece)

Nikos Kampanis (Foundation for Research and Technology, Greece)

Kostas Marias (Foundation for Research and Technology/ Hellenic Mediterranean University, Greece)

Nikos Tsiknakis (Foundation for Research and Technology - Hellas (FORTH), Greece)

9:00 – 10:15

Imaging Informatics and Artificial Intelligence

Room: *Thamama* - Capital Suite 7

Chairs: Wael Elmedany (University of Bahrain)
Chuanxin Xiao (North China Electric Power University, China)
Yoriko Kazama (Hitachi Asia, Singapore)

9:00

Detecting knives-use by a deep learning method from surveillance videos.....416

ChunGuang Liu (Yangzhong Intelligent Electrical Institute, North China Electric Power University, China)

Peng Liu (North China Electric Power University, China)

Chuanxin Xiao (North China Electric Power University, China)

9:15

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Chunfang Xue (Yangzhong Intelligent Electrical Institute, North China Electric Power University, China)

Peng Liu (North China Electric Power University, China)

Weiping Liu (North China Electric Power University, China)

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Classification of different vehicles in traffic using RGB and depth images: A Fast RCNN Approach.....426

Mohan Kashyap Pargi (Hitachi Asia Ltd, Singapore)

Bondan Setiawan (Hitachi Asia, Singapore)

Yoriko Kazama (Hitachi Asia, Singapore)

9:45

Comparison of machine learning methods for multiphase flowrate prediction.....432

Zhenyu Jiang (University of Edinburgh, United Kingdom (Great Britain))

Haokun Wang (University of Edinburgh, United Kingdom (Great Britain))

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

Yi Li (Tsinghua University, China)

10:00

Image reconstruction for electrical impedance tomography based on spatial invariant feature maps and convolutional neural network.....438

Delin Hu (University of Edinburgh, United Kingdom (Great Britain))

Keming Lu (Tsinghua University, China)

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

10:15 – 11:15

Student Awards and Closing Ceremony

Room: *Thamama* - Capital Suite 7