

# 2012 IEEE International Conference on Imaging Systems and Techniques (IST'2012)

Britannia Country House Hotel, Manchester, UK

16-17 July 2012

# 1<sup>st</sup> Call for Papers

Abstract due: 31 March 2012

Notification of acceptance: 15 April 2012

Full paper due: 15 June 2012

Sponsored by IEEE Instrumentation and Measurement Society TC-19: Technical Committee on Imaging Systems

#### In collaboration with

- School of Electrical and Electronic Engineering, University of Manchester
- Visting Manchester
- · Institute of Measurment and Control
- · IEEE UK and Ireland Section

Following the success of events in Stresa in Italy 2004, Niagara Falls in Canada 2005, Minori in Italy 2006, Krakow in Poland 2007, Chania in Greece 2008, Shenzhen in China 2009, Thessaloniki in Greece 2010 and Penang in Malaysia 2011, the 2012 IEEE International Conference on Imaging Systems and Techniques (IST'2012) will take place in Manchester in the UK, 10 days before the London Olympic Game.

IST'2012 deals with the design, development, evaluation and applications of imaging systems, instrumentation, and measuring techniques, to enhance detection and image quality. Applications for aerospace, medicine and biology, molecular imaging, metrology, Ladars and Lidars, radars, homeland security, and industrial imaging, with emphasis on industrial and medical tomography, corrosion imaging, and non-destructive evaluation (NDE), will be covered. The following areas will be particularly considered:

- · Aerospace imaging
- Medical imaging and bio-nano-photonics
- Tomography for industrial and medical applications
- Environmental monitoring, energy resources
- Real-time imaging and video processing
- Molecular imaging and metabolic imaging
- · Remote sensing, passive and active sensing
- · Ladars and Lidars
- Multi-spectral polarimetric imaging and Lasers
- · Subsurface inspection, corrosion imaging
- Radiation detection, airport security and cargo inspection-standoff detection
- Electromagnetic imaging and inverse scattering

#### With emphasis on

- Detector design principles and image formation
- · Imaging system design and instrumentation





- Signal and image analysis
- · Linear and non-linear processing techniques
- Feature extraction and recognition
- · Multi-functional and multi-fusion imaging

It has been agreed that Measurement Science and Technology (IOP) will publish a special issue after the conference.



#### **About Manchester and Hotel**

Just two hours north of London, Manchester was an industrial city and is now one of the most vibrant and cosmopolitan cities in the UK, yet it retains its own unique character. Set in a region that offers great value for money, Manchester has a wealth of things to see and do, a thriving night life scene and top class events. Manchester is a perfect walking city, stroll along the streets, exploring the mixture of old and new architecture. Soak up the urban vibe, speak to people of the city and expect a warm welcome, this is a city that embraces all its visitors. Manchester is easy to get to and perfectly positioned to discover all of England's North Country.

Britannia Country House Hotel is located between Manchester City Centre and the Manchester International Airport. It offers comfort and efficiency of one of Manchester's leading hotels. The hotel is within a short drive from Trafford Centre (the largest shopping centre in the UK), Manchester United Football Club, and University of Manchester. The Fitness Centre in the hotel offers the heated indoor swimming pool, sauna, steam room or jacuzzi.



## **General and Technical Program Chair**

George Giakos, University of Akron, USA

#### **Honorary and Local Chair**

Wuqiang Yang, University of Manchester, UK

#### Co-Chairs

Mohd Zaid Abdullah, Universiti Sains Malaysia Matteo Pastorino, University of Genoa, Italy Cesare Svelto, Polytechnic of Milan, Italy Konstantina Nikita, National Technical University Athens, Greece

Maria Petrou, Imperial College, UK Nikolaos Bourbakis, Wright State University, USA Michele Ceccarelli, University of Sannio, Italy Antonios Gasteratos, Democritus University of Thrace, Greece

Dimitrios Karras, Technological Educational Institute of Chalkida, Greece

Yong Yan, University of Kent, UK George Zentai, Varian Medical Systems, USA Michalis Zervakis, Technical University of Crete, Greece

#### **Technical Coordinators**

Lin Zhang, Cleveland State University, USA Angelos Amanatiadis, Democritus University of Thrace,

#### Workshop Administrator

Chris Dyer, Conference Catalysts, LLC, USA

#### **International Board and Technical Committee**

Vincenzo Piuri, University of Milan, Italy Mel Siegel, Carnegie Mellon, USA Emil Petriu, University of Ottawa, Canada Supavadee Aramvith, Chulalongkorn University, Thailand

Andy Augousti, Kingston University, UK Michele Ceccarelli, University of Sannio, Italy Christo Christodoulou, University of New Mexico, USA Narender Reddy, University of Akron, USA Ioannis Andreadis, Democritus University of Thrace, Greece

Ioannis Gousias, Imperial College, UK Uwe Hampel, Forschungszentrum Dresden-Rossendorf e.V., Germany Yan Han, North University of China Zhiyao Huang, Zhejiang University, China Dimitris lakovidis, University of Athens, Greece

Zheng Ji, Shenzhen University, China Nikolas Karakatsanis, National Technical University Athens, Greece

Theodore Laopoulos, Aristotle University of Thessaloniki, Greece Panos Liatsis, City University, UK George Livanos, Technical University of Crete, Greece Aamir Saeed Malik, Universiti Teknologi Petronas, Malaysia

Stavroula Mougiakakou, University of Bern, Switzerland

Saba Mylvaganam, Telemark University College, Norway

Xiaochuan Pan, University of Chicago, USA George Panayiotakis, University of Patras, Greece Lihui Peng, Tsinghua University, China Michele Piana, University of Verona, Italy Ruzairi Abd. Rahim, Universiti Teknologi Malaysia Lin Zhang, Cleveland State University, USA Andrea Randazzo, University of Genoa, Italy Dominik Sankowski, Technical University of Lodz, Poland

Stefanie Marotta, The University of Akron, USA Chaya Narayan, The University of Akron, USA Jeff Petermann, The University of Akron, USA Stelios Siskos, Aristotle University of Thessaloniki,

Wlademar Smolik, Warsaw University of Technology, Poland

Manuchehr Soleimani, University of Bath, UK Guiyun Tian, Newcastle University, UK Andrea Trucco, University of Genova, Italy Ioannis Valavanis, National Technical University Athens, Greece

Keerthi Valluru, University of Akron, USA Divya Pingili, University of Akron, USA Chi-Hwa Wang, National University of Singapore Huaxiang Wang, Tianjin University, China Wei Wang, Sussex University, UK Lijun Xu, Beihang University, China

#### **Local Committee**

Anthony Cassidy, Visit Manchester John Oakley, University of Manchester Zhipeng Wu, University of Manchester Wuqiang Yang, University of Manchester Hujun Yin, University of Manchester

#### Tours

- Manchester United Football Club and Museum of Science and Industry (sponsored by Visiting Manchester)
- Chester (historical city) and Cheshire Oaks (designer outlet shopping centre)
- Peak District and Chatsworth (Duke of Devonshire's house and garden)

### **Welcome to Manchester**