



**CHINA-SCOTLAND SIGNAL AND IMAGE PROCESSING RESEARCH ACADEMY  
(SIPRA)**

中国-苏格兰信号图像处理研究院

**FIFTH CHINA-SCOTLAND SIPRA WORKSHOP  
NEXT GENERATION INTELLIGENT SIGNAL IMAGE PROCESSING  
TECHNOLOGIES AND APPLICATIONS**

**ROOM 2A73, COTTRELL BUILDING  
DIVISION OF COMPUTING SCIENCE AND MATHEMATICS  
UNIVERSITY OF STIRLING, SCOTLAND, UK**

**11-12 APRIL 2013**

**DAY I THURSDAY 11 APRIL 2013**

09.00-10.15 Delegate Registration and Refreshments

**OPENING SESSION**

**CHAIR: Professor T S Durrani**

10.15-10.30 *Welcome*  
Professor Edmund Burke  
Deputy Principal Research, University of Stirling

10.30-11.00 *Background to Workshop*  
Workshop Co-chairs:  
Professors Tariq Durrani and Amir Hussain, University of Stirling

**PLENARY: THEME I: SECURITY AND SURVEILLANCE**  
**CHAIR: Professor T S Durrani**

11.00-11.30 *'Visual Computing for Enhanced Security'*  
Professor Tieniu TAN, National laboratory for Pattern Recognition, Beijing

11.30-12.00 *'A Novel Method for Group Target Tracking'*  
Professor Jun Wang, Beihang University

12.00-12.15 *Discussion*

**12.15-1400 Lunch**

**PLENARY:  
CHAIR:**

**THEME 2: HYPER SPECTRAL IMAGING  
Professor Bin LUO**

- 14.00-14.30 *'Improved Sparse Representation for Effective Target Detection in Hyperspectral Imaging'*  
Dr Jinchang REN, University of Strathclyde
- 14.30-15.00 *'Hyperspectral Imaging- Diverse Applications'*  
Professor Stephen Marshall, University of Strathclyde
- 15.00-15.15 *Discussion*

**15.15-15.45 Refreshment Break**

**PLENARY:  
CHAIR:**

**THEME 3: INFORMATION REPRESENTATION  
Professor Stephen Marshall**

- 15.45-16.15 *'Towards Understanding the Urban Information - Big Learning for Big Data'*  
Professor Qiao Wang, Southeast University
- 16.15-16.45 *'Graph-based Image Representation and Recognition'*  
Professor Luo Bin, Anhui University
- 16.45-17.00 *Discussion*

**17.00-18.00 PhD STUDENT POSTER SESSION**

**19.00-21.30 WORKSHOP DINNER**

**DAY 2**

**FRIDAY 12 APRIL 2013**

**PLENARY**

- 09.00-09.15 *'Summary of previous day's discussion'*  
Professor T S Durrani

**PLENARY:  
CHAIR:**

**THEME 4: PATTERN CLASSIFICATION  
Professor Qiao WANG**

- 09.15-09.45 *'Style Adaptive Pattern Field Classification'*  
Dr Cheng-Lin LIU National Laboratory for Pattern Recognition
- 09.45-10.15 *'Classification of Colorectal Polyp Regions in Optical Projection Tomography'*  
Dr Jianguo Zhang, University of Dundee
- 10.15-10.30 *Discussion*
- 10.30-11.00 Refreshment Break**

**PLENARY:  
CHAIR:**

**THEME 5: COGNITION  
Professor Jun WANG**

11.00-11.30      *'Spectrum Sensing for Cognitive Radio'*  
Dr Mathini Sellathurai, Heriot-Watt University

11.30-12.00      *'Broadband Angle of Arrival Estimation'*  
Dr Stephan Weiss, University of Strathclyde

12.00-12.15      *Discussion*

**12.15-1400      Lunch**

**PLENARY:  
CHAIR:**

**THEME 6: APPLICATIONS  
Professor Cheng-Lin LIU**

14.00-14.30      *'Synthetic Aperture Radar Moving Target Detection and Its Application'*  
Dr Fei Gao, Beihang University

14.30-15.00      *'On hybrid switching differential equations with applications'*  
Dr Jozsef Farkas, University of Stirling

15.00-15.15      *Discussion*

**15.15-15.45      Refreshment Break**

**PLENARY:  
CHAIR:**

**THEME 7: COGNITION AND TRANSFORM TECHNIQUES  
Professor Tariq S Durrani**

15.45-16.15      *'A Cognitive Control Framework for Autonomous Systems'*  
Professor Amir Hussain and Dr Erfu Yang, University of Stirling

16.15-15.45      *'Curvelet Transform for Image Denoising'*  
Dr Wei Zhao, Beihang University

16.45 -17.00      *Discussion*

**17.00      END OF WORKSHOP**