

[Computer Assisted Radiology and Surgery](#)

[CARS 2013](#)

[June 26th - 29th, Heidelberg, Germany](#)

## **PROGRAM TOPICS**

**Deadline for abstract/paper submission: 10<sup>th</sup> January 2013**

### **27<sup>th</sup> International Congress and Exhibition on Computer Assisted Radiology**

Chairman: Stanley Baum, MD (USA)

Co-chair: Hans-Peter Meinzer, PhD (D)

- Medical Imaging, e.g.  
DR, CT, MR, Virtual Endoscopy, US, SPECT, PET and Molecular Imaging
- Computer Assisted Cardiovascular Imaging
- Image Processing and Display
- Medical Workstations
- Interventional Radiology
- Minimally Invasive Spinal Therapy
- Image Guided Diagnosis and Therapy of the Prostate
- Ablation Therapies
- Image Guided Radiation Therapy
- Nanotechnology for Imaging and Therapy
- Telemedicine, E-health and Multimedia EPR
- Expert Systems and Computer Assisted Education
- Economic and Management Issues
- Security, Legal and Ethical Aspects

### **17<sup>th</sup> Annual Conference of the International Society for Computer Aided Surgery**

President: Makoto Hashizume, MD (J)

- Computer Applications for e.g. Neurosurgery, Head and Neck, Orthopaedics, Ear Nose and Throat, Cardiovascular and Thoracoabdominal Surgery, and Plastic/Reconstructive Surgery
- Image Guided Therapy

- Image Processing and Visualization
- Surgical Robotics and Instrumentation
- Surgical Navigation
- Surgical Simulation
- 3D Modelling and Rapid Prototyping
- Postoperative Result Assessment
- Surgical Education and Training
- Haptics and Multimodal Devices in Medical Applications
- Methods of Validation and Verification
- Computer-Assisted Planning
- Knowledge and Decision Management
- Navigated Control
- Surgical Workplace – Ergonomics

### **15<sup>th</sup> International Workshop on Computer-Aided Diagnosis**

Chairman: Kunio Doi, PhD (USA)

Co-chair: Ulrich Bick, MD (D)

- CAD for Breast, Chest, Colon, Skeletal, Liver, Brain and Vascular Imaging
- CAD for Cancer Screening
- CAD for 3D Imaging
- CAD for Differential Diagnosis
- CAD for CT, MRI, Ultrasonography, PET and Nuclear Medicine Imaging
- Image Databases for CAD
- Computer Vision, ANN and Modelling
- Computerized Detection and Characterization of Lesions in Radiological Images
- Quantitative Analysis of Image Information
- Visualization and Quantitation of 3D Images
- Intelligent Workstations and Decision Support Systems
- Observer Performance Studies and ROC Analysis
- Clinical Evaluation and Prospective Studies
- Image Quality Issues and Evaluation
- CAD in PACS Environment

### **19<sup>th</sup> Computed Maxillofacial Imaging Congress**

Chairman: Allan G. Farman, PhD, DSc (USA)

- New Imaging Devices and Novel Applications
- Evidence-based Selection Criteria in Digital Maxillofacial Imaging
- Craniomaxillofacial Computer-Aided Diagnosis

- Maxillofacial Image Enhancement Algorithms
- Cranial and Maxillofacial Image Guided Surgery
- Image Navigated Dental Implantology
- Orthodontic Applications of Computed Imaging
- Endodontic Applications of Computed Imaging
- Imaging and Modelling for Maxillofacial Prosthodontics
- Cone Beam CT
- 3D and 4D Imaging
- Multi-dimensional Maxillofacial Modelling
- Virtual Reality and Dental Robotics
- Interoperability
- Maxillofacial Applications in Integrating the Healthcare Enterprise

### **31st International EuroPACS Meeting**

President: Emanuele Neri, MD (I)

- PACS Architecture and Workflow
- PACS Workstation Design and Ergonomics
- PACS Integration in Surgical and Interventional Suites
- PACS-CAD Integration
- Open Source Software for PACS and Image Processing
- PACS beyond Radiology (Cardiology, Endoscopy, Ophthalmology, etc.)
- Image Distribution, Storage and Archiving Strategies
- PACS/RIS/HIS Integration Issues
- Regional PACS and Teleradiology
- Standardization (DICOM, HL7, IHE)
- PACS and E-Learning in Radiology and Medical Sciences
- Tablets in Radiology
- Managing Dose Information in PACS
- Structured Reporting

### **14<sup>th</sup> CARS / SPIE / EuroPACS / ISCAS Joint Workshop on Surgical PACS and the Digital Operating Room**

Chairmen: Osman M. Ratib, MD, PhD (CH), Heinz U. Lemke, PhD (D)

- Surgical Workflow
- Digital Operating Room
- Therapy Imaging and Model Management Systems
- Surgical PACS
- DICOM and IHE in Surgery

- Management and Assessment of OR Systems Integration
- Architectures of ORs and Imaging Suites

**5<sup>th</sup> EPMA / IFCARS Workshop on Personalized Medicine and ICT**

Olga Golubnitschaja, MD (D), Heinz U. Lemke, PhD (D)

- Model-Guided Medicine
- Patient-Specific Modelling
- Model Management
- Clinical Examples of Personalized Medicine in Oncology