

Main Themes

- Medical Imaging
- Cardiovascular Imaging
- Computed Maxillofacial Imaging
- Image Processing and Display
- PACS and IHE
- Telemedicine and E-Health
- Computer Aided Diagnosis
- Computer Assisted Radiation Therapy
- Model Guided Therapy
- Surgical Navigation
- Surgical Robotics and Instrumentation
- Surgical Simulation and Education
- Computer Assisted Orthopaedic and Spinal Surgery
- Computer Assisted Head and Neck, and ENT Surgery
- Image Guided Neurosurgery
- Minimally Invasive Cardiovascular and Thoracoabdominal Surgery

Deadline for abstract/paper submission:
11th January 2010
www.cars-int.org



24th International Congress and Exhibition on Computer Assisted Radiology (CAR)
Chairman: Stanley Baum, MD (USA)
Co-chair: Borut Marincek, MD (CH)



- Medical Imaging, e.g. CT, MR, US, SPECT, PET, DR, Molecular Imaging, and Virtual Endoscopy
- 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

14th Annual Conference of the International Society for Computer Aided Surgery (ISCAS)
President: Gero Strauss, MD (D)



- 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
- Decision Management
- Navigated Control
- Surgical Workplace – Ergonomics

12th International Workshop on Computer-Aided Diagnosis (CAD)
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

16th Computed Maxillofacial Imaging Congress (CMI)
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

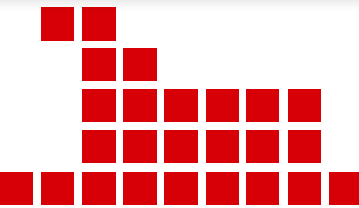
28th International EuroPACS Meeting
President: Osman M. Ratib, MD, PhD (CH)



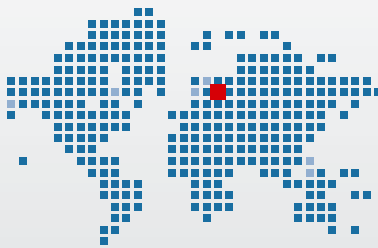
- PACS Architecture and Workflow
- PACS Workstation Design and Ergonomics
- PACS Integration in Surgical and Interventional Suites
- Open Source Software for PACS
- PACS Planning and Purchasing Strategies
- PACS Evaluation and Economical Aspects
- PACS Beyond Radiology (Cardiology, Endoscopy, Ophthalmology, etc.)
- Image Distribution, Storage and Archiving Strategies
- PACS/RIS/HIS Integration Issues
- Regional PACS and Teleradiology
- Security and Privacy, Quality Assurance, Legal Aspects
- Standardization (DICOM, HL7, IHE)
- PACS and E-Learning in Radiology and Medical Sciences

11th CARS/SPIE/EuroPACS 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 in Surgery



CARS 2010
Computer Assisted Radiology and Surgery
24th International Congress and Exhibition



June 23–26, 2010 | **Geneva Switzerland**
University Medical Center

All information is subject to alteration.

The CARS congress with its associated journal is a facilitator of innovation and an important contributor to modern medicine on a worldwide basis. Founded in 1985, CARS with its focus on research and development for computer assisted systems and their applications in radiology and surgery has played a leading role in medical informatics for 25 years. Its growth and impact is due to CARS's close collaboration with the ISCAS, EuroPACS, CAR, CAD and CMI societies. Following the long term successful cooperation, they will jointly hold their annual meetings with CARS in Geneva in 2010.

The CARS Congress Organizing Committee invites you to be part of this extraordinary scientific/medical community which gives medicine a new perspective. Join us in Geneva in June 2010, if you work in the fields of radiology, surgery, engineering, informatics and/or healthcare management and have an interest in topics, such as

- image guided interventions
- medical imaging
- image processing and visualization
- computer aided diagnosis
- surgical simulation
- surgical navigation and robotics
- model-guided therapy, and
- personalised medicine

New PACS applications, including IT-infrastructures adapted for surgery as well as related results from the DICOM and IHE working groups are also within the scope of CARS. Clinical specialties represented at **CARS** include:

- Image Guided Tumor Ablation Therapies
- Cardiovascular Imaging
- Computed Maxillofacial Imaging
- Computer Assisted Radiation Therapy
- Computer Assisted Orthopaedic and Spinal Surgery
- Computer Assisted Head and Neck, and ENT Surgery
- Image Guided Neurosurgery
- Minimally Invasive Cardiovascular and Thoracoabdominal Surgery

Please note that the deadline for paper and abstract submissions for CARS 2010 in Geneva is **January 11, 2010**.

Recent successful CARS congresses have taken place in Berlin, Paris, Tokyo, San Francisco, London, Chicago, Osaka and Barcelona. We would be delighted to welcome you in Geneva for CARS 2010

Osman M. Ratib, MD, PhD
President of CARS 2010

Heinz U. Lemke, PhD
CARS Organizer

CARS 2010 President

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A journal for interdisciplinary research, development and applications of image guided diagnosis and therapy



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International Journal of Computer Assisted Radiology and Surgery

A journal for interdisciplinary research, development and applications of image guided diagnosis and therapy

Editors-in-Chief:
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Overview

June 23 - 26, 2010	
Wednesday, June 23	Clinical Day Tutorials/Workshops Exhibition
Thursday, June 24	ISCAS EuroPACS CAD CAR Exhibition
Friday, June 25	ISCAS EuroPACS CAD CAR CMI Surgical Day Exhibition
Saturday, June 26	ISCAS CAR JICARS Educational Day Workshops/Special Events

Tutorials

- **Medical Workstations**
M.W. Vannier, MD (USA); H.U. Lemke, PhD (D)
- **Computer-Aided Diagnosis**
U. Bick, MD (D); K. Doi, PhD (USA)
- **Computed Maxillofacial Imaging**
A.G. Farman, PhD, DSc (USA); S.D. Bianchi, MD (I)
- **Enterprise-wide PACS**
H.K. Huang, DSc, FRCR (USA)
- **Open Source Software**
K. Cleary, PhD (USA)
- **Assessment of Medical Image Processing for CAS**
P. Jannin, PhD (F)
- **Surgical Workflow**
O. Burgert, PhD (D); NN
- **Visualization and Virtual Reality in Medicine**
B. Preim, PhD (D); C. Botha, PhD (NL)

Special Events

Special Events

Clinical Day

L. Berliner, MD (USA); E. vanSonnenberg, MD (USA)

- Minimally Invasive Spinal Surgery
- Computer Assisted Treatment of the Prostate
- The Interventional Radiology Suite of the Future
- Interventional Oncology

Surgical Day

P. Jannin, PhD (F); G. Eggers, MD (D)

IFCARS Academy Educational Day

- Informatics in Medicine
- Radiological Informatics
- Surgical Informatics

Workshops and Special Sessions

- **6th CARS / CURAC / DGBMT Joint Workshop on Model Guided Therapy**
V. Falk, MD (D); H. U. Lemke, PhD (D); O. Dössel, PhD (D)
- **3rd CARS / TicSalut / EuroPACS Educational Course on the Digital Operating Room**
J. Herrero Hover, MD (E); J. Cornet (E); D. Caramella, MD (I)
- **2nd EPMA / CARS Workshop on Personalized Medicine and ICT**
O. Golubnitschaja, MD (D); H.U. Lemke, PhD (D)
- **JICARS – Japanese Institutes of CARS – Special Session**
T. Dohi, PhD (J); K. Doi, PhD (J); K. Inamura, PhD (J)
- **2nd EuroNOTES / TCAT / CARS Workshop on NOTES: An Interdisciplinary Challenge**
H. Feussner, MD (D)
- **CADDemo@CARS – Demonstration Workshop on Computer-Aided Detection and Diagnosis**
EFMI WG Medical Image Processing
- **Special Session on Human-Computer Interaction**

Co-located Conference

The first conference on **Information Processing in Computer-Assisted Intervention (IPCAI)** will be co-located with CARS 2010 on June 23, 2010.
General Chairs: N. Navab, PhD (D), R. Taylor, PhD (USA), K. Mori, PhD (J), P. Jannin, PhD (F), L. Joskowicz, PhD (IL), D. Hawkes, PhD (UK)

In cooperation with IFCARS – The International Foundation for CARS