

# MICCAI

is the premier international conference with in-depth papers on medical image computing, computer-assisted intervention and medical robotics. The multidisciplinary nature of these emerging fields brings together clinicians, bioscientists, computer scientists, engineers, physicists and other researchers who are contributing to, and need to keep abreast of, advances in the methodology and applications.



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Ville de Saint-Malo  
Service Communication  
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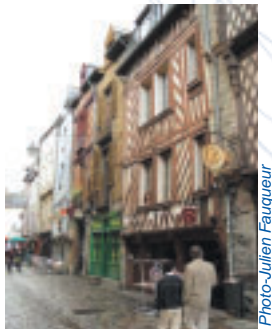


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## HOST INSTITUTIONS



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7<sup>th</sup> international conference on  
medical image computing and  
computer-assisted intervention  
26-30 September 2004  
FRANCE

## Organisation

### Conference Board

**Christian Barillot** (General Chair), Rennes, France  
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**Dave Haynor** (Program Chair), Seattle, WA, USA

**Pierre Hellier** (Program Co-Chair), Rennes, France

**James Duncan**, New Haven, CT, USA

**Mads Nielsen**, Copenhagen, Denmark

**Terry Peters**, London, ON, Canada



### Tutorial Chair

**Grégoire Malandain**, Sophia-Antipolis, France



### Conference Management/Secretariat

**Elisabeth Lebert**, Rennes, France

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### Further information:

MICCAI 2004 Conference  
 IRISA

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Web site: <http://miccai.irisa.fr>



### Conference Venue

“Palais du Grand Large”,  
 Saint-Malo, Brittany, France  
<http://www.pgl-congres.com>

## Submission Information

Papers can be submitted electronically (in pdf) until March 1, 2004. The MICCAI 2004 style file, which can be downloaded from the conference web site, must be used.

For complete instructions on paper submission and formats, please see the conference web site:

<http://miccai.irisa.fr>

### MICCAI 2004 Dates and Deadlines

- **March 01:** Paper Submission
- **May 19:** Notification to Authors
- **May 24:** Registration Opens
- **June 14:** Camera-ready papers due
- **September 26:** Tutorials (Saint-Malo)
- **September 27-29:** Miccai 2004 (Saint-Malo)
- **September 30:** Satellite Workshops (Rennes)

### Tutorial submissions

The conference will organise tutorials on Sunday September 26, 2004. Proposals for contributions should be submitted to the tutorial chair, Dr. Grégoire Malandain

[tutorial\\_miccai@irisa.fr](mailto:tutorial_miccai@irisa.fr)

### Sponsors and Exhibits

We invite companies interested in exhibits to contact the organisation committee at:

[exhibit\\_miccai@irisa.fr](mailto:exhibit_miccai@irisa.fr)

## Topics

*(include but are not restricted to)*

### Medical Image Computing

- Data-driven segmentation
- Anatomical atlases, object-based models and model-matching
- Time series analysis
- Functional image analysis
- Co-registration (alignment) and image fusion
- Fusion of structural and functional information
- Combination of information across scales
- Quantitative analysis
- Finite element models
- Tensor and vector field analysis

### Computer Assisted Interventional Systems and Robotic

- Instrument and patient localisation and tracking
- Planning of interventions, invasive and minimally invasive
- Simulation and training systems
- Computer aided endoscopy
- Guidance of surgery and minimally invasive procedures
- Robotics
- Clinical evaluation of systems
- Safety issues
- Medical telepresence and telesurgery

### New Applications for Specific Imaging Systems

- Magnetic resonance (MRI) applications
- CT and new X-ray tomography applications
- Nuclear medicine
- Conventional and confocal microscopy
- Molecular imaging and macroscopic optical imaging

### Bioscience Applications and Computer-Aided Diagnosis

- Biomechanics, tissue modelling and deformation
- Applications to different clinical specialities
- Quantitative validation

### Visualisation and Feedback

- Applications to different organs and systems
- New display systems
- Enhanced, virtual or augmented reality
- Non-visual feedback