

Couverture

# Table of contents

MICCAI 2004 Timetable .....	4
MICCAI 2004 Organization.....	5
Sessions at a glance .....	11
Site map.....	12
Tutorials.....	13
Scientific sessions .....	14
Sponsors .....	36

## MICCAI 2004 ► *Timetable*

<b>Sunday 26th</b>	08:00 - 19:00	Registration - Main Lobby	
	09:00 - 12:00	Tutorials	
	12:00 - 13:30	Lunch	
	13:30 - 17:00	Tutorials	
	17:00 - 19:00	Miccai Board Meeting	
	19:00 - 20:00	Welcome Reception	
	20:00 - 22:30	Miccai Board Dinner	
<b>Monday 27th</b>	07:30 - 18:00	Registration - Main Lobby	
	08:30 - 09:00	Opening Remarks	
	09:00 - 10:00	Platform Presentations	
	10:00 - 10:30	Coffee/Poster Viewing/Exhibits	
	10:30 - 11:30	Platform Presentations	
	11:30 - 12:30	Poster Teasers	
	12:30 - 14:00	Lunch	
	14:00 - 15:15	Poster Presentations	
	15:15 - 15:45	Coffee/Poster Viewing/Exhibits	
	15:45 - 18:00	Platform Presentations	
	18:00 - 20:00	Miccai Palet game	
	18:00 - 20:00	Miccai Board Meeting	
	20:00 - 22:30	Scientific Committee Party	
<b>Tuesday 28th</b>	08:30 - 08:45	Introduction	
	08:45 - 09:30	Keynote Lecture	
	09:30 - 09:40	Intoduction to Miccai 2005	
	09:40 - 10:40	Platform Presentations	
	10:40 - 11:05	Coffee/Poster Viewing/Exhibits	
	11:05 - 11:50	Platform Presentations	
	11:50 - 12:45	Poster Teasers	
	12:45 - 14:00	Lunch	
	14:00 - 15:15	Poster Presentations	
	15:15 - 15:45	Coffee/Poster Viewing/Exhibits	
	15:45 - 18:00	Platform Presentations	
	18:00 - 20:00	Miccai Board Meeting	
	20:00 - 23:30	Cocktail Tasting NDI Student award Gala Dinner	
	<b>Wednesday 29th</b>	08:30 - 08:45	Introduction
08:45 - 09:30		Keynote Lecture	
09:30 - 10:30		Platform Presentations	
10:30 - 11:00		Coffee/Poster Viewing/Exhibits	
11:00 - 12:00		Platform Presentations	
12:00 - 13:00		Poster Teasers	
13:00 - 14:30		Lunch	
14:30 - 15:45		Poster Presentations	
15:45 - 16:15		Coffee/Poster Viewing/Exhibits	
16:15 - 17:30		Platform Presentations	
17:30 - 18:00		Closing Remarks	
18:00 - 19:30		Miccai Board Meeting	
<b>Thursday 30th</b>		07:30 - 09:00	Transportation St-Malo - Rennes
		09:00 - 12:30	Workshops
	12:30 - 14:15	Lunch and Demonstrations	
	14:15 - 16:45	Workshops	

## MICCAI 2004 ► *Organization*

### **Executive Committee:**

Christian Barillot (General Chair), Rennes, France  
David Haynor (Program Chair), Seattle, USA  
Pierre Hellier (Program Co-Chair), Rennes, France  
James Duncan, New Haven, USA  
Mads Nielsen, Copenhagen, Denmark  
Terry Peters, London, Canada

### **Program Committee:**

#### **Long Papers:**

Brian Davies, London, UK  
Hervé Delingette, Sophia-Antipolis, France  
Gabor Fichtinger, Baltimore, USA  
Guido Gerig, Chapel Hill, USA  
Nobuhiko Hata, Tokyo, Japan  
David Hawkes, London, UK  
Wiro Niessen, Utrecht, The Netherlands  
Alison Noble, Oxford, UK  
Gabor Szekely, Zurich, Switzerland  
William (Sandy) Wells, Cambridge, USA

#### **Shorts Papers:**

Nicholas Ayache, Sophia-Antipolis, France  
Yves Bizais, Brest, France  
Randy Ellis, Kingston, Canada  
Steven Pizer, Chapel Hill, USA  
Michael Vannier, Iowa City, USA

### **MICCAI Board:**

Alan Colchester (General Chair), Canterbury, UK  
Nicholas Ayache, Sophia-Antipolis, France  
Christian Barillot, Rennes, France  
Takeyoshi Dohi, Tokyo, Japan  
James Duncan, New Haven, USA  
Terry Peters, London, Canada  
Steven Pizer, Chapel Hill, USA  
Richard Robb, Rochester, USA  
Russell Taylor, Baltimore, USA  
Jocelyne Troccaz, Grenoble, France  
Max Viergever, Utrecht, The Netherlands

### **Tutorial Chair:**

Grégoire Malandain, Sophia-Antipolis, France

### **Poster Coordination:**

Sylvain Prima, Rennes, France

### **Industrial Exhibition Co-Chairs:**

Jean-Loïc Delhayé, Rennes, France  
Bernard Gibaud, Rennes, France

## MICCAI 2004 ► Organization

### Student Awards Coordination:

Karl Heinz Höhne, Hamburg, Germany

### Conference Secretariat / Management:

Edith Blin-Guyot, Rennes, France  
Caroline Binard, Rennes, France  
Elisabeth Lebret, Rennes, France  
Valérie Lecomte, Rennes, France

### Proceedings Management:

Laure Aït-Ali, Rennes, France  
Arnaud Ogier, Rennes, France  
Cybèle Ciofolo, Rennes, France  
Valérie Lecomte, Rennes, France  
Sylvain Prima, Rennes, France  
Anne-Sophie Tranchant, Rennes, France  
Romain Valabrègue, Rennes, France

### Local Organization Committee:

Christine Alami, Rennes, France  
Annie Audic, Rennes, France  
Yves Bizais, Rennes, France  
Patrick Bourguet, Rennes, France  
Patrick Bouthémy, Rennes, France  
Michel Carsin, Rennes, France  
Pierre Darnault, Rennes, France  
Gilles Edan, Rennes, France  
Catherine Godest, Rennes, France  
Jean-Paul Guillois, Rennes, France  
Pascal Haigron, Rennes, France  
Pierre Jannin, Rennes, France  
Claude Labit, Rennes, France  
Jean-Jacques Levrel, Rennes, France  
Eric Marchand, Rennes, France  
Etienne Mémin, Rennes, France  
Xavier Morandi, Rennes, France  
Gérard Paget, Rennes, France  
Jean-Marie Scarabin, Rennes, France

### Reviewers:

Purang Abolmaesumi	Pierre-Louis Bazini
Faiza Admiraal-Behoul	Fernando Bello
Marco Agus	Marie-Odile Berger
Carlos Alberola-López	Margrit Betke
Elsa Angelini	Isabelle Bloch
Neculai Archip	Thomas Boettger
Simon R. Arridge	Sylvain Bouix
John Ashburner	Catherina R Burghart
Fred S. Azar	Darwin G Caldwell

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François Chaumette	Peter Kazanzides
Kiyoyuki Chinzei	Erwin Keeve
Gary Christensen	Erwan Kerrien
Albert C. S. Chung	Charles Kervrann
Philippe Cinquin	Ali Khamene
Jean-Louis Coatrieux	Sun I Kim
Chris Cocosc	Tadashi Kitamura
Alan Colchester	Karl Krissian
D. Louis Collins	Gernot Kronreif
Isabelle Corouge	Frithjof Kruggel
Olivier Coulon	Luigi Landini
Patrick Courtney	Calvin Jr. Maurer
Christos Davatzikos	Tim McInerney
Brian Davis	Etienne Memin
Benoit Dawant	Chuck Meyer
Marleen De Bruijne	Michael I. Miga
Michel Desvignes	Xavier Morandi
Simon Dimairo	Kensaku Mori
Etienne Dombre	Ralph Mosges
Simon Duchesne	Yoshihiro Muragaki
Ayman El-Baz	Toshio Nakagohri
Alan Evans	Kyojiro Nambu
Yong Fan	Nassir Navab
J Michael Fitzpatrick	Mads Nielsen
Oliver Fleig	Wieslaw L. Nowinski
Alejandro Frangi	Thomas O'Donnell
Ola Friman	Allison M Okamura
Robert Galloway	Sébastien Ourselin
Andrew Gee	Nikos Paragios
James Gee	Heinz-Otto Peitgen
Bernard Gibaud	Mélanie Pelegrini-Issac
Maryellen Giger	Xavier Pennec
Daniel Glazman	Terry M. Peters
Polina Golland	Josien Pluim
Miguel Angel Gonzalez Ballester	Jean-Baptiste Poline
Eric Grimson	Andreas Pommert
Christophe Grova	Richard Prager
Christoph Guetter	Sylvain Prima
Pascal Haigron	Jerry L. Prince
Steven Haker	Sonia Pujol
Makoto Hashizume	Jean Regis
Stefan Hassfeld	Richard A Robb
Peter Hastreiter	Alexis Roche
Pheng Ann Heng	Torsten Rohlfing
Derek Hill	Robert Rohling
Karl Heinz Höhne	Karl Rohr
Robert Howe	Daniel Rueckert
Hiroshi Iseki	Juan Ruiz-Alzola
Pierre Jannin	Ichiro Sakuma
Branislav Jaramaz	Tim Salcudean
Sarang Joshi	Yoshinobu Sato
Michael Kaus	Frank Sauer

## MICCAI 2004 ► Organization

Thomas Lange  
Thomas Lango  
Rudy Lapeer  
Rasmus Larsen  
Heinz U Lemke  
Shuo Li  
Jean Lienard  
Alan Liu  
Huafeng Liu  
Jundong Liu  
Marco Loog  
Benoit Macq  
Mahnaz Maddah  
Frederik Maes  
Isabelle Magnin  
Sherif Makram-Ebeid  
Gregoire Malandain  
Armando Manduca  
Jean-François Mangin  
Marcos Martín-Fernández  
Koen Van Leemput  
Dirk Vandermeulen  
Sebastian Vogt  
Kirby Vosburgh  
Mark Wachowiak  
Yongmei Michelle Wang  
Simon War½eld  
Carl-Fredrik Westin

Julia Schnabel  
Dinggang Shen  
Pengcheng Shi  
Orjan Smedby  
Milan Sonka  
Jon Sporning  
James Stewart  
Colin Studholme  
Martin Styner  
Paul Suetens  
Chris Taylor  
Frank Tendick  
Bart M. Ter Haar Romeny  
Demetri Terzopoulos  
Jean-Philippe Thiran  
Marc Thiriet  
Jocelyne Troccaz  
Régis Vaillant  
Johan Van Cleynenbreugel  
Bram Van Ginneken  
Ross Whitaker  
Louis L. Whitcomb  
Simon Wildermuth  
James Williams  
Yasushi Yamauchi  
Guang-Zhong Yang  
Terry Yoo  
Kelly Zou  
Tatjana Zrimec  
Reyer Zwiggelaar

## MICCAI 2004 ► General Information

### Venue:

Palais du Grand Large  
1 quai Duguay-Trouin – BP 109  
35407 Saint-Malo Cedex – France  
Phone : 02 99 20 60 20

### Phone contact:

0800 803 002 (toll-free hotline for a fixed phone call from France) from Friday 24 to Friday October 1 (8-22h).

### Miccai Organization Office:

“Broussais” Room (*Ground level*).

### Registration:

Registration will take place in the Hall at the main entrance during the duration of the conference. It will be open every day of the conference from 8:00 to 18:00 and up to 19:00 on Sunday 26. Each participant will receive a conference kit, a map and a guide of Saint-Malo.

**Warning:** We inform the participants that only people wearing a badge will be authorized to access to the conference site. We strongly encourage attendees, expecting accompanying persons, to ask in advance the registration people for temporary nominative badges.

### Message and Employment Board:

A board will be provided for delegates to post messages and employment opportunities.

### Tutorials:

Tutorials sessions will take place in the “Lamennais” Room (*3<sup>rd</sup> level*). For tutorial delegates, coffee breaks will be provided at the same floor, and lunch will be offered in the “Surcouf” Rotunda (*2<sup>nd</sup> level*).

### Smoking:

Smoking is not permitted in all the Palais du Grand Large.

### Cloakroom:

A cloakroom will be available during all the conference.

### Coffee Breaks:

Coffee/Tea/Pastries will be offered during the morning and afternoon breaks. These coffee breaks will be located in the “Jacques Cartier” Rotunda (*1<sup>st</sup> level*) (*no coffee break before the morning session*).

### Catering:

The catering area will be located both in the “Lamennais” Room (*3<sup>rd</sup> level*) and in the “Surcouf” Rotunda (*2<sup>nd</sup> level*).

The vegetarian lunches will be served only in the “Lamennais” Room. A dedicated ticket will be delivered to people having requested vegetarian meals.

A lunch bag will be provided for a picnic on the sandy beach on Tuesday 28.

## MICCAI 2004 ► General Information

### Welcome Reception:

A welcome cocktail will be held on Sunday 26 in the evening at the Palais du Grand Large from 19:00 to 20:00 (as well as the registration desk). It will be located in the "Jacques Cartier" Rotunda (1<sup>st</sup> level).

### Conference banquet and NDI Student Award Ceremony:

A tasting Cocktail, followed by the NDI Student Award Ceremony and the Gala Dinner will be held in the "Duguay-Trouin" Hall on Tuesday 28 from 20:00 to 23:30 in front of the Palais du Grand Large (harbour side).

### The Miccai Palet game:

It will be held on Monday 27 from 18:00 to 20:00 on the sandy beach (weather permitting) in the front of the Palais du Grand Large.

### The Internet café:

It will be located in the "Charcot" Room (1<sup>st</sup> level). Computers will be at the participants' disposal and a free Wireless Internet access will be provided (restricted to Charcot Room, Jacques Cartier Rotunda and Grand Large Room).

### Posters:

All Posters will be on display in the "Grand Large" room (1<sup>st</sup> level). Presenters are invited to install them from the welcome cocktail on Sunday evening onwards. No pins are needed - an adhesive kit will be supplied to the participants. Posters should be removed by Wednesday 29 at 17:00.

### Satellite Workshops:

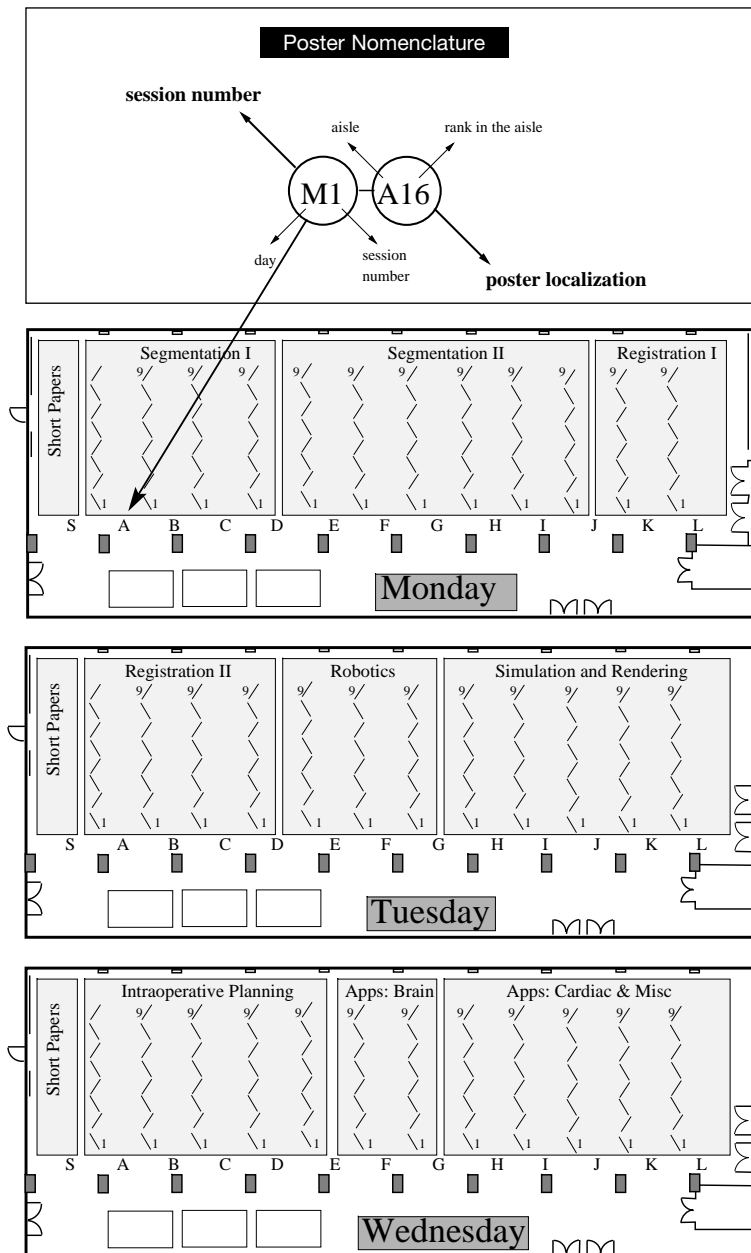
AMI-ARCS and DiDaMIC Workshops will be held on Thursday 30 at IRISA laboratory in Rennes. A special shuttle will leave Saint-Malo, in front of the Conference Center on the harbour side, in the morning at 7:30 to drive the participants to the workshops site.

*Coffee breaks and a lunch will be served to the participants.*

## MICCAI 2004 ► Sessions at a glance

Sunday Sept 26	Monday Sept 27	Tuesday Sept 28	Wednesday Sept 29	Thursday Sept 30
<b>Tutorials</b>	<b>MICCAI Sessions</b>			<b>07:30 Departure to Rennes</b>
09:00 - 12:00 TAM 1 : From mini-invasive surgery to endocavitary / endoluminal interventions Part I : Research issues in endoscopic mini-invasive surgery	08:30 - 09:00 Opening Remarks  09:00 - 10:00 Oral: Session Segmentation, esp. brain	08:30 - 8:45 Introduction 08:45 - 09:30 Keynote Lecture Olivier Faugeras 09:30 - 09:40 Introduction to MICCAI 2005 09:40-10:40 Oral Session: Registration and Applications	08:30 - 8:45 Introduction  08:45 - 9:30 Keynote Lecture Vincent J. Cunningham 09:00 - 10:30 Oral Session: Intraoperative and Registration Applications	09:00 - 12:30 Registration AMI-ARCS 2004  Augmented environments for Medical Imaging including  Augmented Reality in Computer-aided Surgery
09:00 - 12:00 TAM 2 : Grids services for medical image analysis and registration	10:30 - 11:30 Oral Session: Segmentation, esp cardiovascular	11:05 - 11:50 Oral Session: Robotics 1	11:00 - 12:00 Oral Session: Applications, image analysis	08:45 - 09:30  DiDaMIC-2004  Distributed Databases and processing Medical Image in Computing
09:00 - 12:00 TAM 3 : Level set methods, visual grouping, registration and medical image analysis	11:30 - 12:30 Poster Teasers	11:50 - 12:45 Poster Teasers	12:00 - 13:00 Poster Teasers	
<b>Lunch</b>				
13:30 - 17:00 TMP 1 : From mini-invasive surgery to endocavitary / endoluminal interventions Part II : Next generation of surgical robots and devices	14:00 - 15:15 Poster Session M1: Segmentation 1, general  Poster Session M2 Segmentation 2, specific systems	14:00 - 15:15 Poster Session T1: Registration 2  Poster Session T2 Robotics	14:30 - 15:45 Poster Session W1: Intraoperative planning and guidance  Poster Session W2: Applications-brain	14:15 - 16:45 AMI-ARCS 2004  Augmented environments for Medical Imaging including Augmented Reality in Computer-aided Surgery
13:30 - 17:00 TMP 2 : Detection and quantification of evolving processes in medical images	Poster Session M3 Registration 1, general  15:45 - 17:00 Oral Session: Segmentation, misc	Poster Session T3 Simulation and rendering  15:45 - 17:00 Oral Session: Robotics 2	Poster Session W3 Applications-cardiac and misc  16:15 - 17:30 Oral Session: Applications-cardiac and misc	14:15 - 16:45 DiDaMIC-2004 Distributed Databases and processing Medical Image in computing
13:30 - 17:00 TMP 3 : fMRI data analysis	17:00 - 18:00 Oral Session: Registration	17:00 - 18:00 Oral Session: Simulations	17:30 - 18:00 Closing remarks	

## MICCAI 2004 ▶ Site map



## MICCAI 2004 ▶ Tutorials

Sunday, September 26

Morning (09:00 – 12:00) – Lamennais Rooms

**TAM1:** From mini-invasive surgery to endocavitary / endoluminal interventions

PART I: *Research issues in endoscopic mini-invasive surgery*

Coordination: E. Dombre  
LIRMM Robotics Department, CNRS,  
Montpellier, France

**TAM2:** Grids services for medical image analysis and registration

Coordination: J. Montagnat  
CREATIS, CNRS-Inserm,  
Lyon, France

**TAM3:** Level Set Methods, Visual Grouping, Registration and Medical Image Analysis

Coordination: N. Paragios  
ENPC  
Paris, France

Afternoon (13:30 – 17:00) – Lamennais Rooms

**TPM1:** From mini-invasive surgery to endocavitary / endoluminal interventions

PART II: *Next generation of surgical robots and devices*

Coordination: E. Dombre  
LIRMM Robotics Department, CNRS,  
Montpellier, France

**TPM2:** Detection and Quantification of Evolving Processes in Medical Images

Coordination: N. Ayache  
INRIA  
Sophia-Antipolis, France

**TPM3:** Tutorial on fMRI data analysis

Coordination: J.-B. Poline  
MADIC-UNAF-CEA,  
Orsay, France

## MICCAI 2004 ▶ Scientific sessions

Poster Proc.

### MONDAY, SEPTEMBER 27

08:30 Opening remarks

#### 09:00 Oral Session: Brain Segmentation

Chairs: Christos Davatzikos, Jean-François Mangin

- 1 Level Set Methods in an EM Framework for Shape Classification and Estimation  
*Andy Tsai, William Wells, Simon Warfield, Alan Willsky*
- 2 Automatic Segmentation of Neonatal Brain MRI  
*Marcel Prastawa, John Gilmore, Weili Lin, Guido Gerig*
- 3 Segmentation of 3D Probability Density Fields by Surface Evolution: Application to Diffusion MRI  
*Christophe Lenglet, Mikaël Rousson, Rachid Deriche*
- 4 Improved EM-based Tissue Segmentation and Partial Volume Effect Quantification in Multi-Sequence Brain MRI  
*Guillaume Dugas-Phocion, Miguel Angel González Ballester, Grégoire Malandain, Christine Lebrun, Nicholas Ayache*

#### 10:30 Oral Session: Cardiovascular Segmentation

Chairs: Alejandro Frangi, Daniel Ruecker

- 1 Cardiac Motion and Elasticity Characterization with Iterative Sequential H Criteria  
*Huafeng Liu, Pengcheng Shi*
- 2 A Semi-automatic Endocardial Border Detection Method for 4D Ultrasound Data  
*Marijn van Stralen, Johan Bosch, Marco Voormolen, Gerard van Burken, Boudewijn Krenning, Charles Lancee, Nico de Jong, Johan Reiber*
- 3 Vessel Segmentation Using a Shape Driven Flow  
*Delphine Nain, Anthony Yezzi, Greg Turk*
- 4 Learning Coupled Prior Shape and Appearance Models for Segmentation  
*Xiaolei Huang, Zhiguo Li, Dimitris Metaxas*

#### 11:30 Poster Teasers

#### 14:15 Poster Session M1 : Segmentation I

- 1 A modified Total Variation denoising method in the context of 3D ultrasound images  
*Arnaud Ogier, Pierre Hellier*
- 2 Correcting nonuniformities in MRI intensities using entropy minimizations based on an elastic model  
*Ravi Bansal, Lawrence H. Staib, Bradley S. Peterson*
- 3 Texture Image Analysis for Osteoporosis Detection with

## MICCAI 2004 ▶ Scientific sessions

Poster Proc.

- |   | Poster | Proc  |
|---|--------|-------|
| Morphological Tools<br><i>Sylvie Sevestre-Ghalila, Amel Benazza-Benyahia, Anne Ricordeau, Nedra Mellouli, Christine Chappard, Claude Laurent Benhamou</i>   | M1-A7  | I-87  |
| 4 Multi-Class Posterior Atlas Formation via Unbiased Kullback-Leibler Template Estimation<br><i>Peter Lorenzen, Brad Davis, Sarang Joshi, Guido Gerig, Elizabeth Bullitt</i>  | M1-A10 | I-95  |
| 5 Dual Front Evolution Model and Its Application in Medical Imaging<br><i>Hua Li, Abderr Elmoataz, Jalal Fadili, Su Ruan</i>  | M1-A13 | I-103 |
| 6 Topology Smoothing for Segmentation and Surface Reconstruction<br><i>Pierre-Louis Bazin, Dzung Pham</i>   | M1-A16 | I-111 |
| 7 Simultaneous Boundary and Partial Volume Estimation in Medical Images<br><i>Dzung Pham, Pierre-Louis Bazin</i>  | M1-B3  | I-119 |
| 8 Local Watershed Operators for Image Segmentation<br><i>Huseyin Tek, Huseyin Can Aras</i>  | M1-B6  | I-127 |
| 9 Medical Image Segmentation Based on Mutual Information Maximization<br><i>Jaume Rigau, Miquel Feixas, Mateu Sbert, Anton Bardera, Imma Boada</i>  | M1-B9  | I-135 |
| 10 Adaptive Segmentation of Multi-modal 3D Data Using Robust Level Set Techniques<br><i>Aly A. Farag, Hossam Hassan</i>   | M1-B12 | I-143 |
| 11 Coupling Statistical Segmentation and PCA Shape Modeling<br><i>Kilian Pohl, Simon Warfield, Ron Kikinis, W. Eric L. Grimson, Sandy Wells</i>   | M1-B15 | I-151 |
| 12 Image Segmentation Adapted for Clinical Settings by Combining Pattern Classification and Level Sets<br><i>S. Li, T. Fevens, A. Krzyzak</i>   | M1-C2  | I-160 |
| 13 Shape Particle Filtering for Image Segmentation<br><i>Marleen de Bruijne, Mads Nielsen</i>   | M1-C5  | I-168 |
| 14 Profile Scale-spaces for Multiscale Image Match<br><i>Sean Ho, Guido Gerig</i>   | M1-C8  | I-176 |
| 15 Classification Improvement by Segmentation Refinement: Application to Contrast-Enhanced MR-Mammography<br><i>Christine Tanner, Michael Khazen, Preminda Kessar, Martin Leach, David Hawkes</i>   | M1-C11 | I-184 |
| 16 Landmark-driven, Atlas-based Segmentation of Mouse Brain Tissue Images Containing Gene Expression Data<br><i>Ioannis Kakadiaris, Musodiq Bello, Shiva Arunachalam, Wei Kang, Tao Ju, Joe Warren, James Carson, Wah Chiu, Christina Thaller, Gregor Eichele</i> | M1-C14 | I-192 |
| 17 On Normalized Convolution to Measure Curvature Features for Automatic Polyp Detection<br><i>C. van Wijk, R. Truyen, R.E. van Gelder, L.J. van Vliet, F.M. Vos</i>  | M1-D1  | I-200 |



## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
18	Implicit Active Shape Models for 3D Segmentation in MR Imaging <i>Mikaël Rousson, Nikos Paragios, Rachid Deriche</i>	M1-D4	I-209
19	Construction of 3D Dynamic Statistical Deformable Models for Complex Topological Shapes <i>Paramate Horkaew, Guang-Zhong Yang</i>	M1-D7	I-217
20	Shape Representation via Best Orthogonal Basis Selection <i>Ashraf Mohamed, Christos Davatzikos</i>	M1-D10	I-225
21	Robust Generalized Total Least Squares Iterative Closest Point Registration <i>Raul San Jose Estepar, Aders Brun, Carl-Fredrik Westin</i>	M1-D13	I-234
22	Automatic Detection and Removal of Fiducial Markers Embedded in Fluoroscopy Images for On-line Calibration <i>Laurence Smith, Mike Pleasance, Rosalyn Seeton, Neculai Archip, Robert Rohling</i>	M1-S1	II-1034
23	BSI Parameter Analysis <i>Richard Boyes, Jonathan Schott, Chris Frost, Nick Fox</i>	M1-S2	II-1036
24	Evaluating Automatic Brain Tissue Classifiers <i>Sylvain Bouix, Lida Ungar, Chandlee C. Dickey, Robert W. McCarley, Martha E. Shenton</i>	M1-S3	II-1038
<b>14:15 Poster Session M2: Segmentation 2</b>			
1	Multi-Feature Intensity Inhomogeneity Correction in MR Images <i>Uros Vovk, Franjo Pernus, Botjan Likar</i>	M2-D16	I-283
2	Using a Maximum Uncertainty LDA-based Approach to Classify and Analyse MR Brain Images <i>Carlos Thomaz, James Boardman, Derek Hill, Jo Hajnal, David Edwards, Mary Rutherford, Duncan Gillies, Daniel Rueckert</i>	M2-E3	I-291
3	Data Driven Brain Tumor Segmentation in MRI using Probabilistic Reasoning over Space and Time <i>Jeffrey Solomon, John A. Butman, Arun Sood</i>	M2-E6	I-309
4	Atlas-based Segmentation using Level Sets and Fuzzy Labels <i>Cybèle Ciofolo</i>	M2-E9	I-297
5	Multi-Phase Three-Dimensional Level Set Segmentation Of Brain MRI <i>Elsa Angelini, Ting Song, Brett Mensh, Andrew Laine</i>	M2-E12	I-318
6	Effects of Anatomical Asymmetry in Spatial Priors on Model Based Segmentation of the Brain MRI: A Validation Study <i>Siddharth Srivastava, Frederik Maes, Dirk Vandermeulen, Wim Van Paesschen, Patrick Dupont, Paul Suetens</i>	M2-E15	I-327
7	How Accurate is Brain Volumetry? <i>Horst Karl Hahn, Benoît Jolly, Miriam Lee, Daniel Krastel, Jan Rexilius, Johann Drexler, Mathias Schlüter, Burckhard Terwey, Heinz-Otto Peitgen</i>	M2-F2	I-335

## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
8	Anisotropic Interpolation of DT-MRI <i>Carlos Alberto Castaño Moraga, Miguel Angel Rodríguez Florido, Luis Alvarez León, Carl-Fredrik Westin, Juan Ruiz Alzola</i>	M2-F5	I-343
9	3D Bayesian Regularization of Diffusion Tensor MRI using Multivariate Gaussian Markov Random Fields <i>Marcos Martín-Fernández, Carl-Fredrik Westin, Carlos Alberola-López</i>	M2-F8	I-351
10	Interface Detection in Diffusion Tensor MRI <i>Lauren O'Donnell, W. Eric L. Grimson, Carl-Fredrik Westin</i>	M2-F11	I-360
11	Clustering Fiber Traces Using Normalized Cuts <i>Anders Brun, Hans Knutsson, Hae-Jeong Park, Martha E. Shenton, Carl-Fredrik Westin</i>	M2-F14	I-368
12	Area Preserving Cortex Unfolding <i>Jean-Philippe Pons, Renaud Keriven, Olivier Faugeras</i>	M2-G1	I-376
13	Cortical Reconstruction Using Implicit Surface Evolution: A Landmark Validation Study <i>Duygu Tosun, Maryam E. Rettmann, Daniel Q. Naiman, Susan M. Resnick, Mike A. Kraut, Jerry L. Prince</i>	M2-G4	I-384
14	Discriminative MR Image Feature Analysis for Automatic Schizophrenia and Alzheimer's Disease Classification <i>Yanxi Liu, Leonid Teverovskiy, Owen Carmichael, Ron Kikinis, Martha Shenton, Cam Carter, V. Andrew Stenger, Simon Davis, Howard Aizenstein, James T. Baker, Oscar L. Lopez, Carolyn C. Meltzer</i>	M2-G7	I-393
15	Left Ventricular Segmentation in MR Using Hierarchical Multi-Class Multi-Feature Fuzzy Connectedness <i>Amol Pednekar, Uday Kurkure, Ioannis Kakadiaris</i>	M2-G10	I-402
16	3D Cardiac Anatomy Reconstruction Using High Resolution CT Data <i>Ting Chen, Dimitris Metaxas, Leon Axel</i>	M2-G13	I-411
17	3D/4D Cardiac Segmentation using Active Appearance Models, Non-rigid Registration and the Insight Toolkit <i>Robert M. Lapp, Maria Lorenzo-Valdes, Daniel Rueckert</i>	M2-G16	I-419
18	Segmentation of Cardiac Structures Simultaneously from Short- and Long-Axis MR Images <i>Juha Koikkalainen, Mika Pollari, Jyrki Lötjönen, Sari Kivistö, Kirsi Lauerma</i>	M2-H3	I-427
19	Segmentation of Left Ventricle via Level Set Method Based on Enriched Speed Term <i>Yingge Qu, Qiang Chen, Pheng Ann Heng, Tien Tsin Wong</i>	M2-H6	I-435
20	Border Detection on Short Axis Echocardiographic Views Using an Ellipse-driven local Mumford-Shah Framework <i>Maxime Taron, Nikos Paragios, Marie-Pierre Jolly</i>	M2-H9	I-443
21	A data clustering and streamline reduction method for 3D MR flow vector field simplification <i>Bernardo Carmo, Pauline Ng, Adam Prügel-Bennett, Guang-Zhong Yang</i>	M2-H12	I-451
22	Velocity Based Segmentation in Phase Contrast MRI Images <i>Jan Erik Solem, Markus Persson, Anders Heyden</i>	M2-H15	I-459

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
23	Multi-scale Statistical Grey Value Modelling for Thrombus Segmentation from CTA <i>Silvia Olabarriaga, Marcel Breeuwer, Wiro Niessen</i>	M2-I2 I-450
24	Local Speed Functions in Level Set Based Vessel Segmentation <i>Rashindra Manniesing, Wiro Niessen</i>	M2-I5 I-458
25	Automatic heart peripheral vessels segmentation based on a normal MIP ray casting technique <i>Charles Florin, Romain Moreau-Gobard, Jim Williams</i>	M2-I8 I-466
26	A New 3D Parametric Intensity Model for Accurate Segmentation and Quantification of Human Vessels <i>Stefan Wörz, Karl Rohr</i>	M2-I11 I-474
27	Geometric Flows for Segmenting Vasculature in MRI: Theory and Validation <i>Maxime Descoteaux, Louis Collins, Kaleem Siddiqi</i>	M2-I14 I-482
28	Accurate quantification of small-diameter tubular structures in isotropic CT volume data based on multiscale line filter responses <i>Yoshinobu Sato, Shuji Yamamoto, Shinichi Tamura</i>	M2-J1 I-490
29	A Methodology for Validating a New Imaging Modality with respect to a Gold Standard Imagery: Example of the Use of 3DXA and MRI for AVM Delineation <i>Marie-Odile Berger, René Anxionnat, Erwan Kerrien</i>	M2-J4 I-498
30	VAMPIRE: Improved Method for Automated Center Lumen Line Definition in Atherosclerotic Carotid Arteries in CTA Data <i>H.A.F. Gratama van Andel, E. Meijering, A. van der Lugt, H.A. Vrooman, R. Stokking</i>	M2-J7 I-506
31	A General Framework for Tree Segmentation and Reconstruction from Medical Volume Data <i>Thomas Buelow, Cristian Lorenz, Steffen Renisch</i>	M2-J10 I-514
32	Shape-based curve growing model and adaptive regularization for pulmonary fissure segmentation in CT <i>Jingbin Wang, Margrit Betke, Jane P. Ko</i>	M2-J13 I-522
33	A Fully Automated Method for the Delineation of Osseous Interface in Ultrasound Images <i>Vincent Daanen, Jerome Tonetti, Jocelyne Troccaz</i>	M2-J16 I-530
34	Wrist Kinematics from Computed Tomography Data <i>Maarten Beek, Carolyn Small, Steve Scogvay, Rick Sellens, David Pichora</i>	M2-S4 II-996
35	3D analysis of radiofrequency-ablated tumors in liver: a computer-aided diagnosis tool for early detection of local recurrences <i>Ivan Bricault, Ron Kikinis, Eric van Sonnenberg, Kemal Tuncali, Stuart Silverman</i>	M2-S5 II-998
36	Fast Streaking Artifact Reduction in CT using Constrained Optimization in Metal Masks <i>Jonas August, Takeo Kanade</i>	M2-S6 II-1044

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
37	Towards an anatomically meaningful parameterization of the cortical surface <i>Cédric Clouchoux, Olivier Coulon, Arnaud Cachia, Denis Rivière, Jean-François Mangin, Jean Régis</i>	M2-S7 II-1046
38	Nodule Detection in Postero Anterior Chest Radiographs <i>Paola Campadelli, Elena Casiraghi</i>	M2-S8 II-1048
39	Texture-Based Classification of Hepatic Primary Tumors in Multiphase CT <i>Dorota Duda, Marek Kretowski, Johanne Bezy-Wendling</i>	M2-S9 II-1050
40	Construction of a 3D Volumetric Probabilistic Model of the Mouse Kidney from MRI <i>Hirohito Okuda, Pavel Shkarin, Kevin Behar, James Duncan, Xenophon Papademetris</i>	M2-S10 II-1052
<b>14:15 Poster Session M3: Registration I</b>		
1	Volume Preserving Image Registration <i>Jan Modersitzki, Eldad Haber</i>	M3-K2 I-591
2	Multiresolution image registration based on Kullback Leibler distance <i>Rui Gan, Jue Wu, Albert C. S. Chung, Simon C. H. Yu, William M. Wells</i>	M3-K5 I-599
3	Empirical Evaluation of Covariance Estimates for Mutual Information Coregistration <i>Paul Bromiley, Maja Pokric, Neil Thacker</i>	M3-K7 I-607
4	Deformation based representation of groupwise average and variability <i>Natasa Kovacevic, Josette Chen, John G. Sled, Jeffrey Henderson, Mark Henkelman</i>	M3-K9 I - 615
5	Spatial-Stiffness Analysis of Surface-Based Registration <i>Burton Ma, Randy Ellis</i>	M3-K11 I-623
6	Progressive Attenuation Fields: Fast 2D/3D Image Registration Without Precomputation <i>Torsten Rohlfing, Daniel Russakoff, Joachim Denzler, Calvin Maurer</i>	M3-K13 I-631
7	Nonrigid Registration Using Free-Form Deformations With a Local Rigidity Constraint <i>Dirk Loeckx, Frederik Maes, Dirk Vandermeulen, Paul Suetens</i>	M3-K15 I-639
8	Fast Non-linear Elastic Registration in 2D Medical Images <i>Zhiying Long, Li Yao, Danling Peng</i>	M3-L1 I-647
9	Multi-subject Registration for Unbiased Statistical Atlas Construction <i>Mathieu De Craene, Aloys du Bois d'Aische, Benoit Macq, Simon K. Warfield</i>	M3-L3 I-655
10	Simultaneous Segmentation and Registration for Medical Images <i>Chen Xiaohua, Michael Brady, Daniel Rueckert</i>	M3-L5 I-663

## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
11	Mapping Template Heart Models to Patient Data Using Image Registration <i>Marcin Wierzbicki, Maria Drangova, Gerard Guiraudon, Terry Peters</i>	M3-L7	I-671
12	A Framework For Detailed Objective Comparison of Non-Rigid Registration Algorithms in Neuroimaging <i>William Crum, Daniel Rueckert, Mark Jenkinson, David Kennedy, Stephen Smith</i>	M3-L8	I-679
13	Evaluation of registration of ictal SPECT/MRI data using statistical similarity methods <i>Christophe Grova, Pierre Jannin, Irène Buvat, Habib Benali, Bernard Gibaud</i>	M3-L9	I-687
14	Construction of a brain template from MR images using state-of-the-art registration and segmentation techniques <i>Dieter Seghers, Emiliano D'Agostino, Frederik Maes, Dirk Vandermeulen, Paul Suetens</i>	M3-L10	I-696
15	Non-Rigid Atlas to Subject Registration with Pathologies for Conformal Brain Radiotherapy <i>Radu-Constantin Stefanescu, Olivier Commowick, Grégoire Malandain, Pierre-Yves Bondiau, Nicholas Ayache, Xavier Pennec</i>	M3-L11	I-704
16	Ventricle registration for inter-subject white matter lesions analysis <i>Cynthia Jongen, Jeroen van der Grond, Josien Pluim</i>	M3-L12	I-712
17	Deformable Registration of Tumor-diseased Brain Images <i>Tianming Liu, Dinggang Shen, Christos Davatzikos</i>	M3-L13	I-720
18	Fluid deformation of serial structural MRI for low-grade glioma growth analysis <i>Bernard Cena, Nick Fox, Jeremy Rees</i>	M3-S11	II-1055
<b>15:45</b>	<b>Oral Session: Segmentation Methods</b> <b>Chairs: Armando Manduca, Sylvain Prima</b>		
1	Robust Inter-Slice Intensity Normalization using Histogram Scale-Space Analysis. <i>Julien Dauguet, Jean-François Mangin, Thierry Delzescaux, Vincent Frouin</i>		I-242
2	Quantification of Delayed Enhancement MR Images <i>Engin Dikici, Thomas O'Donnell, Randolph Setser, Richard White</i>		I-250
3	Statistical Shape Modelling of the Levator Ani with Thickness Variation <i>Su-Lin Lee, Paramate Horkaew, Ara Darzi, Guang-Zhong Yang</i>		I-258
4	Characterizing the Shape of Anatomical Structures with Poisson's Equation <i>Haissam Haidar, Sylvain Bouix, James Levitt, Chandley Dickey, Robert W. McCarley, Martha E. Shenton, Janet S. Soul</i>		I-266
5	Automatic Optimization of Segmentation Algorithms		

## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
	through Simultaneous Truth and Performance Level Estimation (STAPLE) <i>Mahnaz Maddah, Kelly Zou, William Wells, Ron Kikinis, Simon Warfield</i>		I-274
<b>17:00</b>	<b>Oral Session: Registration</b> <b>Chairs: Benoît Dawant, Xavier Pennec</b>		
1	Registration-based interpolation using a high-resolution image for guidance <i>Graeme Penney, Julia Schnabel, Daniel Rueckert, David Hawkes, Wiro Niessen</i>		I-558
2	Surface-Based Registration with a Particle Filter <i>Burton Ma, Randy Ellis</i>		I-566
3	Standardized Evaluation of 2D-3D Registration <i>Everine van de Kraats, Graeme Penney, Dejan Tomazevic, Theo van Walsum, Wiro Niessen</i>		I-574
4	Image Registration by Hierarchical Matching of Local Spatial Intensity Histograms <i>Dinggang Shen</i>		I-582
<b>TUESDAY, SEPTEMBER 28</b>			
<b>08:30</b>	<b>Introduction</b>		
<b>08:45</b>	<b>Keynote lecture: Olivier Faugeras, Odyssee Team, INRIA, France, "Image segmentation in Computer Vision and Medical Imaging: experiences from the past and challenges for the future"</b>		
<b>09:30</b>	<b>Introduction to MICCAI 2005:</b> <b>James S. Duncan, Guido Gerig</b>		
<b>09:40</b>	<b>Oral Session: Registration and applications</b> <b>Chairs: Graeme Penney, Tortsen Rohlfing</b>		
1	Toward the Creation of an Electrophysiological Atlas for the Pre-operative Planning and Intra-operative Guidance of Deep Brain Stimulators (DBS) Implantation <i>Pierre-François D'Haese, Ebru Cetinkaya, Chris Kao, Peter E. Konrad, J. Michael Fitzpatrick,</i>		I-729
2	Detecting Regional Abnormal Cardiac Contraction in Short Axis MRI Images using Independent Component Analysis <i>A. Suinesiaputra, M. Üzümcü, A.F. Frangi, T.A.M. Kaandorp, J.H.C. Reiber, B.P.F. Lelieveldt</i>		I-737
3	Non-rigid atlas-to-image registration by minimization of class-conditional image entropy <i>Emiliano D'Agostino, Frederik Maes, Dirk Vandermeulen, Paul Suetens</i>		I-745
4	Determination of aortic distensibility using non-rigid registration of cine MR images <i>Maria Lorenzo-Valdes, Gerardo Sanchez-Ortiz, Hugo Bogren, Raad Mohiaddin, Daniel Rueckert</i>		I-754

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
<b>11:05 Ora Session I: Robotics 1</b> <b>Chairs: Greg Hager, Makoto Hashizuma</b>		
1 MARGE Project: Design, Modeling and Control of Assistive Devices for Minimally Invasive Surgery <i>Etienne Dombre, Micaël Michelin, François Pierrot, Philippe Pognet, Philippe Bidaud, Guillaume Morel, Tobias Ortmaier, Damien Sallé, Nabil Zemiti, Philippe Gravez</i>		II-1
2 Crawling on the Heart: A Mobile Robotic Device for Minimally Invasive Cardiac Interventions <i>Nicholas Patronik, Marco Zenati, Cameron Riviere</i>		II-9
3 High Dexterity Snake-like Robotic Slaves for Minimally Invasive Telesurgery of the Upper Airway <i>Nabil Simaan, Russell Taylor, Paul Flint</i>		II-17
<b>11:50 Poster Teasers</b>		
<b>14:00 Poster Session T1: Registration 2</b>		
1 Integrated Intensity and Point-Based Nonlinear Registration <i>Xenophon Papademetris, Andrea Jackowski, Robert Schultz, Lawrence Staib, James Duncan</i>	T1-A2	I-763
2 Matching 3D shapes using 2D Conformal Representations <i>Xianfeng Gu, Baba Vemuri</i>	T1-A5	I-771
3 Parallel Optimization Approaches for Medical Image Registration <i>Mark Wachowiak, Terry Peters</i>	T1-A8	I-781
4 Non-Rigid Multimodal Image Registration Using Local Phase <i>Matthew Mellor, Michael Brady</i>	T1-A11	I-789
5 Multi-channel mutual information using scale space <i>Mark Holden, Lewis Griffin, Nadeem Saeed, Derek Hill</i>	T1-A14	I-797
6 Registration using segment intensity remapping and mutual information <i>Zeger Knops, J. B. A. Maintz, M. A. Viergever, J. P. W. Pluim</i>	T1-B1	I-805
7 Comparison of different global and local automatic registration schemes: An application to retinal images <i>Evangelia Karali, Pantelis Asvestas, Konstantina Nikita, George Matsopoulos</i>	T1-B4	I-813
8 Automatic Estimation of Error in Voxel-Based Registration <i>William Crum, Lewis Griffin, David Hawkes</i>	T1-B7	I-821
9 Rigid and Deformable Vasculature-to-Image Registration : a Hierarchical Approach <i>Julien Jomier, Stephen Aylward</i>	T1-B10	I-829
10 Rigid Registration of Freehand 3D Ultrasound and CT-scan Kidney Images <i>Antoine Leroy, Pierre Mozer, Yohan Payan, Jocelyne Troccaz</i>	T1-B13	I-837

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
11 Improved nonrigid registration of prostate MRI <i>Aloys du Bois d'Aische, Mathieu De Craene, Steven Haker, Neil Weisenfeld, Clare Tempny, Benoît Macq, Simon Warfield</i>	T1-B16	I-845
12 Landmark-Guided Surface Matching and Volumetric Warping for Improved Prostate Biopsy Targeting and Guidance <i>Steven Haker, Simon Warfield, Clare Tempny</i>	T1-C3	I-853
13 Improved regional analysis of oxygen-enhanced lung MR imaging using image registration <i>Josephine Naish, Geoffrey Parker, Paul Beatty, Alan Jackson, John Waterton, Simon Young, Chris Taylor</i>	T1-C6	I-862
14 An Uncertainty-Driven Hybrid of Intensity-Based and Feature-Based Registration with Application to Retinal and Lung CT Images <i>Charles Stewart, Ying-Lin Lee, Chia-Ling Tsai</i>	T1-C9	I-870
15 Portal vein registration for the follow-up of hepatic tumours <i>Arnaud Charnoz, Vincent Agnus, Luc Soler</i>	T1-C12	I-878
16 Fast Rigid 2D-2D Multimodal Registration <i>Ulrich Müller, Jürgen Hesser, Reinhard Männer</i>	T1-C15	I-887
17 Finite Deformation Guided Nonlinear Filtering for Multiframe Cardiac Motion Analysis <i>Ken C.L. Wong, Pengcheng Shi</i>	T1-D2	I-895
18 Contrast-Invariant Registration of Cardiac and Renal MR Perfusion Images <i>Ying Sun, Marie-Pierre Jolly, José Moura</i>	T1-D5	I-903
19 Spatio-Temporal Free-Form Registration of Cardiac MR Image Sequences <i>Dimitrios Perperidis, Raad Mohiaddin, Daniel Rueckert</i>	T1-D8	I-911
20 Cardiac Motion Extraction using 3D Surface Matching in Multislice Computed Tomography <i>Antoine Simon, Mireille Garreau, Dominique Boulmier, Jean-Louis Coatrieux, Hervé Le Breton</i>	T1-S1	II-1057
21 Automatic assessment of cardiac perfusion MRI <i>Hildur Ólafsdóttir, Mikkel B. Stegmann, Henrik B.W. Larsson</i>	T1-S2	II-1060
22 Texture Based Mammogram Registration Using Geodesic Interpolating Splines <i>Styliani Petroudi, Michael Brady</i>	T1-S3	II-1062
23 Gabor Filter-Based Automated Strain Computation from Tagged MR Images <i>Tushar Manglik, Alexandru Cernicanu, Vinay Pai, Daniel Kim, Ting Chen, Pradnya Dugal, Bharathi Batchu, Leon Axel</i>	T1-S4	II-1064
24 Non-invasive Derivation of 3D Systolic Nonlinear Wall Stress in a Biventricular Model from tagged MRI <i>Aichi Chien, J. Paul Finn, Carlo Montemagno</i>	T1-S5	II-1067

## MICCAI 2004 ▶ Scientific sessions

### 14:00 Poster Session T2: Robotics

		Poster	Proc.
1	Liver Motion Due to Needle Pressure, Cardiac and Respiratory Motion During the TIPS Procedure <i>Vijay Venkatraman, Mark VanHorn, Susan Weeks, Elizabeth Bullitt</i>	T2-D11	II-66
2	Visualization, Planning, and Monitoring Software for MRI Guided Prostate Intervention Robot <i>Emese Balogh, Anton Deguet, Robert Susil, Axel Krieger, Anand Vishwanathan, Cynthia Ménard, Jonathan Coleman, Gabor Fichtinger</i>	T2-D14	II-73
3	Robotic Strain Imaging for Monitoring Thermal Ablation of Liver <i>Emad Boctor, Gabor Fichtinger, Ambert Yeung, Michael Awad, Russell Taylor, Michael Choti</i>	T2-E1	II-81
4	A Tactile Magnification Instrument for Minimally Invasive Surgery <i>Hsin-Yun Yao, Vincent Hayward, Randy Ellis</i>	T2-E4	II-89
5	A Study of Saccade Transition for Attention Segregation and Task Strategy in Laparoscopic Surgery <i>Marios Nicolaou, Adam James, Ara Darzi, Guang-Zhong Yang</i>	T2-E7	II-97
6	Precision Freehand Sculpting of Bone <i>Gabriel Brisson, Takeo Kanade, Anthony DiGioia, Branislav Jaramaz</i>	T2-E10	II-105
7	Needle Force Sensor, Robust and Sensitive Detection of the Instant of Needle Puncture <i>Toshikatsu Washio, Kiyoyuki Chinzei</i>	T2-E13	II-113
8	Handheld Laparoscopic Forceps Manipulator using Multi-Slider Linkage Mechanisms <i>Hiromasa Yamashita, Nobuhiko Hata, Makoto Hashizume, Takeyoshi Dohi</i>	T2-E16	II-121
9	An MR-Compatible Optical Force Sensor for Human Function Modeling <i>Mitsunori Tada, Takeo Kanade</i>	T2-F3	II-129
10	Flexible Needle Steering and Optimal Trajectory Planning for Percutaneous Therapies <i>Daniel Glozman, Moshe Shoham</i>	T2-F6	II-137
11	CT and MR Compatible Light Puncture Robot : Architectural Design and First Experiments <i>Elise Taillant, Juan-Carlos Avila-Vilchis, Christophe Allegrini, Ivan Bricault, Philippe Cinquin</i>	T2-F9	II-145
12	Development of a Novel Robot-Assisted Orthopaedic System designed for Total Knee Arthroplasty <i>Naohiko Sugita, Shin'ichi Warisawa, Mamoru Mitsuishi, Masahiko Suzuki, Hideshige Moriya, Koichi Kuramoto</i>	T2-F12	II-153
13	Needle Guiding Robot with Five-bar Linkage for MR-Guided Thermotherapy of Liver Tumor		

## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
	<i>Nobuhiko Hata, Futoshi Ohara, Ryuji Hashimoto, Makoto Hashizume, Takeyoshi Dohi</i>	T2-F15	II-161
14	Computer-assisted minimally invasive curettage and reinforcement of femoral head osteonecrosis with a novel, expandable blade tool <i>Tsuyoshi Koyama, Nobuhiko Sugano, Hidenobu Miki, Takashi Nishii, Yoshinobu Sato, Hideki Yoshikawa, Shinichi Tamura, Takahiro Ochi</i>	T2-G2	II-169
15	A parallel robotic system with force sensors for percutaneous procedures under CT guidance <i>Benjamin Maurin, Jacques Gangloff, Bernard Bayle, Michel de Mathelin, Olivier Piccin, Philippe Zanne, Christophe Doignon, Luc Soler, Afshin Gangi</i>	T2-G5	II-176
16	System Design for Implementing Distributed Modular Architecture to Reliable Surgical Robotic System <i>Eisuke Aoki, Takashi Suzuki, Etsuko Kobayashi, Nobuhiko Hata, Takeyoshi Dohi, Makoto Hashizume, Ichiro Sakuma</i>	T2-G8	II-184
17	Precise Evaluation of Positioning Repeatability of MR-Compatible Manipulator Inside MRI <i>Yoshihiko Koseki, Ron Kikinis, Ferenc Jolesz, Kiyoyuki Chinzei</i>	T2-G11	II-192
18	MRI compatible modular designed robot for interventional navigation - prototype development and evaluation <i>Hiroaki Naganou, Hiroshi Iseki, Ken Masamune</i>	T2-S6	II-1022

### 14:00 Poster Session T3 : Simulation and rendering

1	Physiopathology of pulmonary airways: automated facilities for accurate assessment <i>Diane Perchet, Catalin Fetita, Françoise Prêteux</i>	T3-G14	II-234
2	A Framework for the Generation of Realistic Brain Tumor Phantoms and Applications <i>Jan Rexilius, Horst Hahn, Mathias Schlüter, Sven Kohle, Holger Bourquain, Böttcher Joachim, Heinz-Otto Peitgen</i>	T3-H1	II-243
3	Measuring biomechanical characteristics of blood vessels for early diagnostics of vascular retinal pathologies <i>Alexander Kupriyanov, Nataly Ilyasova, Michael Ananin, Nataly Gavrilova</i>	T3-H4	II-251
4	A 4D-optical measuring system for the dynamic acquisition of anatomical structures <i>Kathleen Denis, Tom Huysmans, Tom De Wilde, Cristian Forausberger, Walter Rapp, Bart Haex, Jos Vander Sloten, Remi Van Audekercke, Georges Van der Perre, Kjell Roger Heitmann</i>	T3-H7	II-259
5	An Anisotropic Material Model for Image Guided Neurosurgery <i>Corey A. Kemper, Ion-Florin Talos, Alexandra Golby, Peter M. Black, Ron Kikinis, W. Eric L. Grimson, Simon K. Warfield</i>	T3-H10	II-267

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
6	Estimating Mechanical Brain Tissue Properties with Simulation and Registration <i>Grzegorz Soza, Roberto Grosso, Christopher Nimsky, Guenther Greiner, Peter Hastreiter</i>	T3-H13 II-276
7	Dynamic Measurements of Soft Tissue Viscoelastic Properties with a Torsional Resonator Device <i>Davide Valtorta, Edoardo Mazza</i>	T3-H16 II-284
8	Simultaneous Topology and Stiffness Identification for Mass-Spring Models based on FEM Reference Deformations <i>Gérald Bianchi, Barbara Solenthaler, Gabor Szekely, Matthias Harders</i>	T3-I3 II-293
9	Human Spine Posture Estimation Method from Human Images to Calculate Physical Forces Working on Vertebrae <i>Daisuke Furukawa, Takayuki Kitasaka, Kensaku Mori, Yasuhito Suenaga, Kenji Mase, Tomoichi Takahashi</i>	T3-I6 II-302
10	Modelling Surgical Cuts, Retractions, and Resections via Extended Finite Element Method <i>Lara Vigneron, Jacques Verly, Simon Warfield</i>	T3-I9 II-311
11	A Collaborative Virtual Environment for the Simulation of Temporal Bone Surgery <i>Dan Morris, Christopher Sewell, Nikolas Blevins, Federico Barbagli, Kenneth Salisbury</i>	T3-I12 II-319
12	Computational Mechanical Analysis for Human Atherosclerotic Plaques Using MRI-Based Models with Fluid-Structure Interactions <i>Dalin Tang, Chun Yang, Jie Zheng, Pamela Woodard, Gregorio Sicard, Jeffrey Saffitz, Shunichi Kobayashi, Thomas Pilgram, Chun Yuan</i>	T3-I15 II-328
13	In silico tumor growth: application to glioblastomas <i>Olivier Clatz, Pierre-Yves Bondiau, Hervé Delingette, Grégoire Malandain, Maxime Sermesant, Simon Warfield, Nicholas Ayache</i>	T3-J2 II-337
14	An Event-Driven Framework for the Simulation of Complex Surgical Procedures <i>Christopher Sewell, Dan Morris, Nikolas Blevins, Federico Barbagli, Kenneth Salisbury</i>	T3-J5 II-346
15	Photorealistic Rendering of Large Tissue Deformation for Surgical Simulation <i>Mohamed ElHelw, Benny Lo, Adrian Chung, Darzi Ara, Guang-Zhong Yang</i>	T3-J8 II-355
16	BurnCase 3D – Realistic Adaptation of 3-Dimensional Human Body Models <i>Johannes Dirnberger, Michael Giretzlehner, Thomas Luckeneder, Herbert Haller, Christian Rodemund, Doris Siegl</i>	T3-J11 II-363
17	Fast Soft Tissue Deformation with Tetrahedral Mass Spring Model for Maxillofacial Surgery Planning Systems	

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
	<i>Wouter Mollemans, Filip Schutyser, Johan Van Cleynenbreugel, Paul Suetens</i>	T3-J14 II-371
18	Generic Approach for Biomechanical Simulation of Typical Boundary Value Problems in Cranio-Maxillofacial Surgery Planning <i>Evgeny Gladilin, Alexander Ivanov, Vitaly Roginsky</i>	T3-K1 II-380
19	Virtual unfolding of the stomach based on volumetric image deformation <i>Kensaku Mori, Hiroki Oka, Takayuki Kitasaka, Yasuhito Suenaga, Jun-ichiro Toriwaki</i>	T3-K4 II-389
20	A Model for some Subcortical DTI Planar and Linear Anisotropy <i>Song Zhang, David Laidlaw</i>	T3-S7 II-1071
21	A 3D model of the Human Lung <i>Tatjana Zrimec, Sata Busayarat, Peter Wilson</i>	T3-S8 II-1074
22	Color Rapid Prototyping for Diffusion Tensor MRI Visualization <i>Daniel Acevedo, Song Zhang, David Laidlaw, Christopher Bull</i>	T3-S9 II-1076
23	Process of interpretation of two-dimensional densitometry images for the prediction of bone mechanical strength <i>Laurent Pothuaud</i>	T3-S10 II-1079
24	Transient MR Elastography: Modeling Traumatic Brain Injury <i>Paul McCracken, Armando Manduca, Joel Felmlee, Richard Ehman</i>	T3-S11 II-1081
<b>15:45</b>	<b>Oral Session: Robotics 2</b> <b>Chairs: Philippe Cinquin, Etienne Dombre</b>	
1	Development of a Robotic Laser Surgical Tool with an Integrated Video Endoscope <i>Takashi Suzuki, Youhei Nishida, Etsuko Kobayashi, Takayuki Tsuji, Tsuneo Fukuyo, Michihiro Kaneda, Kozo Konishi, Makoto Hashizume, Ichiro Sakuma</i>	II-25
2	Micro-neurosurgical System in the Deep Surgical Field <i>Daisuke Asai, Surman Katopo, Jumpei Arata, Shin'ichi Warisawa, Mamoru Mitsuishi, Akio Morita, Shigeo Sora, Takaaki Kirino, Ryo Mochizuki</i>	II-33
3	Dense 3D Depth Recovery for Soft Tissue Deformation During Robotically Assisted Laparoscopic Surgery <i>Danail Stoyanov, Ara Darzi, Guang Zhong Yang</i>	II-41
4	Vision-Based Assistance for Ophthalmic Micro-Surgery <i>Maneesh Dewan, Panadda Marayong, Allison M. Okamura, Gregory D. Hager</i>	II-49
5	Robot-assisted distal locking of long bone intramedullary nails: localization, registration, and in-vitro experiments <i>Ziv Yaniv, Leo Joskowicz</i>	II-58

## MICCAI 2004 ▶ Scientific sessions

Poster Proc.

### 17:00 Oral Session: Simulations

Chairs: Peter Hastreiter, Guang-Zong Yang

- |   |  |        |
|---|--|--------|
| 1 | Simulation Model of Intravascular Ultrasound Images<br><i>Misael Dario Rosales Ramirez, Petia Radeva Ivanova, Josepa Mauri, Pujol Oriol</i>  | II-200 |
| 2 | Vessel driven Correction of Brain shift<br><i>Ingerid Reinertsen, Maxime Descoteaux, Simon Drouin, Kaleem Siddiqi, D. Louis Collins</i>  | II-208 |
| 3 | Predicting Tumour Location by Simulating Large Deformations of the Breast using a 3D Finite Element Model and Nonlinear Elasticity<br><i>Pras Pathmanathan, David Gavaghan, Jonathan Whiteley, Michael Brady, Martyn Nash, Poul Nielsen, Vijay Rajagopal</i> | II-217 |
| 4 | Modeling of brain tissue retraction using intraoperative data<br><i>Hai Sun, Francis Kennedy, Erik Carlson, Alex Hartov, David Roberts, Keith Paulsen</i>  | II-225 |

## WEDNESDAY, SEPTEMBER 29

### 08:30 Introduction

08:45 **Keynote lecture: Vincent J. Cunningham, *Translational Medicine and Technology, GlaxoSmithKline, Greenford, UK***  
"The role of Medical Imaging in Drug Discovery"

### 09:30 Oral Session: Intraoperative and registration applications

Chairs: Elisabeth Bullit, Nasser Navab

- |   |   |        |
|---|---|--------|
| 1 | Cadaver Validation of the Use of Ultrasound for 3D Model Instantiation of Bony Anatomy in Image Guided Orthopaedic Surgery<br><i>C.S.K. Chan, D.C. Barratt, P.J. Edwards, G.P. Penney, M. Slomczykowski, T.J. Carter, D.J. Hawkes</i> | II-397 |
| 2 | Correction of Movement Artifacts from 4-D Cardiac Short and Long-Axis MR Data<br><i>Jyrki Lötjönen, Mika Pollari, Sari Kivistö, Kirsi Lauerma</i>   | II-405 |
| 3 | Scale-Invariant Registration of Monocular Endoscope Images to CT-Scans For Sinus Surgery<br><i>Darius Burschka, Ming Li, Russel Taylor, Gregory Hager</i>   | II-413 |
| 4 | Patient-Specific Operative Planning for Aorto-Femoral Reconstruction Procedures<br><i>Nathan Wilson, Frank Arko, Charles Taylor</i>   | II-422 |

### 11:00 Oral Session: Applications, image analysis

Chairs: Jim Gee, Kaleem Siddiqui

## MICCAI 2004 ▶ Scientific sessions

Poster Proc.

- |   |   |        |
|---|---|--------|
| 1 | Determining Malignancy of Brain Tumors By Analysis of Vessel Shape<br><i>Elizabeth Bullitt, Inkyung Yung, Keith Muller, Guido Gerig, Stephen Aylward, Sarang Joshi, Keith Smith, Weili Lin, Matthew Ewend</i>     | II-645 |
| 2 | Automatic classification of SPECT images of Alzheimer's disease patients and control subjects<br><i>Jonathan Stoeckel, Nicholas Ayache, Grégoire Malandain, Pierre Koulibaly, Klaus Ebmeier, Jacques Darcourt</i> | II-654 |
| 3 | Estimation of Anatomical Connectivity by Anisotropic Front Propagation and Diffusion Tensor Imaging<br><i>Marcel Jackowski, Chiu Yen Kao, Maolin Qiu, R Todd Constable, Lawrence H Staib</i>                      | II-663 |
| 4 | A statistical shape model of individual fiber tracts extracted from diffusion tensor MRI<br><i>Isabelle Corouge, Sylvain Gouttard, Guido Gerig</i>  | II-671 |

### 12:00 Poster Teasers

### 14:30 Poster Session W1: Intraoperative planning and guidance

- |   |  |        |        |
|---|--|--------|--------|
| 1 | Intuitive and Efficient Control of Real-time MRI Scan Plane Using a Six-degree-of-freedom Hardware Plane Navigator<br><i>Dingrong Yi, Jeff Stainsby, Graham Wright</i>                         | W1-A3  | II-430 |
| 2 | Shape-Enhanced Surgical Visualizations and Medical Illustrations with Multi-Flash Imaging<br><i>Kar-Han Tan, James Kobler, Paul Dietz, Ramesh Raskar, Rogerio Feris</i>                        | W1-A6  | II-438 |
| 3 | Immediate Ultrasound Calibration with Three Poses and Minimal Image Processing<br><i>Anand Viswanathan, Emad M. Boctor, Russell H. Taylor, Gregory Hager, Gabor Fichtinger</i>                 | W1-A9  | II-446 |
| 4 | Accuracy of Navigation on 3DRX Data Acquired with a Mobile Propeller C-arm<br><i>Theo van Walsum, Everine B. van de Kraats, Bart Carelsen, Sjirk N. Boon, Niels Noordhoek, Wiro J. Niessen</i> | W1-A12 | II-455 |
| 5 | High Quality Autostereoscopic Surgical Display using Anti-aliased Integral Videography Imaging<br><i>Hongen Liao, Daisuke Tamura, Makoto Iwahara, Iwahara Hata, Takeyoshi Dohi</i>             | W1-A15 | II-462 |
| 6 | Enhancing Fourier Volume Rendering using Contour Extraction<br><i>Zoltan Nagy, Marcin Novotni, Reinhard Klein</i>  | W1-B2  | II-470 |
| 7 | A Novel Approach to Anatomical Structure Morphing for Intraoperative Visualization   |        |        |





## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
	<i>Raquel Gur, James Gee</i>	W2-F4	II-688
3	Temporal lobe epilepsy surgical outcome prediction <i>Simon Duchesne, Neda Bernasconi, Andrea Bernasconi, D. Louis Collins</i>	W2-F7	II-696
4	Exact MAP Activity Detection in fMRI Using a GLM with an Ising Spatial Prior <i>Eric Cosman, John Fisher, William Wells</i>	W2-F10	II-703
5	Bias in Resampling-Based Thresholding of Statistical Maps in fMRI <i>Ola Friman, Carl-Fredrik Westin</i>	W2-F13	II-711
6	Solving Incrementally the Fitting and Detection Problems in fMRI Time Series <i>Alexis Roche, Philippe Pinel, Stanislas Dehaene, Jean-Baptiste Poline</i>	W2-F16	II-719
7	Extraction of Discriminative Functional MRI Activation Patterns and an Application to Alzheimer's Disease <i>Despina Kontos, Vasileios Megalookonomou, Dragoljub Pokrajac, Alexander Lazarevic, Zoran Obradovic, Orest Boyko, James Ford, Fillia Makedon, Andrew Saykin</i>	W2-G3	II-727
8	Functional Brain Image Analysis Using Joint Function Structure Priors <i>Jing Yang, Xenophon Papademetris, Lawrence Staib, Robert Schultz, James Duncan</i>	W2-G6	II-736
9	Improved Motion Correction in fMRI by Joint Mapping of Slices into an Anatomical Volume <i>Hyunjin Park, Charles Meyer, Boklye Kim</i>	W2-G9	II-745
10	Motion correction in fMRI by mapping slice to-volume with concurrent field-inhomogeneity correction <i>Desmond Teck Beng Yeo, Jeffrey A. Fessler, Boklye Kim</i>	W2-G12	II-752
11	An Analysis Tool for Quantification of Diffusion Tensor MRI Data <i>Hae-Jeong Park, Martha Shenton, Carl-Fredrik Westin</i>	W2-S4	II-1089
<b>14:30</b>	<b>Poster Session W3: Applications – cardiac and misc</b>		
1	Computer Aided Detection in CT colonography, via Spin Images <i>Gabriel Kiss, Johan Van Cleynenbreugel, Guy Marchal, Paul Suetens</i>	W3-G15	II-804
2	Foveal Algorithm for the Detection of Microcalcification Clusters: a FROC Analysis <i>Marius George Lingurar, Michael Brady, Ruth English</i>	W3-H2	II-813
3	Pulmonary Micronodule Detection from 3D Chest CT <i>Suknoon Chang, Hiroshi Emoto, Dimitris Metaxas, Leon Axel</i>	W3-H5	II-821
4	SVM Optimization for Hyperspectral Colon Tissue Cell Classification <i>Kashif Rajpoot, Nasir Rajpoot</i>	W3-H8	II-829

## MICCAI 2004 ▶ Scientific sessions

		Poster	Proc.
5	Pulmonary nodule classification based on nodule retrieval from 3-D thoracic CT images database <i>Yoshiki Kawata, Noboru Niki, Hironobu Ohmatsu, Masahiko Kusumoto, Ryutaro Kakinuma, Kouzo Yamada, Kiyoshi Mori, Hiroyuki Nishiyama, Kenji Eguchi, Masahiro Kaneko, N. Moriyama</i>	W3-H11	II-838
6	Physics Based Contrast Marking and Inpainting Based Local Texture Comparison for Clustered Microcalcification Detection <i>Xin Yuan, Pengcheng Shi</i>	W3-H14	II-847
7	Automatic Detection and Recognition of Lung Abnormalities in Helical CT images Using Deformable Templates <i>Aly Farag, Ayman El-Baz, Georgy G. Gimel'farb, Robert Falk, Stephen G. Hushek</i>	W3-I1	II-856
8	A multi-resolution CLS detection algorithm or mammographic image analysis <i>Lionel C. C. Wai, Matthew Mellor, Michael Brady</i>	W3-I4	II-865
9	Cervical Cancer Detection Using SVM Based Feature Screening <i>Jiayong Zhang, Yanxi Liu</i>	W3-I7	II-873
10	Robust 3D Segmentation of Pulmonary Nodules in Multislice CT Images <i>Kazunori Okada, Dorin Comaniciu, Arun Krishnan</i>	W3-I10	II-881
11	The automatic identification of hibernating myocardium <i>Nicholas Noble, Derek Hill, Marcel Breeuwer, Reza Razavi</i>	W3-I13	II-890
12	A Spatio-Temporal Analysis of Contrast Ultrasound Image Sequences for Assessment of Tissue Perfusion <i>Quentin Williams, J Alison Noble</i>	W3-I16	II-899
13	Detecting Functional Connectivity of the Cerebellum Using Low Frequency Fluctuations (LFFs) <i>Yong He, Yufeng Zang, Tianzi Jiang, Meng Liang, Gaolang Gong</i>	W3-J3	II-907
14	Independent Component Analysis of Four-phase Abdominal CT Images <i>Xuebin Hu, Akinobu Shimizu, Hidefumi Kobatake, higeru Nawano</i>	W3-J6	II-916
15	Volumetric Deformation Model for Motion Compensation in Radiotherapy <i>Kajetan Berlinger, Michael Roth, Jens Fisseler, Otto Sauer, Achim Schweikard, Lucia Vences</i>	W3-J9	II-925
16	Fast Automated Segmentation and Reproducible Volumetry of Pulmonary Metastases in CT-Scans for Therapy Monitoring <i>Jan-Martin Kuhnigk, Volker Dicken, Lars Bornemann, Dag Wormanns, Stefan Krass, Heinz-Otto Peitgen</i>	W3-J12	II-933
17	Bone motion analysis from dynamic MRI: acquisition and tracking <i>Benjamin Gilles, Rosalind Perrin, Nadia Magnenat-Thalmann, Jean-Paul Vallée</i>	W3-J15	II-942
18	Cartilage thickness measurement in the sub-millimeter range <i>Geert Streekstra, Pieter Brascamp, Christiaan van der Leij,</i>		

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
19	W3-K2	II-950
<i>René ter Wee, Simon Strackee, Mario Maas, Henk Venema</i> A method to monitor local changes in MR signal intensity in articular cartilage: a potential marker for cartilage degeneration in osteoarthritis <i>Josephine Naish, Graham Vincent, Mike Bowes, David White, Manish Kothari, John Waterton, Chris Taylor</i>		
20	W3-K5	II-959
Tracing Based Segmentation for Labeling of Individual Rib Structures in Chest CT Volume Data <i>Hong Shen, Lichen Liang, Min Shao, Shuping Qing</i>		
21	W3-K8	II-967
Automated 3D Segmentation of the Lung Airway Tree Using Gain-based Region Growing Approach <i>Harbir Singh, Michael Crawford, John Curtin, Reyer Zwiggelaar</i>		
22	W3-K10	II-975
Real-Time Dosimetry for Prostate Brachytherapy Using TRUS and Fluoroscopy <i>Danny French, James Morris, Mira Keyes, Tim Salcudean</i>		
23	W3-K12	II-983
Fiducial-Less Respiration Tracking in Radiosurgery <i>Achim Schweikard, Hiroya Shiomi, Jens Fisseler, Manfred Dötter, Kajetan Berlinger, Hans-Björn Gehl, John Adler</i>		
24	W3-K14	II-992
A dynamic model of average lung deformation using capacity-based reparameterization and shape averaging of lung MR images <i>Tessa Sundaram, Brian Avants, James Gee</i>		
25	W3-K16	II-1000
Prostate Shape Modeling based on Principal Geodesic Analysis Bootstrapping <i>Erik Dam, P. Thomas Fletcher, Stephen M. Pizer, Gregg Tracton, Julian Rosenman</i>		
26	W3-L2	II-1008
Estimation of Organ Motion from 4D CT for 4D Radiation Therapy Planning of Lung Cancer <i>Michael Kaus, Thomas Netsch, Sven Kabus, Vladimir Pekar, Todd McNutt, Bernd Fischer</i>		
27	W3-L4	II-1017
Three-Dimensional Shape-Motion Analysis of the Left Anterior Descending Coronary Artery in EBCT Images <i>Ioannis Kakadiaris, Amol Pednekar, Alberto Santamaria</i>		
28	W3-L6	II-1025
A Cross-Platform Software Framework for Medical Image Processing <i>Koen Van Leemput, Janne Hämmäläinen</i>		
29	W3-S5	II-1091
Detection of Micro- to Nano-Sized Particles in Soft Tissue <i>Helmut Troster, Stefan Milz, Michael F. Trendelenburg, F. Joerger, Hanns-Peter Scharf, Markus Schwarz</i>		
30	W3-S6	II-1093
Hardware-assisted 2D/3D Intensity-based Registration for Assessing Patellar Tracking <i>T. S. Y. Tang, N. J. MacIntyre, H. S. Gill, R. A. Fellows, N. A. Hill, D. R. Wilson, R. E. Ellis</i>		
31	W3-S7	II-1095
Multiple Coils for Reduction of Flow Artefacts in MR Images <i>David Atkinson, David Larkman, Philipp Batchelor, Derek Hill,</i>		

## MICCAI 2004 ▶ Scientific sessions

	Poster	Proc.
32	W3-S8	II-1097
<i>Joseph Hajnal</i> Freely Available Software for 3D RF Ultrasound <i>Graham Treece, Richard Prager, Andrew Gee</i>		
33	W3-S9	II-1099
A Study of Dosimetric Evaluation and Feasibility of Image Guided Intravascular Brachytherapy in Peripheral Arteries <i>Julien Bellec, Jean-Pierre Manens, Cemil Goksu, Cecile Moisan, Pascal Haignon</i>		
34	W3-S10	II-1101
3D Elastography using Freehand Ultrasound <i>Joel Lindop, Graham Treece, Andrew Gee, Richard Prager</i>		
34	W3-S11	II-1103
<b>16:15 Oral Session: Applications, cardiac and misc</b> <b>Chairs: Michael Kaus, Marc Thiriet</b>		
1		II-761
Towards Optical Biopsies with an Integrated Fibered Confocal Fluorescence Microscope <i>Georges Le Goualher, Aymeric Perchant, Magalie Genet, Charlotte Cavé, Bertrand Viellerobe, Frédéric Berier, Benjamin Abrat, Nicholas Ayache</i>		
2		II-769
A prospective multi-Institutional study of the reproducibility of fMRI: a preliminary report from the biomedical informatics research network <i>Kelly Zou, Douglas Greve, Meng Wang, Steven Pieper, Simon Warfield, Nathan White, Mark Vangel, Ron Kikinis, William Wells, First Birn</i>		
3		II-777
Real-Time Multi-Model Tracking of Myocardium in Echocardiography using Robust Information Fusion <i>Bogdan Georgescu, Xiang Sean Zhou, Dorin Comaniciu, Bharat Rao</i>		
4		II-786
Simulation of the Electromechanical Activity of the Heart using XMR Interventional Imaging <i>Maxime Sermesant, Kawal Rhode, Angela Anjorin, Sanjeet Hegde, Gerardo Sanchez-Ortiz, Daniel Rueckert, Pier Lambiase, Clifford Bucknall, Derek Hill, Reza Razavi</i>		
5		II-795
Needle Insertion in CT Scanner with Image Overlay - Cadaver Studies <i>Gabor Fichtinger, Anton Deguet, Ken Masamune, Emese Balogh, Greg Fischer, Herve Mathieu, Russ Taylor, Laura Fayad, James Zinreich</i>		
<b>17:30 Closing Remarks</b>		

## Host Institutions



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