



# Eurographics 2009

March 30 - April 3, 2009  
Munich, Germany

## Medical Prize

### Medical Prize Co-Chairs

Katja Bühler, VRVis Zentrum für Virtual Reality und Visualisierung, Austria  
Dirk Bartz, University of Leipzig, Germany

### Medical Prize Sponsor

Vital Images, Inc.

### Committee Members

Erich Sorantin (A), Medical University Graz  
Micheal Vannier (US), University of Chicago  
Michael Meißner (US), Omnyx  
Anna Vilanova (NL), TU Eindhoven  
Anders Ynnerman (SE), Linköpings Universitet

Published by  
*The Eurographics Association*  
ISSN 1017-4656

## Table of Contents

Table of Contents .....	ii
Preface .....	iii
Author Index .....	iv

### First Prize

Virtual Hip Joint: from Computer Graphics to Computer-Assisted Diagnosis .....	1
<i>Caecilia Charbonnier, Jérôme Schmid, Frank Kolo-Christophe, Nadia Magnenat-Thalmann, Christoph Becker, and Pierre Hoffmeyer</i>	

### Second Prize

ImaGINE-S: Imaging Guided Interventional Needle Simulation .....	5
<i>Fernando Bello, Andrew Bulpitt, Derek A. Gould, Richard Holbrey, Carrie Hunt, Thien How, Nigel W. John, Sheena Johnson, Roger Phillips, Amrita Sinha, Franck P. Vidal, Pierre-Frédéric Villard, Helen Woolnough, and Yan Zhang</i>	

### Third Prizes

GREiF - Graphical Documentation of Retinal Findings Using a Standardized Digital Symbol Library .....	9
<i>Clemens Jürgens, Rico Großjohann, and Frank Tost</i>	
Advanced GPU Volume Rendering for Virtual Endoscopy .....	13
<i>Arno Krüger, Christoph Kubisch, Gero Strauß, and Bernhard Preim</i>	

## **Preface**

These proceedings include the Medical Prize papers presented at the EUROGRAPHICS 2009 conference. The Medical Prize papers are archived in the Eurographics Digital Library and are considered a peer reviewed publication.

This publication presents the work of the winners of the EUROGRAPHICS 2009 Medical Prize competition, which is the fourth competition since 2003. This biannual prize acknowledges the contribution of computer graphics to the medical field. The winning contributions were selected from 15 high-quality submissions. The four winners receive their prize certificates in the EG 2009 award ceremony on Tuesday, March 31, 2009, and they will present their work during the Medical Prize session on Wednesday, April 1, 2009. We would like to thank all contributors for their contributions, the Prize Committee, Stefanie Behnke and the EG Support Team, and the local organizing staff at TU München.

We hope that you will enjoy this year's Medical Prize program and we look forward to seeing you all in Munich.

Katja Bühler, Dirk Bartz  
EG 2009 Medical Prize Cochairs

## Author Index

Becker, Christoph .....	1	Krüger, Arno .....	13
Bello, Fernando .....	5	Kubisch, Christoph .....	13
Bulpitt, Andrew .....	5	Magenat-Thalmann, Nadia .....	1
Charbonnier, Caecilia .....	1	Phillips, Roger .....	5
Gould, Derek A. ....	5	Preim, Bernhard .....	13
Großjohann, Rico .....	9	Schmid, Jérôme .....	1
Hoffmeyer, Pierre .....	1	Sinha, Amrita .....	5
Holbrey, Richard .....	5	Strauß, Gero .....	13
How, Thien .....	5	Tost, Frank .....	9
Hunt, Carrie .....	5	Vidal, Franck P. ....	5
John, Nigel W. ....	5	Villard, Pierre-Frédéric .....	5
Johnson, Sheena .....	5	Woolnough, Helen .....	5
Jürgens, Clemens .....	9	Zhang, Yan .....	5
Kolo-Christophe, Frank .....	1		