



INTUITION 2008 Programme – Tutorials (Oct 6) and Conference Day 1 (Oct 7)

Monday October 6, 2008

14:00 - 19:30

Parallel Tutorial Session:

Mathematical Fundamentals for Computer Graphics and Virtual Reality
Prof. Vaclav Skala - University of West Bohemia, Czech Republic

Building a Complete Virtual Reality Application
Franco Tecchia, Marcello Carrozzino - PERCRO / Scuola Superiore S.Anna, Italy

13:45 - 15:30

Parallel Session I: Haptics – Chair: Jerome Perret (HAPTION, FR)

Force-Feedback, from Teleoperation to Simulation in Virtual Reality¹
Jérôme Perret, Loïc Tching

Haptic Rendering of Highly Complex Quasi-Convex Objects
Huagen Wan, Xiaoxia Han, Zhihua Zhou

The Design of a Haptic Simulator for Teaching and Assessing Spinal Anaesthesia
Erik Löfvquist, Zsuzsanna Kulcsár, George D. Shorten, Annette Aboulaflia, Mikael Fernström

Hardware-Based Parallel Computing for Real-Time Haptic Rendering of Deformable Objects
Ramin Mafi, Shahin Siroospour, Behzad Mahdavihah, Brian Moody, Kaveh Elizeh

Tuesday October 7, 2008

08:30 - 09:30

Registration

09:30 - 09:40

INTUITION Official Opening by the Organiser and the INTUITION Coordinator
Giuseppe Varalda - CRF, Angelos Amditis – ICCS

09:40 - 10:00

Conference Overview by the IPC Chairs
Massimo Bergamasco - PERCRO, Roland Blach – FhG-IAO, Giannis Karaseitanidis – ICCS

10:00 - 10:10

Welcome address by the Turin Chamber of Commerce
Mr. Alessandro Barberis, President

10:10 - 10:20

Welcome address by ATA
Mr. Nevio di Giusto, President of ATA and CEO of FIAT Research Centre and ELASIS

10:20 - 10:30

Welcome address by MIMOS
Mr. Davide Borra, President of MIMOS and President of NoReal

10:30 - 11:15

Keynote Speech 1: Game-Based Virtual Rehabilitation
Dr. Grigore Burdea – Rutgers University, USA

11:15 - 11:30

Coffee Break

11:30 - 12:15

Keynote Speech 2: Virtual Environments for Motor Skills Acquisition and Transfer
Dr. Massimo Bergamasco – Scuola Superiore S.Anna, Italy

12:15 - 12:45

EuroVR Association
Angelos Amditis – ICCS

12:45 - 13:45

Lunch

13:45 - 15:30

Parallel Session II: Applications I² – Chair: Cristiano Montrucchio (Alenia Aeronautica, IT)

COSE Centre: The Thales Alenia Space Italia Collaborative System Engineering Centre
Valter Basso

New Paradigm for Virtual Testing in Aerospace
Enzio Maria Providone, Vittorio Selmin

Aircraft Process-Oriented Training System – Research and Demonstration Outcomes
Massimo Corazza

TraVis - A Virtual Reality Application For Interactive Simulations In Aerospace And Astronomy
Manuela Marellò, Christian Bar

Virtual Reality for Enhanced Urban Design
Mauro Ceconello, Davide Spallazzo

VR/AR Medium and Long Term Application Scenarios in Aerospace Domain
Marinella Ferrino, Domenico Tedone, Benoit Chanclou

13:45 - 15:30

Parallel Session III: Sketches and Visions I (Short Papers) – Chair: Bernd Fröhlich (Uni. Weimar, DE)

A Low-Cost Laser Based 6 DoF Head Tracker for Usability Application Studies in Virtual Environments
Moritz Vieth, Rainer Herpers, Michael Huelke, Deepak Chhabra

Coperion 3D – A Virtual Factory on the Tabletop
Michael Zöllner, Jens Keil, Johannes Behr, Jan Gillich, Sebastian Gläser, Erich Schöls

Real Time Ray Tracing on Many-Core-Hardware
Iliyan Georgiev, Dmitri Rubinstein, Hilko Hoffmann, Philipp Stusallek

Estimation of Occluded Finger Position in a Camera-Based Tracking System Based on Human Grasping Models
Yutaka Matsuda, Kinya Fujita

WEAR: WEARable Augmented Reality

David De Weerd, Michel Ilzkovitz, Miguel Casas Sanchez, Tangi Meyer, Luis Arguello

¹ This is an introductory paper to the Haptics session and therefore, not peer-reviewed

² Applications I Session papers are not peer-reviewed





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15:30 - 15:45	<p>Deforming Virtual Dense Elastic Object with Force Feedback Device PHANTOM Hiroshi Takada, Norihiro Abe, Kinosita Yoshimasa, Shoujie He, Hirokazu Taki</p> <p><i>Coffee break</i></p>	15:45 - 17:30	<p>Parallel Session IV: Interaction – Chair: Sabine Coquillart (INRIA, FR)</p> <p>The Influence of Position Control and Rate Control on Spatial Perception in Desktop-Based 3D Applications Jan Hochstrate, Alexander Kulik, André Kunert, Bernd Fröhlich</p> <p>Wheel-Tracked VR: Walking Through The Virtual World Javi Boo, Marta Fairén, Jordi Moyés</p> <p>A System for Aesthetic Shapes Evaluation and Modification Based on Haptic and Auditory Interfaces Monica Bordegoni, Umberto Cugini</p> <p>Advanced Interaction Systems to Manage Design Review Inside a Virtual Room Alice Pignatell, Fausto Brevi</p>
15:45 - 17:30	<p>Parallel Session V: Applications II – Chair: Philippe Gravez (CEA, FR)</p> <p>Fire in a Storage: From Simulation to Virtual Environments Andreas Gerndt, Malcolm Hutson, Paul Fung, Carolina Cruz-Neira</p> <p>Mixed Reality Architecture: Introducing Collaborative VR Tools into Commercial Organisations Rose Saikayasis, Holger Schnädelbach, Michael Pettitt, Harshada Patel, Tony Glover</p> <p>Realistic Scene Contrast Reduction Induces Drivers to Slow Down Paolo Pretto, Astros Chatziastros</p> <p>Collaborative Editing and Viewing of Interactive 3D Contents on Mobile Devices³ Luca Vezzadini, Giuseppe Donvito, Stefano Gasco, Riccardo Corsi</p> <p>A Virtual Environment for Car Body Trim Assessment in the Automotive Design Process⁴ Alessandro Milite, Arcangelo Truppa, Fabrizio Frascà</p>	17:30 - 18:15	<p>Parallel Session VI: Sketches and Visions II (Short Papers) – Chair: Fabio Salsedo (PERCRO, IT)</p> <p>New Assessment for Old Addictions: Virtual Reality as an Instrument to Assess Alcohol Dependent Patients Elena Gatti, Cinzia Sacchelli, Rosanna Massari, Tiziana Lops, Riccardo Gatti, Giuseppe Riva</p> <p>Neural Activity Related to Visual Cues And Saccade Preparation For Operating A Brain Computer Interface Areti Tzelepi, Ricardo Ron Angevin, Angelos Amditis</p> <p>Perception of Size in Vehicle Architecture Studies Andras Kemeny, Emmanuelle Combe, Posselt Javier</p> <p>Technological and Evaluation Tools for Interaction in Collaborative Virtual Environment Hrimech Hamid, Merienne Frédéric, Zheng Jian</p> <p>Avatar Based Physiotherapy Rehabilitation Scheme Konstantinos Loupos, Italo Braga, Angelos Amditis</p> <p>Detection of Blood Vessels and Brain Aneurysm Referring to Medical Images of Head Toshihide Miyagi, Norihiro Abe, Yoshimasa Kinoshita, Shoujie He, Hirokazu Taki</p>
		17:30 - 18:50	<p>Poster Session - Exhibition Rally</p> <p>VIRMAN Special Session – Chair: Prof. Satyandra K. Gupta (University of Maryland, USA)</p> <p>Use of Simulation in Developing and Characterizing Motion Planning Approaches for Automated Particle Transport Using Optical Tweezers Ashis Gopal Banerjee, Satyandra K. Gupta</p> <p>Virtual Worlds as Collaborative Environments for Design and Manufacturing: From Idea to Product Scott Chase</p> <p>Haptic Modeling for Virtual Design and Prototyping Mark B. Colton, Paul A. Theodosis</p> <p>Use of Virtual Environments in Training Applications: State of the Art Survey Satyandra K. Gupta, Davinder K. Anand, John E. Brough, Robert A. Kavetsky, Maxim Schwartz</p>
		20:30 -	<p><i>Conference Dinner</i></p>

^{3,4} The paper is invited and thus not peer-reviewed





INTUITION 2008 Programme – Conference Day 2 (Oct 8)

Wednesday October 8, 2008

09:00 - 9:45	Keynote Speech 3: Convergence of Immersive Media: Virtual Reality Meets Video Games Dr Anthony Steed – University College London, UK
9:45 - 10:30	Keynote Speech 4: Towards AR-Ready Buildings Dr Gudrun Klinker – Technical University of Munich, Germany
10:30 - 10:45	Coffee break
10:45 - 12:15	Special Invited Session on Vision and Strategies in VR Technologies and Applications: Industry Perspectives – Chair: Giuseppe Varalda (CRF, IT)
12:15 - 12:45	Poster Session - Exhibition Rally
12:45 - 13:45	Lunch
13:45 - 14:30	Keynote Speech 5 (VIRMAN *): Virtual Manufacturing – Are We There Yet? The Continuing Journey Dr. Sankar Jayaram – Washington State University, USA
14:30 - 16:15	Parallel Session VII: Systems – Chair: Carolina Cruz-Neira (Lite 3D, USA) A Global Illumination Rendering Implementation of Web3D Using the Shading Language Masahiro Sakai, Noriyuki Ichijo, Yoshinori Dobashi, Tsuyoshi Yamamoto A Low Cost Video See-Through Head Mounted Display for Increased Situation Awareness in an Augmented Environment Daniel Johansson, Leo J de Vin Evaluation of Registration Approaches for Industrial Augmented Reality Katharina Pentenrieder, Christian Bade, Dirk Richter, Fabian Doil, Gudrun Klinker The USE-VR Platform – A Framework for Interoperability Among VR Solutions Benjamin Mesing, Matthias Vahl, Uwe von Lukas
14:30 - 16:15	Parallel Session VIII: European Projects on VR/AR – Chair: Angelos Amditis (ICCS, GR) The following invited European Projects, created in the INTUITION context, are presented: IMVIS (Bernd Fröhlich - Uni. Weimar, DE) CATER (Manfred Dangelmaier – FhG-IAO, DE) MANUVAR (Konstantinos Loupos – ICCS, GR) COSPACES (Terrence Fernando – USAL, UK) DIFAC (Claudia Redaelli – ITIA-CNR, IT)

14:30 - 16:15

VIRMAN Session I: Virtual Manufacturing Case Studies * – Chair: Prof. James M. Ritchie (Heriot-Watt University, UK)

Computing Swept Volumes for Virtual Manufacturing Applications
Huseyin Erdim, Horea T. Ilies

Automated Knowledge Capture in 2D and 3D Design Environments
James M Ritchie, Raymond CW Sung, Heather J Rea, Theodore Lim, Jonathan R Corney, Csaba Salamon, Iris Howley

The Generation of Assembly Process Plans and Associated Gilbreth Motion Study Data
James M. Ritchie, Theo Lim, Raymond S. Sung, Hugo Medellin

Collaborative Virtual Environments for Sharing Product Lifecycle
L. Brayda, L. Taverna, L. Rossi, R. Chellali

Embedding Haptics-Based Virtual Cutting in CAD Systems
Hrishikesh Kate, Sankar Jayaram, Uma Jayaram

14:30 - 16:15

VIRMAN Session II: Virtual Manufacturing Case Studies * – Chair: Prof. Jonathan Corney (University of Strathclyde, UK)

Virtual Tools and Devices for Automotive Work-Cells Simulation
M. Di Pardo, A. Riccio, M. Allocca, L Talamo

Geometric Reasoning with a Virtual Workforce (Crowdsourcing for CAD/CAM)
P. Jagadeesan, J. Wenzel, J.R. Corney, X.T. Yan, A. Sherlock, W. Regli

A Generic Multimodal Interface for Design and Manufacture Applications
Gheorghe Mogan, Doru Talaba, Florin Garbacia, Tiberiu Butnaru, Sebastian Sisca, Ciprian Aron

Methods and Tools for Manufacturing Simulation in Aerospace
Marco Alemanni, Giovanni Pricelli

16:15 - 16:30

Conference Closure (Angelos Amditis - ICCS, Giuseppe Varalda - CRF)

* For further information on the VIRMAN programme please visit <http://virman08.wordpress.com/programme/>



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