

MESSAGE FROM THE CHAIRS

The organizing committee welcomes you to the 2010 IEEE International Conference on Virtual Environments, Human-Computer Interfaces, and Measurement Systems (IEEE VECIMS 2010), held in Taranto, Italy, on 6-8 September, 2010. This meeting, sponsored by the IEEE Instrumentation and Measurement Society, is the eighth of a successful series that extends its roots back to the 1996 IEEE Workshop on Emerging Technologies for Instrumentation and Measurement, as clear evidence of the continuous and even increasing interest in this research and applications area.

The three-day program aims to extend and advance the use of virtual environments and human-computer interaction in the instrumentation and measurement field in an informal setting arranged to encourage broad discussion about theory, methodologies and results. Participants will hear and discuss opportunities and problems in using virtual environment and human-computer interfacing breakthroughs to the advancement of instrument performance and measurement capabilities, and related applications. To promote interaction and discussion in the audience, sufficient time is allotted to presenters not only to introduce their achievements, but also to engage in extended discussions with the participants. Subjects of discussion include, but are not restricted to, examination of approaches and results, the rationale underlying particular methodologies, experimental and theoretical examinations, practical difficulties, insights, and extensions to other application areas.

This conference will be held in parallel with the IEEE International Conference on Computational Intelligence for Measurement Systems and Applications (IEEE CIMSA 2010). Due to their many common aspects and shared technologies, this parallel organization will allow for more interaction among the participants in the two events, and for more sharing of advanced knowledge and stimulating experiences.

We think you will find IEEE VECIMS 2010 a challenging and productive experience. We hope that you will also enjoy the location, the culture, the food and the sea: Taranto will be an exciting experience!

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General Co-Chairs

Andrea Guerriero, Politecnico di Bari, Italy
Emil M. Petriu, University of Ottawa, Canada

Program Co-Chairs

Yonghua Chen, The University of Hong Kong, China
Stefano Ferrari, Università degli Studi di Milano, Italy
Pierre Payeur, University of Ottawa, Canada

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Monday, September 6

8:30 AM - 10:00 AM *Registration*

10:00 AM - 11:00 AM *Opening Session and Talk*

11:00 AM - 11:30 AM *Coffee Break*

11:30 AM - 1:00 PM *Models & Simulation I*

11:30 Upper Extremity Kinetics during Walker-Assisted Gait of Knee Joint Stiffness Simulation

Dong Ming (Tianjin University, China)
Xiuyun Liu (Tianjin University, China)
Yanru Bai (Tianjin University, China)
Xingwei An (Tianjin University, China)
Hongzhi Qi (Tianjin University, China)
Baikun Wan (Tianjin University, China)
Yong Hu (University of Hong Kong, China)

12:00 A Visual-Inertial Approach for Camera Egomotion Estimation and Simultaneous Recovery of Scene Structure

Dominik Aufderheide (South Westphalia University of Applied Sciences, Germany)
Werner Krybus (South Westphalia University of Applied Sciences, Germany)

12:30 Three Pillar Information Management System for Modeling the Environment of Autonomous Systems

Ioana Gheata (Karlsruhe Institute of Technology)
Marcus Baum (Karlsruhe Institute of Technology)
Andrey Belkin (Karlsruhe Institute of Technology, Germany)
Jürgen Beyerer (Karlsruhe Institute of Technology)
Uwe D. Hanebeck (Karlsruhe Institute of Technology)

1:00 PM - 2:00 PM *Lunch*

2:00 PM - 3:30 PM *Models & Simulation II*

2:00 Low Cost Helicopter Training Simulator - A Case Study from the Brazilian Military Police

Joice Barbosa Mendes (Universidade Federal de Itajubá, Brazil)
Guilherme Henrique Caponetto (Universidade Federal de Itajubá, Brazil)
Gabriel Paiva Lopes (Universidade Federal de Itajubá, Brazil)
Alexandre Carlos Brandão Ramos (Universidade Federal de Itajubá, Brazil)

2:30 An AI Based Solution for the Control of 3D Real-Time Sensor Based Gaming

Dan Ionescu (University of Ottawa, Canada)
Shahidul Islam (University of Ottawa, Canada)
Cristian Gadea (University of Ottawa, Canada)
Bogdan Ionescu (University of Ottawa, Canada)
Eric McQuiggan (University of Ottawa, Canada)
Mircea Trifan (University of Ottawa, Canada)

3:00 Simulation of Reflectometer System For Complex Reflection Coefficient Measurements

Ermeey Abd Kadir (Universiti Teknologi MARA, Malaysia)
Husna Abd. Rahman (Universiti Teknologi MARA, Malaysia)
Nesamalar Kantasamu (Universiti Teknologi MARA, Malaysia)
Nor Wahidah Binti Misran ((Universiti Teknologi MARA, Malaysia)

3:30 PM - 4:00 PM *Coffee Break*

4:00 PM - 6:00 PM *Human-Computer Interface in Applications*

4:00 Brain-Computer Interface Technique for Electro-Acupuncture Stimulation Control

Dong Ming (Tianjin University, China)
Yanru Bai (Tianjin University, China)
Xiuyun Liu (Tianjin University, China)
Xingwei An (Tianjin University, China)
Hongzhi Qi (Tianjin University, China)
Baikun Wan (Tianjin University, China)
Yong Hu (University of Hong Kong, China)

4:30 Human Machine Interface in Command and Control System

Petr Frantis (University of Defense, Czech Republic)
Jan Hodický (University of Defense, Czech Republic)

5:00 Virtual Reality to Improve Remote Control in Presence of Delays

Philippe Le Parc (University of Brest, France)
Etienne Pardo (University of Brest, France)
Amara Touil (University of Brest, France)
Jean Vareille (University of Brest, France)

5:30 A Navigator of the Patient's Anatomy Model for Intra-Operative Surgical Guidance

Lucio T. De Paolis (Salento University, Italy)
Giovanni Aloisio (Salento University, Italy)
Marco Pulimeno (Salento University, Italy)

Tuesday, September 7

9:30 AM - 11:00 AM

Measurements

9:30

Identification of Tactile Walking Surface Indicators by White Cane

Shoichiro Fujisawa (The University of Tokushima, Japan)

Naochiro Yamada (The University of Tokushima, Japan)

Shin-ichi Ito (The University of Tokushima, Japan)

Katsuya Sato (The University of Tokushima, Japan)

Seiji Mitani (National Institute of Technology and Evaluation, Japan)

Osamu Sueda (The University of Tokushima, Japan)

10:00

Analysis of Direct Motion Measurement System for Design of Above Knee Prosthesis

Kurtulus Erinc Akdogan (Hacettepe University, Turkey)

Atila Yilmaz (Hacettepe University, Turkey)

10:30

Analysis of Dexterous Finger Movements for Writing using a Hand Motion Capture System

Kazutaka Mitobe (Akita University, Japan)

Masachika Saitoh (Akita University, Japan)

Noboru Yoshimura (Akita University, Japan)

11:00 AM - 11:30 AM

Coffee Break

11:30 AM - 1:00 PM

Architectures I

11:30

TV-TeleArch an architecture for enabling device telecontrol and sensor data access over IDTV systems

Julio César Paulino de Melo (Federal University of Rio Grande do Norte, Brazil)

Samuel Azevedo (Universidade Federal do Rio Grande do Norte, Brazil)

Luiz Eduardo Cunha Leite (Universidade Federal do Rio Grande do Norte, Brazil)

Aquiles M.F. Burlamaqui (Universidade Federal do Rio Grande do Norte, Brazil)

Rummenigge Dantas (Federal University of Rio Grande do Norte, Brazil)

Luiz Marcos Garcia Gonçalves (Federal University of Rio Grande do Norte, Brazil)

12:00

An architecture that allows event based computing for environment sensing systems

Gianna Rodrigues de Araújo (Federal University of Rio Grande do Norte, Brazil)

Julio César Paulino de Melo (Federal University of Rio Grande do Norte, Brazil)

Luiz Marcos Garcia Gonçalves (Federal University of Rio Grande do Norte, Brazil)

José Alberto Nicolau de Oliveira (Federal University of Rio Grande do Norte, Brazil)

12:30

A Plug-n-Play wireless sensor network based on Web service for monitoring climatic parameters

Fabrizio Ciancetta (University of L'Aquila, Italy)

Giovanni Bucci (University of L'Aquila, Italy)

Edoardo Fiorucci (University of L'Aquila, Italy)

Carmine Landi (Second University of Naples, Italy)

1:00 PM - 2:00 PM

Lunch

2:00 PM - 3:00 PM

Architectures II

2:00

Virtual reality training environment a proposed architecture

Ademar Virgolino da Silva Netto (Federal University of Campina Grande, Brazil)
Maria de Fatima Queiroz Vieira (Federal University of Campina Grande, Brazil)

2:30

Optimizing the Utilization of Virtual Resources in Cloud Environment

Sunirmal Khatua (University of Calcutta, India)
Anirban Ghosh (Jadavpur University, India)
Nandini Mukherjee (Jadavpur University, India)

3:00

Java Services for Distributed Resources Performance Monitoring and Forecasting

Andrea Guerriero (Politecnico di Bari, Italy)
Ciriaco Ciro Pasquale (Politecnico di Bari, Italy)
Francesco Ragni (Politecnico di Bari, Italy)

3:30 PM - 4:00 PM

Coffee Break

4:00 PM - 5:30 PM

Performances

4:00

Evaluation and Classification of Digital Games using QOL Measurements

Yukari Hori (University of Tokyo, Japan)
Akira Baba (University of Tokyo, Japan)

4:30

A qualitative measure of jpeg compressed image

Giovanni Dimauro (Università degli Studi di Bari, Italy)
Claudia Trullo (Università degli Studi di Bari, Italy)
Antonella Fattizzo (Università degli Studi di Bari, Italy)
Nunzio Gianfelice (Università degli Studi di Bari, Italy)
Nicola Milella (Università degli Studi di Bari, Italy)

5:00

Dialogue-Oriented Interface for Linguistic Human-Computer Interaction: a Chat-based Application

Vincenzo Di Lecce (Politecnico di Bari, Italy)
Marco Calabrese (Polytechnic of Bari, Italy)
Domenico Soldo (myHermes S.r.l., Italy)
Alessandro Quarto (myHermes S.r.l., Italy)

Wednesday, September 8

9:30 AM - 11:00 AM

Technologies for Interactive Applications

9:30 ELVIS: A system for interact, socialize and learn in a personal learning environment

Giovanni Dimauro (Università degli Studi di Bari, Italy)

Claudia A. Trullo (Università degli Studi di Bari, Italy)

10:00 Using Depth Measuring Cameras for a New Human Computer Interaction in Augmented Virtual Reality Environments

Dan Ionescu (University of Ottawa, Canada)

Bogdan Ionescu (University of Ottawa, Canada)

Shahidul Islam (University of Ottawa, Canada)

Cristian Gadea (University of Ottawa, Canada)

Eric McQuiggan (University of Ottawa, Canada)

10:30 Understanding the Impact of Visual Quality Parameters on Activities in Immersive Systems

Rahul Malik (University of Illinois at Urbana Champaign, USA)

Peter Bajcsy (University of Illinois at Urbana-Champaign, USA)

11:00 AM - 11:30 AM

Coffee Break

11:30 AM - 1:00 PM

Collaborative Distributed Virtual Environments

11:30 Home Recording for Pre-Phase Sleep Apnea Diagnosis by Holter Recorder Using MMC Memory

Atila Yilmaz (Hacettepe University, Turkey)

Tolga Dundar (Hacettepe University, Turkey)

12:00 Evaluating the Effectiveness of Communication Media on Remote Collaboration

Rahul Malik (University of Illinois, USA)

Melissa Dobosh (University of Illinois, USA)

Marshall S. Poole (University of Illinois, USA)

Kenton McHenry (University of Illinois, USA)

Peter Bajcsy (University of Illinois, USA)

12:30 A Path Editor for Virtual Museum Guides

Rummenigge R. Dantas (Federal University of Rio Grande do Norte, Brazil)

Julio César P. de Melo (Federal University of Rio Grande do Norte, Brazil)

Jefferson Lessa (Federal University of Rio Grande do Norte, Brazil)

Claudio Claudio Schneider (Federal University of Rio Grande do Norte, Brazil)

Haroldo Teodosio (Federal University of Rio Grande do Norte, Brazil)

Luiz Marcos Garcia Gonçalves (Federal University of Rio Grande do Norte, Brazil)

1:00 PM - 2:00 PM

Lunch

2:00 PM - 3:30 PM

Data Fusion and Non-linear Methods

2:00 A Real-time System for Sensor Information Interactive Visualization with Multi-touch Technology

Kevin O' Mahony (Cork Institute of Technology, Ireland)
Jian Liang (Cork Institute of Technology, Ireland)
Kieran Delaney (Cork Institute of Technology, Ireland)

2:30 Simultaneous Determination of Dimension and Intensity of an Object by Image Fusion

Umesh C. Pati (National Institute of Technology, India)
Pranab K. Dutta (Indian Institute of Technology, India)

3:00 Smile Stages Classification Based on Kernel Laplacian Lips Using Selection of Non Linear Function Maximum Value

Mauridhi Hery Purnomo (Institut of Technology Sepuluh Nopember, Indonesia)
Tri Arif Sarjono
Arif Muntasa

3:30 PM - 4:00 PM

Coffee Break