

Aims and Scope

Computational methodologies of signal processing and analyses, namely considering 2D, 3D and 4D images, are commonly used in different application of our society. For instances, full automatic or semi-automatic Computational Vision systems have been increasing used in surveillance tasks, traffic analysis, recognition process, inspection purposes, human-machine interfaces, 3D vision and deformation analysis. One of the main characteristics of the Computational Vision domain is its inter-multidisciplinarity. In fact, methodologies of several more basic sciences, such as Informatics, Mathematics, Statistics, Psychology, Mechanics and Physics are usually used in this domain. Besides this inter-multidisciplinary characteristic, one of the main reasons that contributes for the continually effort done in this domain of the human knowledge is the number of applications that exists in the medical area. For instance, it is possible to use statistical or physical procedures on medical images in order to model the images structures. This modeling can have different goals, for example: shape reconstruction, organs identification, multimodality data registration, behavior simulation, motion and deformation analysis, virtual reality, computer-assisted therapy or tissue characterization. The main objective of these ECCOMAS Thematic Conferences on Computational Vision and Medical Image Processing is to promote a comprehensive forum for discussion on the recent advances in the related fields trying to identify widespread areas of potential collaboration between researchers of different sciences.

Conference Topics

- Signal and Image Processing
- Computational Vision
- Medical Imaging
- Physics of Medical Imaging
- Tracking and Analysis of Movement
- Simulation and Modeling

- Image Acquisition
- Industrial Applications
- Shape Reconstruction
- Objects Segmentation, Matching, Simulation
- Data Interpolation, Registration, Acquisition and Compression
- 3D Vision
- Virtual Reality
- Visual Inspection
- Software Development for Image Processing and Analysis
- Computer Aided Diagnosis, Surgery, Therapy, and Treatment
- Computational Bioimaging and Visualization
- Telemedicine Systems and their Applications

Invited Lectures

- **Daniel Rueckert** - Imperial College London, UK
- **Dimitris N. Metaxas** - Rutgers University, USA
- **Durval C. Costa** - Champalimaud Foundation, Portugal
- **James S Duncan** - Yale School of Medicine, USA
- **Milan Sonka** - The University of Iowa, USA
- **Richard Bowden** - University of Surrey, UK

Registration

	Early (€)	Late (€)
IACM/ECCOMAS Members	425	500
Non-IACM/ECCOMAS Members	475	550
Students	275	325
Accompanying Persons	150	200
Book of Proceedings	100	125

The fees cover: Book of proceedings (except for students registration) • Participation in the scientific sessions • Coffee breaks • Lunches • Welcome reception • Conference Banquet
For Accompanying Persons: welcome reception and conference banquet

Notes:

- Early registration fee must be received until July 1, 2013
- Each accepted paper should have, at least, one non-student registration

Scientific Committee

- **Ahmed El-Rafei** Friedrich-Alexander University Erlangen-Nuremberg, Germany
- **Alejandro F. Frangi** The University of Sheffield, UK
- **Alexandre Cunha** California Institute of Technology, USA
- **Ana Mafalda Reis** University of Porto, Portugal
- **André Correia** University of Porto, Portugal
- **André R. S. Marçal** University of Porto, Portugal
- **Andrew D. Bagdanov** University of Florence, Italy
- **Armando Sousa** University of Porto, Portugal
- **Arrate Muñoz Barrutia** Center for Applied Medical Research, Spain
- **Aubrecht Christoph** AIT Austrian Institute of Technology GmbH, Austria
- **Bernard Gosselin** Faculte Polytechnique de Mons, Belgium
- **Christos Constantinou** Stanford University, USA
- **Christos Grecos** University of West of Scotland, UK
- **Daniela Iacoviello** Università degli Studi di Roma "La Sapienza", Italy
- **Djemel Ziou** Université de Sherbrooke, Canada
- **Durval C. Costa** Champalimaud Foundation, Portugal
- **Eduardo Borges Pires** Instituto Superior Técnico, Portugal
- **Eduardo Soudah Prieto** CIMNE, Spain
- **Emmanuel A. Audenaert** Ghent University Hospital, Belgium
- **Enrique Alegre Gutiérrez**, University of León, Spain
- **Eugenio Oñate**, Universitat Politècnica de Catalunya, Spain
- **Fernão Abreu** University of Aveiro, Portugal
- **Filipa Sousa** University of Porto, Portugal
- **Fiorella Sgallari** University of Bologna, Italy
- **George Bebis** University of Nevada, USA
- **Henryk Palus** Silesian University of Technology, Poland
- **Huiyu Zhou** Queen's University Belfast, UK

- **Isabel M. A. P. Ramos** University of Porto, Portugal
- **Ioannis Pitas** Aristotle University of Thessaloniki, Greece
- **João Paulo Vilas-Boas** University of Porto, Portugal
- **Jaime S. Cardoso** University of Porto, Portugal
- **Jan C de Munck** VU University Medical Center, The Netherlands
- **Javier Melenchón** Universitat Oberta de Catalunya, Spain
- **Jeffrey A. Weiss** University of Utah, USA
- **José C. Reis Campos** University of Porto, Portugal
- **Jimmy T. Efrid** East Carolina Heart Institute, USA
- **João M. A. Rebello** Federal University of Rio de Janeiro, Brazil
- **João Paulo Papa** São Paulo State University, Brazil
- **Joaquim Silva Gomes** University of Porto, Portugal
- **Jordi González** Centre de Visió per Computador, Spain
- **Jorge M. G. Barbosa** University of Porto, Portugal
- **Jorge S. Marques** Instituto Superior Técnico, Portugal
- **Jose M. García Aznar** University of Zaragoza, Spain
- **Khan M. Iftekharuddin** The University of Memphis, USA
- **Kristian Sandberg** Computational Solutions, USA
- **Lionel Moisan** Université Paris V, France
- **Lyuba Alboul** Sheffield Hallam University, UK
- **Luís Amaral** Polytechnic Institute of Coimbra, Portugal
- **Luís Paulo Reis** University of Minho, Portugal
- **Marc Thiriet** Université Pierre et Marie Curie, France
- **M. Emre Celebi** Louisiana State University in Shreveport, USA
- **Mahmoud El-Sakka** The University of Western Ontario, Canada
- **Manuel Filipe Costa** University of Minho, Portugal
- **Manuel González Hidalgo** University of the Balearic Islands, Spain
- **Manuel Ujaldon** University of Malaga, Spain
- **Manuele Bicego** University of Verona, Italy
- **Marcos Rodrigues** Sheffield Hallam University, UK
- **Mário Forjaz Secca** Universidade Nova de Lisboa, Portugal
- **Miguel Velhote Correia** University of Porto, Portugal
- **Mislav Grgic** University of Zagreb, Croatia
- **Mónica N. S. Oliveira** University of Strathclyde, UK
- **Nguyen Dang Binh** Hue University, Vietnam
- **Nuno Machado** Polytechnic Institute of Lisbon, Portugal
- **Paulo Flores** University of Minho, Portugal
- **Pedro Almeida** University of Lisbon, Portugal

- **Philippe G. Young** University of Exeter, UK
- **Rainald Lohner** George Mason University, USA
- **Reneta Barneva** State University of New York at Fredonia, USA
- **Rui Lima** Polytechnic Institute of Bragança, Portugal
- **Sabina Tangaro** Istituto Nazionale di Fisica Nucleare, Italy
- **Slimane Larabi** USTHB University, Algeria
- **Susana Branco Silva** Polytechnic Institute of Lisbon, Portugal
- **Teresa Mascarenhas** University of Porto, Portugal
- **Tolga Tasdizen** University of Utah, USA
- **Thierry Brouard** University of Tours, France
- **Yongjie (Jessica) Zhan** Carnegie Mellon University, USA
- **Zeyun Yu** University of Wisconsin at Milwaukee, USA

Publications

PROCEEDINGS

Extended abstracts (for submission): 2 to 4 (recommended) A4 pages must be considered. The abstract must provide authors' name and affiliation, and should also include a title and keywords. All extend abstracts submitted will be subjected to a review process by two members of the conference scientific committee. The proceedings book will be published by the Taylor & Francis Group and indexed by Thomson Reuters Conference Proceedings Citation Index, IET Inspect and Elsevier Scopus.

SPRINGER BOOK

A book with 20 invited works from the most important ones presented in the conference will be published by Springer under the book series "Lecture Notes in Computational Vision and Biomechanics".

JOURNAL PUBLICATION

A dedicated special issue of the Taylor & Francis International Journal "Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization" will be published with extended versions of the best works presented in the conference.

Thematic Sessions

Experts on related conference topics are invited to submit proposals for thematic sessions. The organizers of the selected thematic sessions will be included in the conference scientific committee and will have a reduced registration fee. They will be responsible for the dissemination of their thematic session, may invite expertise researchers to have invited keynotes during their session and will participate in the review process of the submitted contributions.

Proposal for Thematic Sessions should be submitted by email to the conference co-chairs (tavares@fe.up.pt, rnatal@fe.up.pt).

Important Dates

- **Deadline for Thematic Session Proposals:** March 1, 2013
- **Deadline for Extended Abstracts:** April 15, 2013
- **Authors Notification:** May 1, 2013
- **Deadline for Lectures and Papers:** July 1, 2013

Accomodation

The organizers have arranged special conditions and rates at **Melia Madeira Mare Hotel** for the conference participants.

Awards

"best paper award" and "best student paper award" are going to be given to the author(s) of two papers presented at the conference, selected by the Organizing Committee based on the best combined marks from the Scientific Committee and Session Chairs.



Organizing Committee

- **João Manuel R. S. Tavares**, Faculty of Engineering of University of Porto, Portugal
- **Renato M. Natal Jorge**, Faculty of Engineering of University of Porto, Portugal
- **Maria Amélia Duarte Ferreira**, Faculty of Medicine of University of Porto, Portugal
- **Francisco J. Perales López**, University of Balears Island, Spain

Conference Secretariat

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IV ECCOMAS
THEMATIC CONFERENCE
ON COMPUTATIONAL VISION
AND MEDICAL IMAGE
PROCESSING

14-16 October 2013

Melia Madeira Mare Hotel
Funchal, Madeira Island, Portugal

Conference Co-Chairs

João Manuel R. S. Tavares Faculty of Engineering
of University of Porto, Portugal
Renato M. Natal Jorge Faculty of Engineering of
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