

MEDICON2013

XIII Mediterranean Conference
on Medical and Biological
Engineering and Computing



IFMBE

INTERNACIONAL FEDERACION DE INGENIERIA BIOMEDICA



SEVILLA, SPAIN

September, 25th - 28th 2013

www.medicon2013.com

Research and Development of
Technology for Sustainable Healthcare

CALL FOR PAPERS

The Mediterranean Conference on Medical and Biological Engineering and Computing is a regional conference with a long tradition and high scientific level, which is organized every three years in a Mediterranean country under the umbrella of the International Federation of Medical and Biological Engineering (IFMBE). For more than 30 years, MEDICON has been a scientific forum for the presentation of the recent advances in the biomedical engineering fields. Authors are invited to submit papers before April 26th 2013 about the following topics:

BIOMEDICAL SIGNAL PROCESSING

- Biosignal processing and biological modelling
- Non linear dynamic analysis of biomedical signals
- Signal pattern classification
- Adaptive and parametric filtering
- Time-frequency and time-scale analysis
- Principal component analysis and independent component analysis

BIOMEDICAL IMAGING AND PROCESSING

- X-Ray imaging / mammography
- Computed tomography / magnetic resonance imaging / ultrasound imaging
- Optical imaging and microscopy / molecular imaging
- SPECT and PET technologies
- Multimodality imaging
- Image processing

MEDICAL DEVICES AND SENSORS

- Ambulatory point-of-care systems, home/personal/independent living
- Medical devices evaluation and standards
- Diagnostic and therapeutic devices
- Therapeutic and diagnostic techniques based on bioelectromagnetic interactions

BIO-MICRO AND BIO-NANO TECHNOLOGIES

- Internal, implanted therapeutic devices
- Diagnostic in vitro
- Bionanotechnology, biosensors, biomems and lab-on-a-chip devices
- Therapeutic nanoconjugates and drug delivery systems
- Electrical fields at the cell and protein scale

MOLECULAR, CELLULAR AND TISSUE ENGINEERING AND BIOMATERIALS

- Biomaterials cell interactions
- Scaffolds in tissue engineering
- Biomimetic, bioinspired and patterned biomaterials
- Stem cells in regenerative medicine

NEURAL AND REHABILITATION ENGINEERING

- Neural interfaces and regeneration
- Brain computer / machines interfaces
- Brain physiology and modelling
- Neural signal processing
- Rehabilitation engineering and wearable technologies

BIOMECHANICS, ROBOTICS AND MINIMAL INVASIVE SURGERY

- Cardiovascular Fluid Mechanics / Respiratory Biomechanics
- Prosthetic biomechanics / Rehabilitation robotics
- Robot-aided surgery
- Image-guided surgery
- Minimal invasive surgery and interventions
- Sports biomechanics and human performance

CARDIOVASCULAR, RESPIRATORY AND ENDOCRINE SYSTEMS ENGINEERING

- Cardiac and respiratory mechanics, function, modeling and control
- Vascular disease, mechanics and hemodynamics
- Cardiovascular and pulmonary signal processing
- Cellular and molecular cardiorespiratory engineering
- Endocrine systems, function, modeling and control
- Artificial organs
- Cardiac instrumentation and wearable technologies

CLINICAL ENGINEERING

- Clinical engineering and health technology management
- Health technology policy and assessment
- Safety and human factors engineering for medical devices and systems
- Social, societal and ethical implications of computing and networking (Compunetics) in medicine and biology / Patient empowerment

HEALTH INFORMATICS, E-HEALTH, TELEMEDICINE AND INFORMATION TECHNOLOGY IN MEDICINE, BIOINFORMATICS

- Wireless health technologies and body sensor networks, participatory and personal health systems
- mHealth, eHealth
- Telemedicine
- Ambient assisted living, smart homes
- Health information management, electronic health record
- Knowledge discovery and management for personalized health, decision support methods and systems
- Bioinformatics, biomedical informatics, computational biology, synthetic and systems biology

IMPORTANT DATES

Proposal of Special Sessions:
March 1st 2013

Paper submission:
April 26th 2013

Notification of paper acceptance:
June 14th, 2013

Final accepted paper submission:
June 28th 2013

Publication

Conference Proceedings will be published within the *IFMBE Proceedings series* (Springer)

Journals

The following journals will publish a special issue with extended manuscripts from selected papers submitted to the conference:

IEEE Journal on Biomedical and Health Informatics

Micro and Nanosystems Journal

Indexing

The proceedings will be indexed in the following scientific databases: ISI, INSPEC, SCOPUS

Contributed papers

Each contribution must be prepared according to the IFBME Proceedings Series format. Manuscripts should be up to four (4) pages long and should be submitted electronically in their final form before the paper submission deadline, including an abstract, no longer than 300 words. Submissions must include the title of the paper, each author's name and affiliation, the suggested topics in which the paper falls, and the IFBME copyright transfer form. Check the conference website (www.medicon2013.com) for specific information on the electronic submission process, detailed publication guidelines and templates. All papers will be peer-reviewed by at least three reviewers from the Scientific International Committee under the supervision of the International Program Committee. They will be judged with respect to their quality, originality, and relevance.

Special Sessions & Workshops

Prospective organizers are invited to submit proposals for special sessions or workshops to the conference technical secretariat e-mail address (medicon2013@pacifico-meetings.com) by March 1st, 2013. Proposals must include a topical title, rationale, session/tutorial outline, contact information, and a description of how the session/tutorial will be organized.

Student Paper Competition

Papers selected for platform sessions can join the student paper competition provided that the first author of the paper is a student following a full undergraduate or PhD program, register for the conference and make the presentation. Prospective authors should express their will upon paper submission and the papers will qualify for one of three awards selected from the finalists.

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The site for the Conference is the Meliá Sevilla Hotel (<http://www.melia.com/hotels/spain/seville/melia-sevilla/index.html>), in Seville, the capital of Andalusia. Seville has evolved as a melting pot of cultures with an unparalleled artistic heritage as a consequence of its milenary history. Together with its being a key touristic destination, currently it is a modern city with an outstanding projection at the technological research and industry levels, and biomedical research.

MEDICON 2013 incorporates the XXXI Annual Meeting of the Spanish Society of Biomedical Engineering (CASEIB).

The Conference is organized by the Spanish Society of Biomedical Engineering (SEIB) under the sponsorship of the IFMBE and the University of Sevilla. The IEEE Engineering in Medicine & Biology Society (IEEE-EMBS) is a technical co-sponsor of the Conference.

For any queries, contact the technical secretariat: GRUPO PACÍFICO | Benito Mas y Prat, 5 - 1ª, Oficina 9 | 41005 Sevilla | Tel. (34) 902.108.542 - (34) 954.98.16.81 | Fax. (34) 954.581.200 | medicon2013@pacifico-meetings.com