

UCBM: IEEE BioRob 2012

IEEE International Conference on Biomedical Robotics and Biomechatronics June 24-28, 2012 Roma, Italy Sponsored by IEEE Robotics and Automation Society & IEEE Engineering in Medicine and Biology Society

[Call for Papers](#)

The fourth IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics - BioRob 2012 - is a joint effort of the two IEEE Societies of Robotics and Automation - RAS - and Engineering in Medicine and Biology - EMBS.

BioRob covers both theoretical and experimental challenges posed by the application of robotics and mechatronics in medicine and biology. The primary focus of Biorobotics is to analyze biological systems from a "biomechatronic" point of view, trying to understand the scientific and engineering principles underlying their extraordinary performance. This profound understanding of how biological systems work, behave and interact can be used for two main objectives: to guide the design and fabrication of novel, high performance bio-inspired machines and systems, for many different applications; and to develop novel nano, micro-, macro- devices that can act upon, substitute parts of, and assist human beings in prevention, diagnosis, surgery, prosthetics, rehabilitation and personal assistance.

The technical program of IEEE BioRob2012 will consist of invited talks, special sessions, posters, and paper presentations. Papers can cover areas of Biorobotics and Biomechatronics including:

- Technology for assisted surgery and diagnosis
- Rehabilitation and assistive robotics
- Micro/nano technologies in medicine and biology
- Prosthetic devices
- Wearable assistive and augmenting devices

- Biological systems modeling
- Biologically-inspired systems
- Biomechatronic and human-centred design
- Human-machine interaction
- Locomotion and manipulation in robots and biological systems
- Neuro-robotics
- Technology Assessment, Ethical and Social Implications of Biorobotics and Biomechatronics

Symposium on Surgical Robotics (June 24, 2012 – June 25, 2012): As part of the BioRob 2012 program, there will also be a two-day single track Symposium on Surgical Robotics with a dinner banquet on June 24th, 2012. The Symposium will comprise of invited speakers, regular paper presentations and poster session(s), and will be held at the same venue as BioRob 2012.

Papers Submission:

- 1) Author(s) submitting papers to the BioRob 2012 conference should submit 6-page full papers electronically in double column IEEE compliant PDF format. All papers will be peer-reviewed. Accepted papers will have a choice for oral and/or poster presentations, and will be published in CD-ROM. Posters will be displayed throughout the conference and Poster/Interactive Sessions will be scheduled for author/audience interaction.
- 2) Author(s) who would like their paper also to be considered for the single-track Surgical Robotics Symposium should use the code “ix976” when they upload their paper. Regular papers submitted to the Surgical Robotics Symposium are limited to 6-pages in the double column IEEE compliant PDF format and they will undergo the same peer-review process as papers submitted to BioRob 2012. Author(s) who wish to submit a poster contribution to the Surgical Robotics Symposium, should submit a 2-page paper for review in the double column IEEE compliant PDF format (Surgical Robotics Symposium poster papers will not be published in IEEE Xplore, but will be made available on the BioRob 2012

website).

To submit a contribution, please go to ras.papercept.net

The Conference welcomes proposals for special sessions, workshops, tutorials, symposia.

Venue: The venue for the conference is downtown Rome (walking distance to Piazza Venezia, same venue as ICRA 2007), one of the most beautiful cities in the world where art meets with history and progress. Rome is easily accessible from all over the world by two International airports (Leonardo da Vinci – Fiumicino and Ciampino), high-speed railway and highway.

IMPORTANT DATES!

- January 31, 2012 : Submission of full papers, Special sessions and workshop proposals
- March 31, 2012: Paper acceptance notification
- April 30, 2012: Final paper submission