



# Call for Papers

IEEE

IEEE TRANSACTIONS ON ROBOTICS

## Special Issue on Bio-Robotics

The increasing number of applications of robotics and mechatronics in biomedicine as well as the growing interest in biological inspiration for the development of artificial systems are posing new and challenging theoretical and technological problems. A deep reconsideration of models and technologies adopted for the design and fabrication of current bio-inspired robots and bio-mechatronic devices is very important for further progress. The main objective of *Bio-Robotics* is to investigate the working principles of biological systems from a biomechatronic viewpoint and to exploit this knowledge in order to develop methodologies and innovative technologies for the design and fabrication of bio-inspired machines and systems, characterized by different sizes (from macro to micro and nano) and with advanced performance (e.g., humanoids and animaloids). The focus of this Special Issue of the *IEEE Transactions on Robotics* (T-RO) is to show the main achievements on different technical topics relevant to the development of bio-inspired mechatronic devices and robotic systems. Engineering aspects of the development of bio-mimetic and bio-inspired machines will be also considered.

### Topics

Papers are solicited on bio-robotic systems, especially for those that may potentially inspire and promote the exchange of knowledge between biologist and engineers, including but not limited to the following:

- Humanoids & Animaloids
- Neuro-robotics
- Bionics
- Biomechatronic robot design
- Biomimetic robotic systems
- Bio-inspired sensory-motor coordination
- Bio-inspired learning in robots
- Biomechatronic devices for surgery, endoscopy, rehabilitation and assistance

### Important dates:

<b>October 1, 2006:</b>	Call for Papers
<b>January 31, 2007:</b>	Deadline for Paper Submission
<b>May 31, 2007:</b>	Completion of First Review
<b>September 30, 2007:</b>	Completion of Final Review
<b>February 2008 (tentative):</b>	Publication

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*Co-Chairs of the IEEE-RAS Technical Committee on Bio-Robotics*

### Submission and Review of Papers:

Submission procedures can be obtained from the T-RO web site <http://www.dis.uniroma1.it/ieetro>. Papers submitted to the Special Issue will undergo the usual reviewing process of T-RO. For further information on this Special Issue, please refer to the web site of the IEEE-RAS TC on Bio-Robotics at <http://thth.berkeley.edu/tab-db/>.