



**The 43rd Annual Conference of the IEEE Industrial Electronics Society
China National Convention Center, Beijing, China
October 29 - November 1, 2017**

**Special Session on
Bioinspiration and Robotics: Systems, Techniques and Intelligence
Organized and Co-chaired by:**

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Call for Papers

Outline of the Session

The special session aims to bring researchers in the evolving field of Bioinspiration Robotics and Technology with its focus on new trend field of Intelligent and Autonomous Robotics. Autonomous and Intelligent Systems that are inspired by nature and able to adapt to different environment, task while autonomously navigate and adapt their behaviors in using intelligent mechanisms, techniques and algorithms, smart trends in sensors and actuators, artificial perception and sensor fusion, and intelligence. It is important to mention that biologically inspired intelligent robots require understanding the nature evolution and different biological models as well as advancements in different interdisciplinary areas of research. Bioinspiration and Intelligent Robotics research approach incorporate materials and techniques drawn from naturally made substances, and resemble biological systems in structure and/or function as relevant. The evolving merging interdisciplinary field of Bioinspiration and Intelligent Robotics focuses on making nature as a model of inspiration that would immensely: Help conscious abstraction of new principles and ideas; Foster innovative design collections; Find out new techniques and functionalities; Seek new paradigms and intelligent & efficient methods; Develop new materials, sensors and actuators at nature's scale; Design new streams of intelligent machines, mechanisms, robots, systems, devices, algorithms, etc.

Topics of the Session

- Biomimetic and Control Techniques
- Bioinspiration and Autonomous Robotics
- Biomimetics: Mapping, Localization and Dynamic Environments
- Bioinspiration and Autonomous Robotics Architectures
- Bioinspiration: Actuators and Sensors for Intelligent Robotics
- Bioinspiration and Learning Techniques
- Biomechatronics and Navigation Techniques
- Bioinspiration and Smart Sensors
- Bioinspiration and Intelligence
- Bioinspiration and Artificial Life

**Author's schedule: Deadline for submission of special session papers
Notification of acceptance
Deadline for submission of final manuscripts**

**April 17, 2017
July 3, 2017
August 15, 2017**

All the instructions for paper submission are included in the conference website: www.iecon2017.com