

**MECHATRONICS***Call for Papers***Focused Section on
Electroactive Polymer Mechatronics**

Mechatronic devices and systems based on so-called ElectroActive Polymers (EAP) represent a fast growing and promising scientific field of research and development. EAP consist of materials capable of changing dimensions and/or shape in response to suitable electrical stimuli. They are commonly classified in two major families: ionic EAP (activated by an electrically-induced transport of ions and/or molecules) and electronic EAP (activated by electrostatic forces). These polymers show interesting properties, such as sizable active strains and/or stresses in response to electrical driving, high mechanical flexibility, low density, structural simplicity, ease of processing and scalability, no acoustic noise and, in most cases, low costs. EAP are today studied for applications that so far have been precluded to conventional actuation technologies; uses span from the micro- to the macro- scale, in several fields, including robotics, automation, prosthetics, orthotics, artificial organs, optics, energy harvesting and even aerospace. After several years of basic research, today the EAP field is just starting to undergo transition from academia into commercialization, with companies starting to invest in this technology. In an effort to disseminate current advances enabled by EAP, a focused session in this area will be published by IEEE/ASME Transactions on Mechatronics (TMECH). Papers are solicited on all aspects of Electroactive Polymer Mechatronics, including materials, devices, modelling, control, conceptual design and characterisation, reliability, fabrication, technological and research challenges, applications and so on.

Manuscript preparation:

Papers must contain original contributions and be prepared in accordance with TMECH standards. Instructions for authors are available online at: <http://www.ieee-asme-mechatronics.org>

Manuscript submission:

Manuscripts should be submitted through the online submission service available at:

<http://mc.manuscriptcentral.com/tmech-ieee>.

The cover letter should report the following statement: “*This paper is submitted for possible publication in the special issue on Electroactive Polymer Mechatronics*”. All manuscripts will be subjected to the peer review process. If you have any question relating to this Focused Section, please email one of the Guest Editors.

Important dates:

Paper Submission	April 1, 2010
Completion of First Review	July 1, 2010
Submission of Revised Papers	August 15, 2010
Completion of Final Review	October 1, 2010
Submission of Final Manuscripts and Copyright Forms	November 1, 2010
Publication	February 2011

Guest Editors:

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