

**Call for Papers****Focused Section on  
Mechatronics for Sustainable and Resilient Civil Infrastructure**

Sustainability and resilience of large-scale civil infrastructure are of utmost importance concerning human society and our daily lives. The demand has also created enormous areas of application for mechatronics. For example, in the past few decades, intelligent machinery (with field bus control network, GPS positioning and measuring, load-sensing energy type of electro-hydraulic control, sensors, field robotics, and smart materials in field and service) has played an important role in construction and active maintenance of large-scale bridges, highway, high-speed railways, etc. As another example, the safety inspection of large civil structures has also adopted a variety of advanced inspection techniques (such as bio-inspired robot inspection, image based structure inspection, optimization of sensor network, and multi-sensor data fusion). Furthermore, the combination of mechanics, electronics, and computing has also thrust a significant amount of work in smart structural technologies, e.g. sensing and feedback vibration control of civil structures during dynamic excitations. In an effort to disseminate current advances of various mechatronics technologies for large civil structures, a focused session in this area will be published in IEEE/ASME Transactions on Mechatronics (TMECH). Papers should contain both theoretical and practical/experimental results and will be subject to TMECH review procedures. Potential topics include but are not limited to:

- Mechatronics in construction machinery
- Measurement technology and data fusion of multi-sensor for civil structures
- Smart sensory and driven materials in intelligent structures
- Mobile sensor network and robotic inspection for civil structures
- Prognostics and health monitoring of large civil structures and construction machinery
- Damage repair and emergency handling control of large civil structures
- Novel actuation, transmission, and control techniques for construction machinery and construction automation
- Sensing and feedback vibration control of structures

**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 focused section on Mechatronics for Sustainable and Resilient Civil Infrastructure.*” 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	December 15, 2012
Completion of First Review	March 15, 2013
Submission of Revised Papers	May 1, 2013
Completion of Final Review	June 15, 2013
Submission of Final Manuscripts and Copyright Forms	July 15, 2013
Publication	December 2013

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