

**Call for Papers****Focused Section on
Marine Mechatronic Systems**

The marine environment plays a critical role in our ecosystem, economy and daily lives. As we increase our reliance on oceans and waterways for new resources and expanding civil, commercial and scientific activities, we are faced with a need for highly capable mechatronic systems capable of performing in this environment. Marine mechatronic systems are used for a wide range of applications, such as exploring the extreme depths of our ocean, harvesting resources ranging from food to oil, monitoring our environment, supporting national defence operations, transporting goods, and supporting recreational activities. While doing this, these systems operate in a demanding environment with challenges such as intense hydrostatic pressures, harmful interaction with electronics and materials, powerful hydrodynamic forces, and high attenuation of electromagnetic signals. This Focused Section of the IEEE/ASME Transactions on Mechatronics is dedicated to new advances in the modeling, analysis, design, control, implementation and operation of mechatronic devices and systems operating in the marine environment. Papers should contain both theoretical and practical/experimental results and are subject to the TMECH review procedures. Potential topics include but are not limited to:

- Novel platforms, including moorings, buoys, ships, tethered and untethered underwater robots, and gliders
- Fleets, clusters, and formations of surface and underwater robotic vehicles
- Novel components and technologies as well as advanced control and automation strategies
- Seafloor observatories and distributed sensor networks
- Environmental monitoring and characterization systems
- Disaster monitoring and mitigation systems
- Deep-sea measurement, sampling, and drilling systems
- Systems for energy harvesting and flow containment
- Systems for *in situ* sensing, sampling and analysis and environmental perturbation experiments
- Systems for inspection, remote observation, and physical intervention

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 Marine Mechatronic Systems*”. 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, 2011
Completion of First Review	July 1, 2011
Submission of Revised Papers	August 15, 2011
Completion of Final Review	October 1, 2011
Submission of Final Manuscripts and Copyright Forms	November 1, 2011
Publication	February 2012

Guest Editors:

CHRISTOPHER KITTS
Santa Clara University, USA
ckitts@scu.edu

YING CHEN
Zhejiang University, China
ychen@zju.edu.cn

STEFAN WILLIAMS
University of Sydney, Australia
stefanw@acfr.usyd.edu.au

BRIAN BINGHAM
University of Hawaii, USA
bsb@hawaii.edu

WILLIAM KIRKWOOD
Monterey Bay Aquarium Research Institute, USA
kiwi@mbari.org

GWYN GRIFFITHS
National Oceanography Centre, UK
g.griffiths@noc.soton.ac.uk