

## IET Control Theory & Applications Call for Papers

### SPECIAL ISSUE ON:

### Implementation of Feedback Controllers on Special-Purpose Hardware

There is intense interest in applying complex controllers to 'fast' systems, including aerospace, automotive, large electric motors, and paper-making machines. The bottleneck problem which impedes application in such areas is often the computational speed of the on-line computations that are required. There is therefore growing research activity into implementation of feedback controllers on specialised hardware, such as FPGAs or GPUs. Much of the interest comes from the demand for Model Predictive Control (MPC), but this special issue will not be confined to applications of MPC.

The aim of this special issue is to give a broad perspective of the state-of-the-art on the subject, to provide the community with an up-to-date account of recent advances in the hardware implementation of controllers, to showcase some of the current work, and to delineate new challenging research directions. The special issue is open to both theoretical and practical aspects of hardware implementation of controllers.

Descriptions of successful applications in all relevant scientific and engineering disciplines (including automotive, aerospace, biomedical and environmental science) are also strongly encouraged. Tutorial papers introducing digital system design issues relevant to fast implementations are also welcome.



All papers must be submitted through the journal's Manuscript Central system:  
<http://mc.manuscriptcentral.com/iet-cta>

#### Proposed publication schedule:

**Deadline for submission of  
papers:** 01 August 2010

**Authors to receive a  
1st decision by:**  
31 December 2010

**Final notification of acceptance:**  
01 April 2011

**On-line and print publication:**  
Mid/late 2011

#### Special issue guest editors:

**Jan Maciejowski**  
University of Cambridge, UK

**Keck-Voon Ling**  
Nanyang Technological University, Singapore

#### IET Publishing Dept. contact:

**Miss Joanna Lawrie**  
(IET Control Theory & Applications  
Editorial Assistant)  
**E:** [jlawrie@theiet.org](mailto:jlawrie@theiet.org)