***Measurement and Control***

Special Collection on Advanced Control of Systems Having Magnitude and Rate Bounded Actuators/Sensors

**To have your paper considered for this Special Collection, submit by 31 December, 2020.**

Please review the [Manuscript Submission Guidelines](https://uk.sagepub.com/en-gb/eur/journal/measurement-and-control#submission-guidelines) before submitting your paper.

[Click here to submit your paper.](https://mc.manuscriptcentral.com/jmac)

**Lead Guest Editor:**

**Dr Ibrahim Kucukdemiral**
*Glasgow Caledonian University, UK*
ibrahim.kucukdemiral@gcu.ac.uk

**Guest Editors:**

**Dr Geraint Bevan**
*Glasgow Caledonian University, UK*
geraint.bevan@gcu.ac.uk

**Overview**

Almost all practical systems in industry are dominated by physical constraints. Unfortunately, in most cases, these constraints are ignored in the design of control systems. One of the most commonly encountered constraints in engineering is the one that is relevant to actuators. The magnitude, and especially rate bounded actuators, are very common, even inevitable in control systems and identified as a source of severe performance degradation or instability in many applications including aerospace and transportation systems, particularly those having mechanical actuators. They may cause fatal effects in several situations such as the crash of YF-22 in 1992, which has been caused by pilot-induced oscillations due to rate saturated control surfaces. Other examples in which the magnitude and rate bounded actuators are a source of performance degradation and instability can be listed as jet engine compressors, general reaction processes with sluggish actuators and rudders and fins of ships. However, as opposed to the broad literature on the control of systems considering only the magnitude bounded actuators, the research work on the control of systems having both magnitude and rate bounded actuators is somewhat shallow. The aim of this special issue is to seek high-quality submissions that highlight advances and applications of control techniques for systems having both magnitude and rate bounded actuators.

The potential topics of this special issue include, but are not limited to:

* Continuous/Discrete-time
* Linear Parameter Varying (LPV) control,
* Nonlinear control,
* Optimal control
* Gain-scheduling control,
* Adaptive control,
* Intelligent control,
* Robust Model Predictive control,
* Iterative and learning control,
* Repetitive control,
* Fractional order control,
* Set theoretic methods in control, of linear/nonlinear processes having magnitude and rate bounded actuators and/or sensors

The submitted manuscripts for this Special Collection will be peer-reviewed before publication.

[Submit your paper.](https://mc.manuscriptcentral.com/jmac)

Please submit your paper according to the following timetable for the Special Collection:

**Manuscript Deadline**

31 December, 2020