

Special Issue on **Mathematical Theories and Applications for Nonlinear Control Systems**

CALL FOR PAPERS

Nonlinear control is without doubt a very popular research field in modern control theory. Compared with linear systems, nonlinear control has a greater number of practical applications and exhibits a greater degree of complexity. Although nonlinear control theory and application have made great progress in recent years, there are still many existing problems—and indeed new challenges—in the areas of theory analysis and applications, which are yet to be solved. These cover the fields of multiobjective control, design of regulating and tracking systems, fault estimation, nonlinear robust H infinity control and filtering, and stability and stabilization amongst others.

These problems merit further study with the use of more advanced mathematical theories and tools. As such, we now welcome interested authors from across the discipline to submit relevant articles to this Special Issue. To reflect the most recent advances, we hope to attract original research articles with a focus on nonlinear control systems together with their applications to control, filtering, communication, manufacturing, fault detection, and systems biology. Focused review articles that describe the latest advances are also welcomed.

Potential topics include but are not limited to the following:

- ▶ Stability and stabilization in nonlinear systems
- ▶ Modelling, simulation, and identification in nonlinear systems
- ▶ Discussion and evaluation of competing solutions for problems in nonlinear systems
- ▶ Robust control design for nonlinear systems
- ▶ Coordinated control of multiagent systems
- ▶ Optimal/near-optimal/adaptive control of nonlinear systems
- ▶ Consensus and synchronization of nonlinear systems
- ▶ Nonlinear filtering and estimation
- ▶ Nonlinear variable structure and sliding mode control design
- ▶ Nonlinear compensation and design
- ▶ Nonlinear multiobjective optimization
- ▶ Applications of nonlinear control theory to finance, economics, insurance, real estate, manufacturing systems, fault detection, networked control systems, power systems, and so on

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/mpe/nsta/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Special Issue Editor in Chief

Xue-Jun Xie, Qufu Normal University,
Qufu, China
xuejunxie@126.com

Guest Editors

Ju H. Park, Yeungnam University,
Kyongsan, Republic of Korea
jessie@ynu.ac.kr

Hiroaki Mukaidani, Hiroshima
University, Hiroshima, Japan
mukaida@hiroshima-u.ac.jp

Weihai Zhang, Shandong University of
Science and Technology, Qingdao,
China
w_hzhang@163.com

Submission Deadline

Friday, 7 September 2018

Publication Date

January 2019