

Call for Papers for Control Engineering of China *Special Issue on “Control Systems Engineering”*

Control systems contribute to every aspect of modern society. In our life control systems exist in almost everywhere such as toasters, VCRs and smart phones. In science and technology, control systems already have widespread applications, for example, steering ships, guiding missiles and driving driverless cars in the near future. In all the control systems, systems are the key platform where control should be put into. It is at the system level that control shows its values. Extracting and formulating control problems in the system is equally important if not more important than control algorithm design based on the formulated control problem. In the age of IoT (Internet of Things), a control system in industry is usually both “cyber” and “physical”. Control is only a small component within the cyber-physical systems and should be driven by the underlying systems.

This special issue is designed to focus on “Control Systems Engineering” with a balanced emphasis on “control”, “systems”, and “engineering”. It is our hope that this special issue is a beginning to start to bring “systems” back into “control” and implement “control algorithms” into “engineering systems”.

Scope of this Special Issue

The focus will be on systems and the derived control problems and solutions. Topics of interest include, but are not limited to the following:

- a) Process control systems
- b) Integrated automation systems
- c) Monitoring systems
- d) Motion control systems
- e) Computer control systems
- f) Intelligent control systems
- g) Energy systems

The prospective contributions are expected to address the following basic “Control Systems Engineering” questions (as many as possible):

- What is the real world need for such “controlled system”?
- What is the control system architecture? How to address the controllability issues of such systems?
- What are the control objectives?
- What are the controller design challenges?
- What are the modeling efforts to meet the controller design challenges?
- What are controller design options? Why a specific controller is adopted? How many tuning knobs are left for site engineers and the tuning guideline?
- What should be aware of and what issues could be encountered during implementation?
- What should be aware of and what issues could be encountered during operation in terms of system performance?
- What issues could be caused during life-cycle?
- What should be avoided when knowledge/experience-based database is available?
- What should be considered in terms of system robustness when trying to optimize certain indices we care?

- How to make such control systems reliable in terms of external/internal disturbances?
- How to maximize the profits and at the same time minimize cost?

Guest Editors

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Important Dates

Aug. 31, 2015, Submission Deadline

Nov. 10, 2015, Notification of Acceptance

Nov. 30, 2015, Final Manuscript Submission

Jan. 20, 2016, Expected Publication Date

Submission of Manuscript

Papers should be prepared in English or Chinese within 6-10 pages, and should be submitted on the journal website <http://www.kzgc.com.cn> and conform to the guidelines listed there. Manuscripts should be clearly stated in the cover letter as being submitted to the Special Issue on “Control Systems Engineering”. After submission, please forward the receipt of acknowledgement email to both xxia@up.ac.za (X. Xia) and ychen53@ucmerced.edu (Y. Chen).

Control Engineering of China

Editor-in-Chief: Prof. Chai, Tianyou

Journal of Control Engineering of China is directed by the Ministry of Education and sponsored by Northeastern University. Readers are assumed mainly as researchers, professors, engineers, and post- and undergraduate students in the field of automatic control science and technology. The journal publishes bimonthly high-quality papers in either Chinese or English on technological research and development achievements in automation field. The coverage of this journal includes but is not limited to (1) Integrated automation systems; (2) Process control technology and applications; (3) Intelligent control technology and applications; (4) Optimization control technology and applications; (5) Manufacturing execution system; (6) Computer control system and software; (7) Fault diagnosis; (8) Electrified transmission and automation; (9) Integration of mechanical and electrical; (10) Device of detection and monitoring.