

Editorial

Automation: A New Open-Access Journal with a Broad Scope and an Exciting Mission

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It is a sincere pleasure to welcome you to the inaugural issue of *Automation*. *Automation* is dedicated to the dissemination of rigorously peer-reviewed publications on automation, control, and allied topics.

The launch of this journal is truly exciting. It brings much promise and much opportunity for making and disseminating contributions that advance automation and control, as well as their connections and interactions with many other areas, including but not limited to, communications, system identification, optimization, network science and the internet, computing, artificial intelligence and machine learning, and the modeling and harnessing of man–machine interaction. The journal aims to publish methods and technologies that are at the forefront of knowledge, and indeed that advance our knowledge in fundamental ways.

The name *Automation* hints that the journal's focus stretches beyond fundamental advances in theory, modeling, and design of automated systems. The journal also stresses application-motivated research advances in automation and control. Advances in allied areas such as computing, communications, energy systems, sensor networks, manufacturing, and in the modeling of human–machine interactions bring fascinating opportunities for the field of automation. These opportunities need to be harnessed if Society is to achieve new integrated automation technologies and systems that can help to significantly improve the human condition.

Many critical applications await major advances at the forefront of interdisciplinary knowledge in automation and control. Through such advances, the research and development community can make major inroads in many areas that are of great importance for Society, such as energy systems, transportation, the environment, commerce, manufacturing, medical care, water purification, food and agriculture, disaster avoidance and response, and education. The fields of automation and control can also contribute to facilitating fundamental advances in other disciplines, such as in communications, networks, and machine learning. These advances will in turn have major implications through multiplier effects that occur, due to the strong interdependence of technologies in modern systems.

As an open access journal, *Automation* aims to provide high visibility and a timely research impact, and is committed to rapid publication. The outstanding systems and staff that MDPI have developed over the years facilitate achieving the timely and high-quality review of submitted articles, and online publication allows rapid dissemination. The journal provides a venue for both specialized and multi-disciplinary research on automation and control and their applications.

Automation publishes full research papers, communications, and review articles. There is no restriction on the length of papers and no additional charges for color figures, etc. The journal allows the deposit of electronic files as supplementary materials, supplying details of calculations and of experimental procedures.

The scope of the journal is summarized next.

Automation covers a broad range of areas, such as studies related to the following topics:

- Control theory
- Optimization algorithms
- Networked systems
- System condition monitoring
- Manufacturing systems
- Energy management systems
- Aerospace control systems
- Micro- and nano-systems
- Learning systems
- Intelligent control systems
- Artificial neural networks
- Motion control and sensing
- Supervisory control and data acquisition
- Process automation and monitoring
- Fault detection and diagnosis
- Sensors and signal processing
- Robotics and applications
- Human-machine systems and interfaces
- Devices and instruments

We are very pleased to have recruited an outstanding and growing editorial board, comprised of highly accomplished experts in automation and control. I look forward to working with this distinguished team in the coming years to establish *Automation* as a leading journal with a unique and valuable mission.

I also look forward to hearing from you, our readers and authors, and working with you toward achieving the journal's goals. Together, we can advance fundamental knowledge and develop innovative applications that will make a difference in technology and Society.

I can be reached through the Editorial Office (automation@mdpi.com) or at my university email address, abed@umd.edu. If you write me at the latter address, please include the word *Automation* in the subject line of email messages that concern the journal.

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