Journal of Industrial Electronics & Applications

Editorial

A SCITECHNOL JOURNAL

Industrial Electronics as a Separate Engineering Field

Stelios M. Potirakis*

Abstract

Industrial electronic systems are differentiated from other electronic systems mainly based on their application, which is usually related to industrial and manufacturing processes, while this differentiation sometimes refers to their ruggedized design and components. This is an attempt to refer both to the discrete character and the broadness of the engineering field of industrial electronics, roughly describing the orientation of the new journal, Journal of Industrial Electronics and Applications.

Keywords

Industrial electronics; Research and development

Introduction

Journal of Industrial Electronics and Applications is a new journal in the engineering field of industrial electronics which is launched aimed at advancing and disseminating high quality novel research as well as innovative practical developments in the wider field of industrial electronics. Peer review and strict scientific criteria during the review process ensure the high quality of the published articles and contribute to building a good reputation for this new journal. However, the success of a scientific journal is also highly depended on the timeliness of the published articles and the time from submission to publication [1-4]. Technology is developing at such a high rate that it requires the rapid communication of innovative research and development results. The value of the published articles is dependent on the importance of their contents but this importance is also dependent on the solutions offering to current scientific/engineering problems, defining thus the timeliness. In this sense, one of the main aims of this new journal is also to provide topical articles reaching the readers in short time.

However, an important question is to whom is this new journal addressing to, or which kinds of research and development could be effectively communicated through this new journal. This question is effectively referring to the definition of industrial electronics and their applications. Industrial electronic systems are differentiated from other electronic systems mainly based on their application, which is usually related to industrial and manufacturing processes, while sometimes this differentiation refers to their ruggedized design and components [5]. In this sense the engineering field of industrial electronics is very broad and multidisciplinary, including various, even quite disparate, topics. Journal of Industrial Electronics and Applications primarily focuses on the topics that include but are not limited to control systems and applications, power and feedback electronics, electrical machines and drives, power grid monitoring and synchronization, mechatronics and robotics, sensors and actuators, systems integration, factory automation, informatics and computational intelligence, information processing and communications, signal and image processing, automotive technology, instrumentation, fault detection and diagnosis, measurement and testing, modeling and simulation, etc. An article presenting theory, or applications, or case studies, or tutorials in any of the above fields, and even more, referring to industrial applications is in principle considered appropriate for possible publication to this new journal. Therefore, beyond anything else, the usefulness of an article's contents for industrial applications should be explicitly mentioned either the article focuses, for example, on circuit analysis, or control, or signal processing, or communications.

Is industrial electronics a discrete engineering field? This is another important question, which could be rephrased to: "is it meaningful for a journal to focus on industrial electronics"? The answer is yes. One main reason is that industrial applications call for a number of special design solutions and properties for the involved electronics which would not be necessary in similar non-industrial applications. Another important reason is exactly the multidisciplinary character of industrial electronics engineering which calls for ingredients from seemingly disparate disciplines to be combined in order to achieve an efficient industrial electronics application. This is the reason why not only other journals are already successfully focusing on the specific field [5] but also there are curricula in modern engineering education which also focus on industrial electronics engineering [6-10].

Journal of Industrial Electronics and Applications is welcoming high quality, unpublished, work within the abovementioned framework, while aspires to play a key role in shaping research and development in the field of industrial electronics and quickly be acknowledged by readers, achieving a high visibility for its articles.

References

1. Bo-Christer B, Solomon D (2013) The publishing delay in scholarly peer-reviewed journals. J Informetrics 4: 914-923.
2. Acero A (2014) At the forefront in technical publications. IEEE Signal Proc Mag 4: 6.
3. Powell K (2016) The waiting game. Nature 530: 148-151.
4. Toroser D, Carlson J, Robinson M, Gegner J, Girard V, et al. (2017) Factors Impacting Time to Acceptance and Publication for Peer-reviewed Publications. Curr Med Res Opin 7: 1183-1189.
5. Al-Haddad K (2016) Promoting Industrial Electronics Engineering. IEEE Indust Electron Mag 2: 4-5.
6. Drazen D (2017) Industrial electronics I. Swiss Federal Institute of Technology, Lausanne.
7. Drazen D (2017) Industrial electronics II. Swiss Federal Institute of Technology, Lausanne.
8. Lewis-Clark State College (2017) Industrial Electronics Tech.
9. Polytechnic University of Catalonia (2017) Bachelor's degree in Industrial Electronics and Automatic Control Engineering.
10. University of Valencia (2017) Degree in Industrial Electronic Engineering.

***Corresponding author:** Stelios M. Potirakis, Department of Electronics Engineering, Piraeus University of Applied Sciences (TEI of Piraeus), 250 Thivon and P. Ralli, Aigalao, Athens GR-12244, Greece, Tel: +30.210.538.1550; E-mail: spoti@puas.gr

Received: August 10, 2017 **Accepted:** August 23, 2017 **Published:** August 30, 2017

Author Affiliation Top

Piraeus University of Applied Sciences (TEI of Piraeus), Athens GR, Greece