

Editorial

Evolution of a model journal in the era of digital revolution

The scientific journal *Integrated Computer-Aided Engineering* (ICAE) is approaching its 30th anniversary. For nearly three decades it has been promoting innovative multidisciplinary research with absolute consistency, maintaining the highest standards of quality without compromise. The scientific community has honored ICAE with its trust and with a very high impact factor. I wish to thank the Editor in Chief Professor Hojjat Adeli, for giving me the chance to write and publish this brief analysis. We are grateful for his invaluable contribution.

The recent flourishing of the 4th Industrial Revolution (4IR) is calling for interdisciplinary research efforts, aiming in the development of intelligent non-linear models applied in every real-life domain. ICAE is a leading journal for the dissemination of timely synergistic research efforts in the fields of Engineering and Information-Communication technologies. It opens new frontiers for solving complex problems to meet the needs of our post-modern 21st century societies.

A major part of the research papers published in the journal during the past three decades has been related

mainly but not limited to a wide spectrum of Artificial Intelligence (AI) algorithms and approaches. In the 4IR era, the technological developments in the field of Intelligent Information Systems are rapid and having a decisive impact on the respective engineering applications. And ICAE has been at the forefront of this developments.

The following Fig. ??, shows the frequency distribution of the topics covered by the journal's publications during the past two years (2018–2019). More specifically, 15 published papers are in the thematic area of *Image-Video Processing (IMVP)*, 12 are related to *Machine Learning (ML)*, 9 to *Robotics*, and 8 to *Optimization (OPT)*. It is of great importance that the ICAE journal also covers a wide spectrum of topics namely: *Big Data*, *Filtering*, *Control Systems*, *Autonomous Vehicles*, *Cognitive modeling and Bioinformatics*. ML publications are related to *Classification*, *Ensembles*, *Deep – Convolutional and Transfer Learning* algorithms with respective applications. On the other hand, OPT papers have employed Meta Heuristic approaches.

A comparison of the 2012–2013 article list with 2018–2019 article list shows many additional research

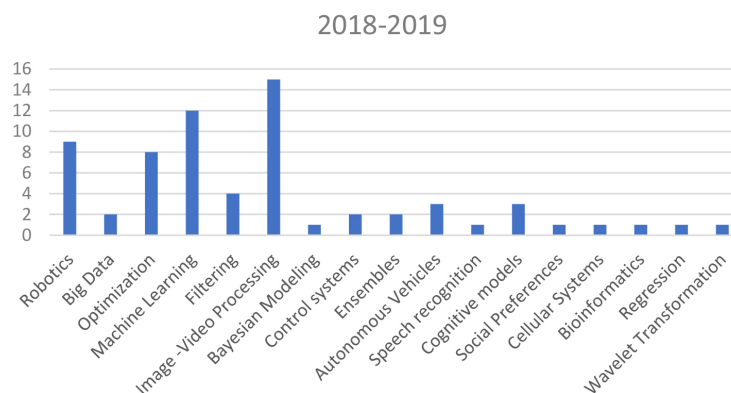


Fig. 1. Scientific domains for the period 2018–2019.

areas. This proves the journal's adaptability to the evolution of information sciences and the fact that it always publishes state of the art innovative research. The wide range of scientific areas covered by ICAE shows a high level of pluralism.

My experience as a member of the Editorial Advisory Board, is unique. I am very much impressed by the high academic standards defined by the distinguished Editor in Chief (EIC) Professor Hojjat Adeli. To the best of my knowledge it is one of the few scientific journals (if not the only one) that follows a unique 5-review process. This approach ensures that only the best innovative submissions of high quality are accepted.

The EIC Hojjat Adeli has a distinguished record of scholarly publication in many diverse areas such as Biomedical Engineering, Biomedical Informatics, Civil and Infrastructure Engineering, Electrical and Computer Engineering, Computer Science, Neurology, and Neuroscience among others. He has authored more than 600 scientific publications including 16 groundbreaking high-technology books. He has been honored for his outstanding achievements by many prestigious

awards all over the globe. He is a pioneer always looking forward, setting new paths in science and leading the way. He is widely recognized as a visionary and a renaissance man.

I express my warmest congratulations and my honest appreciation to the Editor in chief Professor Hojjat Adeli for his remarkable dedication to ICAE and exceptional contributions to the scientific committee over a long period of three decades. The global impact of the prestigious ICAE journal in the dissemination of science and its contribution for the inspiration of new research is and will remain outstanding.

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