Editorial
IEEE Transactions on Emerging Topics in Computational Intelligence

IT IS with great excitement that I welcome all readers to the inaugural issue of the IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI). TETCI is a recent Transactions launched by the IEEE Computational Intelligence Society (CIS), targeting a worldwide network of scientists, engineers, practitioners, and researchers who are interested in pushing the boundaries of machine intelligence capabilities forward in the quest to better tackle the complex real-world challenges of today.

TETCI has been conceived by the society to serve as a new platform for promoting the most promising scientific and technological advancements in computational intelligence, those that are likely to play a key role in shaping the future of the IEEE CIS and its activities. In particular, it is regarded that while the origins of the field mainly comprised of three familiar topics, namely, neural networks, fuzzy systems, and evolutionary computation, there are a variety of other notable techniques emerging on the horizon that are increasingly capturing our attention as effective generators of powerful machine intelligence. To this end, TETCI shall complement the existing peer-reviewed publications by embracing those emerging ideas and innovative scientific developments in computational intelligence that expand the scope of the field beyond topics that are already covered by the other IEEE CIS journals, thereby opening doors to a plethora of exciting opportunities for the creation of next-generation intelligent machines that are equipped to handle a multitude of practical problem-solving scenarios.

As suggested above, the focus of TETCI is not restricted solely to the theoretical and methodological advances of the foundations of computational intelligence. In fact, given the rapidly oncoming era of ubiquitous computing, Internet of Things, Smart-x technologies, etc., an interdisciplinary flavor is strongly encouraged in all submitted manuscripts by describing new and insightful real-world domains that may themselves shed light upon the growing space for machine intelligence. In line with the stated vision for TETCI, the first issue presents a compilation of original contributions from leaders in various technical communities that reflect the wide-reaching implications of the state-of-the-art in computational intelligence capabilities. Topics ranging from the pervasion of intelligent systems in creativity-driven music composition, to industrially pertinent settings involving large-scale cyber physical systems, smart distribution grids, and others, have been included to underscore the diversity that we seek as the hallmark of all future issues of TETCI.

I take this opportunity to invite original articles on any emerging aspect of computational intelligence, including theoretical contributions, noteworthy industrial applications, and surveys on matters that may not necessarily be tied down to the traditional inspirations of the field but must nevertheless result in or demonstrate effective machine intelligence. In addition, I welcome proposals for special issues targeting innovative conceptual themes within the scope of TETCI, as well as studies on impactful real-world domains wherein the potential utility of the latest developments in computational intelligence remain to be fully explored. A few such illustrative examples that are of interest to TETCI include glial cell networks, artificial endocrine and hormone networks, non-fuzzy computing with words, ambient intelligence, cultural learning, artificial life, etc.

In conclusion, I most eagerly look forward to establishing TETCI as the platform that advances emerging topics of computational intelligence with diverse implications for society. It is evident that such a community-building exercise is difficult, if not impossible, to be achieved by a single person. First and foremost, I would like to express my sincere appreciation to all the Associate Editors for their relentless efforts in maintaining a consistently high standard of the review cycle. Thanks are also due to all IEEE staff who have helped in setting up an efficient running of the TETCI backend. Further, it is indeed recognized that the quality and impact of a journal is not merely dependent on the Editor-in-Chief and the editorial board members, but also on the peer reviewers. Thus, I would like to extend my utmost gratitude to all the anonymous reviewers who continue to selflessly serve the field with their knowledge, rigor, and timely feedback. Finally, to all our readers who shall mold the fortune of TETCI, I welcome any feedback or suggestions on the journal that may assist us in ensuring future issues of the highest relevance.

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