
Editorial

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Biographical notes: Jingui Lu is a Professor in the CAD Center at Nanjing University of Technology, China. His research areas and expertise include computer-aided design and a variety of computational intelligence techniques such as genetic algorithm, neural network, and decision tree. He obtained his PhD, MS, and BS in Mechanical Engineering. He was a Research Fellow of Tokyo Institute of Technology, Japan, from 1997 to 1998, and Visiting Professor of Utah State University, USA, in 2007. He is a senior member of the Society of Mechanical Engineer of China.

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We would like to welcome readers to this special issue on computational intelligence and its applications in engineering. In recent years, there have been rapid advancements in bio-inspired computational intelligence (BICI) theories and their growing applications in nearly all engineering fields, such as mechanical, electrical, civil, and manufacturing engineering. BICI has been successfully employed in solving real world engineering problems at both large-scale and small-scale levels, ranging from the design of complex engineering systems, material processing and manufacturing, assembly, signal processing and pattern identification, to system and process optimisation, to name a few.

This special issue includes seven papers that have successfully passed rigorous peer-review processes. These papers address applications of computational intelligence in a wide variety of engineering fields, such as automotive engineering, electrical engineering, computer engineering, engineering design, and manufacturing processes.

Durgasukumar and Pathak developed an adaptive neuro-fuzzy inference system (ANFIS) for an indirect, vector-controlled, VSI-fed induction motor drive to minimise the torque ripple. Through simulation experiments at different operating conditions, they compared the

performance of the vector-controlled induction motor drive using the ANFIS controller with that of using the PI controller.

Wang, Chen, and Jiang developed a multi-agent integrated controller to resolve the match issue between semi-active suspension and electric power steering on vehicle chassis subsystems. The multi-agent integrated controller they developed was based on an embedded operating system.

Furey, Curran, and McKeivitt proposed a discrete Bayesian filter approach to use Wi-Fi signals for indoor tracking and location. The history-aware-based indoor tracking system that he developed has a level of accuracy comparable to that achieved by doubling the number of access points.

Natarajan, Subramanian, and Premalatha compared cuckoo search and bat algorithm for Bloom filter optimisation in spam filtering. Their work shows that by finding the optimal false positive rates and number of elements stored in every bin, the total membership invalidation cost of bin Bloom filters could be minimised.

Abdelsalam and Mohamed developed a discrete particle swarm optimisation (DPWO) algorithm to determine the optimal sequence of activity execution within a product development (or design) project to minimise the project's

total iterative time. They also compared the performance of the DPWO algorithm with published results.

Sheta, Rausch, and Al-Afeef proposed an evolutionary quality management framework for lost foam casting processes. The multi-tier framework they developed involves the use of electrical capacitance tomography and remote access facilities.

Laseetha and Sukanesh demonstrated the use of the biogeography-based optimisation (BBO) algorithm for uniform linear antenna array synthesis using an amplitude-only control method. Their work shows that BBO has a great potential in optimum antenna array designs.

We thank all the authors for their valuable contributions to this special issue. We also thank all the reviewers for their constructive comments on these papers. The staff members of the *International Journal of Bio-Inspired Computation (IJBIC)* are also appreciated. We hope the readers find this special issue useful to their own research.