Editorial

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Biographical notes: Xiao-Zhi Gao earned his DSc (Tech.) degree from the Helsinki University of Technology (now Aalto University), Finland in 1999. Since 2004, he has been working as a Docent (Adjunct Professor) at the same university. He is also a Guest Professor/ Visiting Professor at several universities in China. He has published more than 290 technical papers on refereed journals and international conferences. His current research interests are nature-inspired computing methods (e.g., neural networks, fuzzy logic, evolutionary computing, swarm intelligence and artificial immune systems) with their applications in optimisation, data mining, control, fault diagnosis, signal processing and industrial electronics.

Zong Woo Geem is a faculty member at Gachon University, Korea. He has researched at Virginia Tech, University of Maryland, and Johns Hopkins University. He is an inventor of music-inspired optimisation algorithm, harmony search (HS), which has been successfully applied to various optimisation problems.

The harmony search (HS) method was first proposed in 2001 and initially applied to the optimisation problem of water distribution networks. As a novel population-based meta-heuristic algorithm, during the recent years, it has gained great research successes in the areas of mechanical engineering, control, signal processing, etc.

Different from most emerging nature-inspired computing (NIC) techniques, the inspiration of the HS is not from the natural phenomena, for example, the clonal selection algorithm (CSA) is inspired by the natural immune system and the collective behaviour among the unsophisticated individuals of some living creatures has promoted the swarm intelligence, but is conceptualised from the musical process of searching for a perfect state of the harmony determined by aesthetic standards.

This special issue of 'Theory and applications of the harmony search method' in the *International Journal of Bio-inspired Computation* (*IJBIC*) focuses on the recent advances made in the study of the theory and applications of the HS method.

The papers submitted to this special issue have been carefully reviewed by the guest editors and referred reviewers. The guest editors would like to extend their sincere thanks to all the authors and reviewers. They also thank the chief editor, Professor Zhihua Cui, for offering the invaluable opportunity of editing this special issue.