
Editorial

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Biographical notes: B. Nagaraj is working as a Professor and Dean at Karpagam College of Engineering, India. He filed about 12 patents and published more than 50 papers in national and international journals.

Danilo Pelusi is a Professor in the Faculty of Communication Sciences at the University of Teramo, Italy. He is Associate Editor of *IEEE Transactions on Emerging Topics in Computational Intelligence* and *IEEE Access*. He is author of various papers on computational intelligence.

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Biomedical signals have high significance towards many applications. In recent decades, soft computing has emerged as a potential candidate for solving complex and intricate global optimisation problems, which are otherwise difficult to solve by traditional methods. At present image processing, signal processing, industrial optimisation, control system applications and power system application fields provide challenging results to be interpreted by researchers. They are applying soft computing techniques for solving such problems. Some popular soft computing techniques for global optimisation includes

genetic algorithms (GA), differential evolution (DE), ant colony optimisation (ACO), particle swarm optimisation (PSO), artificial bee colony (ABC), firefly algorithm (FFA) algorithm, artificial neural network (ANN), fuzzy logic, deep learning methods, etc. These methods have been successfully applied to a wide range of benchmarks and real-world application problems. On one-hand these soft computing techniques are used to process different dimensioned signals, on other hand the deep features extracted from the images as well as signals, especially in biomedical field is used to train the soft computing techniques to make it take the better decision in the phase of uncertainty. In the field of biomedical engineering especially in the section of disease diagnosis, the features extracted from the biomedical signal/image seem non-linear. For example, the biomedical signals such as ECG, the pattern of one normal person varies with another normal. In case of EEG, the variation rate is much higher and so on. This is where the soft computing methods solve the uncertain nature.

This special issue seeks to bring forward and highlight applications of soft computing for real-world problems especially biomedical signal and image processing. It also explores many strategies and solutions to overcome the hurdles faced by researchers.

We wish to thank Editor-in-Chief Prof. Nilmini Wickramasinghe and Mrs Liz Harris, Journal Manager, Inderscience for giving us the opportunity of serving as Guest Editor(s) of this Special Issue. It has been a real pleasure. We also express our gratitude to all members of editorial office, the authors and to the independent reviewers that had made possible this issue. We hope that this Special Issue will be of high interest to the reader, as we consider that are the contributions contained in it.