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## Editorial

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**Biographical notes:** Tarun Kumar Sharma is a Professor of Computer Science and Engineering at the Graphic Era Hill University, Dehradun. He holds a PhD in Soft Computing from the IIT, Roorkee. He has supervised two PhD's and six under process. He has 80+ research publications to his credit. He is a founding member of an International Conference on Soft Computing: Theories and Application (SoCTA) Series. He has edited a number of AISC series of Springer conference proceedings volumes. He is an Associate Editor, a Guest Editor, and a reviewer in the Springer, Inderscience, IEEE Transactions, etc. He has delivered guest lectures in institution of national and international repute. He is a member of the IET, IANEG, CSTA and MIRS Lab.

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## 1 Introduction

In the past few decades, there have been an exponential rises in the applications bio-inspired algorithms. Bio-inspired algorithms generally takes their inspirations from natural species like ant, frogs, honeybees and a like for solving intricate problems arising in different domains of engineering design, management and science. The concept of *no free lunch algorithm* has given the rise to hybrid bio-inspired algorithms. Hybrid bio-inspired algorithms are the algorithms that are designed using best features of two or more metaheuristics algorithms or some local search strategy is embedded in one algorithm to improvise the efficiency and efficacy of the algorithm when applied to optimisation problems. The versatility of these bio-inspired algorithms is enabling the improvement in engineering design and optimisation in areas, where the classical optimisation techniques were not able to deal with real engineering problems (Sharma et al., 2013; Kumar et al., 2013; Rajpurohit et al., 2017; Sharma and Rajpurohit, 2019).

## 2 Objective of the special issue

The primary objective of this special issue is to bring forward thorough, in-depth, and well-focused developments various hybrid bio-inspired algorithms methods in various domains.

## 3 Organisation of the special issue

The special issue is organised into four manuscripts with the following brief description:

- Paper 1 ‘Fuzzy knowledge-based fractional order PID control implementation with nature inspired algorithms’
- Paper 2 ‘Stock price trend prediction with long short-term memory neural networks’
- Paper 3 ‘Prediction of air pollution using LSTM-based recurrent neural networks’
- Paper 4 ‘Human activity recognition from histogram of spatiotemporal depth features’.

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