This LNCS volume contains the papers presented at the 5th Swarm, Evolutionary and Memetic Computing Conference (SEMCCO-2014) held during December 18–20, 2014, at the Institute of Technical Education and Research, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha, India. SEMCCO is regarded as one of the most prestigious international conference series that aims at bringing together researchers from academia and industry to report and review the latest progress in cutting-edge research on swarm, evolutionary, memetic computing, and other novel computing techniques such as neural and fuzzy computing, to explore new application areas, to design new bio-inspired algorithms for solving specific hard optimization problems, and finally to create awareness of these domains to a wider audience of practitioners.

SEMCCO-2014 received 250 paper submissions from 18 countries across the globe. After a rigorous peer-review process involving 800 reviews, 96 full-length articles were accepted for oral presentation at the conference. This corresponds to an acceptance rate of 38.4% and is intended for maintaining the high standards of the conference proceedings. The papers included in this LNCS volume cover a wide range of topics in swarm, evolutionary, memetic, and other intelligent computing algorithms and their real-world applications in problems selected from diverse domains of science and engineering.

The conference featured four distinguished keynote speakers: Prof. Kalyanmoy Deb, Michigan State University, USA; Prof. Bidyut Baran Chaudhuri, Indian Statistical Institute, Kolkata, India; Prof. Yaochu Jin, University of Surrey, UK; and Dr. P.N. Suganthan, NTU, Singapore.

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