Dr. Anirban Banik
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Title of the SS: Soft computing and Computer Aided simulation for Sustainability

Profile: Dr. Anirban Banik is currently affiliated with the Department of Civil Engineering at the National Institute of Technology Sikkim, India. He has been awarded Ph.D. in Civil Engineering from National Institute of Technology Agartala, India. He received his M.Tech and B.E. in Civil Engineering from National Institute of Technology Agartala and Nagpur University, India, respectively.

His areas of specialization are hydro informatics, soft computing, fluid mechanics, separation process, nature inspired algorithm and open channel hydrodynamics. He published several SCI and SCOPUS journal papers, conference papers, and Book chapters with renowned international publishers. Dr. Banik is active as an editorial board member of international journals and technical program committee member of several international conferences. He also served as a reviewer for international journals such as Water Conservation Science and Engineering, IEEE Transactions on Fuzzy Systems, and Civil Engineering and Environmental Systems.

Dr. Banik is member of several professional bodies such as Institution of Engineers (India), International Association of Engineers (Hong Kong), Institute of Research Engineers and Doctors (USA), Industrial Engineering and Operation Management, and International Water Resources Association. He is also a working group member of EWG-EUROPT, EWG-ORD, and IFORS Developing Countries Online Resources Page.

Short description of the SS:

Sustainability is a three-dimensional concept that includes environmental, economic, and social aspects. Real world problems in the context of sustainability are related to uncertainty and vagueness. Soft computing and computer aided simulation techniques can handle the ambiguity and pronounce sustainable and optimal solutions to these complex real world problems. Moreover, soft computing and computer assisted simulation methodologies can help researchers, industry, and policy makers adopt the best solution to satisfy the goal of sustainability. It is a major challenge to select the appropriate soft computing and computer assisted simulation strategy to accomplish this task. The aim

of this special session is to highlight the recent, cutting edge, and novel applications of soft computing and computer simulation in the field of sustainability.

Topic of Interest

Recommended topics include, but are not limited to, the following:

Artificial neural network, Adaptive neuro fuzzy inference system, Artificial intelligence, Machine intelligence, Metaheuristic algorithms, Hydropower, Renewable energy, Solar PV, Bio power, Geothermal power, Ocean power, Wind power, Bio-Informatics, Hydro Informatics, Hydro dynamics, Evolutionary algorithms, Swarm intelligence, Computational intelligence, Computational fluid dynamics, Finite Element analysis, Finite volume analysis, Operational research, Data mining, Hybrid optimization, Bio energy Recycling, Biofuel supply chains, Energy management policy, Energy efficiency, Energy-saving technology, Small hydropower plants, Thermal treatments, Remote sensing, Optimization theory and applications, application in infrastructure engineering and management, Separation process.