

# Special Session on Swarm Intelligent Applications

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Tolerant Control, Reliability, and Optimization*

**Organizers:** Wei-Chang Yeh, National Tsing Hua University, Taiwan (yeh@ieee.org)

## **Brief Description of Area of Coverage:**

Today, Swarm Intelligence has become an increasingly important driving role for business strategies and real modern world applications. The essential idea of Swarm Intelligence is the emergent collective intelligence of groups of simple agents. There are several popular algorithms based on these concepts, including Particle Swarm Optimization (PSO), Ant Colony Optimization (ACO), Artificial Bee Colony (ABC) algorithms and Simplified Swarm Optimization (SSO), etc. Despite a significant amount of research on Swarm Intelligence, there remain many open issues and intriguing challenges in the field. The aims of this special session are to demonstrate the current state-of-the-art concepts, theory and practice of Swarm Intelligence, to reflect on the latest advances in swarm intelligent design and applications for real world problems, and to explore the future directions in Swarm Intelligence.

## **Program Organizer:**

Professor Wei-Chang Yeh, Ph.D.  
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**Wei-Chang Yeh** has Completed his Ph.D degree in 1992 at the Department of Industrial Engineering, University of Texas at Arlington, USA. He is the Professor of the Department of Industrial Engineering and Engineering Management in the National Tsing Hua University, Taiwan. He has also published more than 108 papers in reputed journals and serves as an editorial board member of repute. His research

interest include Network Reliability, Scheduling Problem, Cloud Computing Management, SSO and Soft Computing and Data Mining. Prof. Yeh is an editorial board members of “Reliability Engineering and System Safety (RESS)”, “Soft Computing with Applications (SCA)” and “International Journal of management and Marketing (IJMM)”. He is most honored to be able to serve as the Chair for the IEEE Computational Intelligence Society, and looks forward to the event.

**Program Committee of Potential Participants and Reviewers:**

Professor Huaguang Zhang, Ph.D.

Professor Ana Maria Madureira, Ph.D.

Dr. Changseok Bae

Dr. Vera Yuk Ying Chung

Professor David W. Coit, Ph.D.

A/Professor Binyue Cui, Ph.D.

Professor Xiangjian He, Ph.D.

A/Professor Chia-Ling Huang, Ph.D.

A/Professor Yunzhi Jiang, Ph.D.

Professor Ji-Hyun Lee, Ph.D.

Dr. Gregory Levitin

Professor Shiuhyng Winston Shieh, Ph.D.

A/Profecesor Xiaoding Yue, Ph.D.