IEEE Computational Intelligence for Security and Defense Applications (IEEE CISDA 2018)

18-21 November   Bangaluru - India

IEEE

IEEE Computational Intelligence Society

Call for Papers

Given the current global security environment, there has been increased interest within the security and defense communities in novel techniques for solving challenging problems. The genesis of this interest lies in the fact that repeated attempts of using traditional techniques have left many important problems unsolved, and in some cases, not addressed. New problems have emerged within the broad areas of security and defense that are difficult to tackle with conventional methods, thus requiring new techniques for detecting and adapting to emerging threats.

The purpose of the symposium is to present current and ongoing efforts in computational intelligence (e.g., neural networks, fuzzy systems, evolutionary computation, swarm intelligence, and other emerging learning or optimization techniques) as applied to security and defense problems.

List of Topics

Advanced Architectures for Defense Operations

- Multi-Sensor Data Fusion
- Hard-Soft Data Fusion
- Context-Aware Data Fusion
- Employment of Autonomous Vehicles
- Intelligence Gathering and Exploitation
- Mine Detection
- Situational Assessment
- Impact Assessment
- Process and User Refinement
- Automatic Target Recognition
- Mission Weapon Pairing and Assignment
- Sensor Cueing and Tasking
- Self-Healing Systems

Modeling and Simulation of Defense Operations

- Logistics Support
- Mission Planning and Execution
- Resource Management
- Red Teaming
- Computational Red Teaming
- Course of Action Generation and Recommendation
- Models for War Games
- Risk-Aware Decision Support
- Multi-Agent Based Simulation
- Critical Infrastructure Protection
- Strategic Planning
- Counterterrorism and Counterinsurgency
- Behavioral or Cognitive Learning
- Human Modeling: Behavior, Emotion, Motion

Security Applications

- Surveillance
- Suspect Behavior Profiling
- Anomaly Detection
- Automated Handling of Dangerous Situations or People
- Stationary or Mobile Object Detection, Recognition and Classification
- Intrusion Detection Systems
- Cyber-Security
- Air, Maritime and Land Security
- Network Security
- Biometrics Security
- Forensics Security
- Authentication technologies

Organizing Committee

Symposium Chair

Marco Cococcioni,
University of Pisa, Italy

Symposium Co-Chairs

James M. Keller,
University of Missouri, USA

Sundaram Suresh,
Nanyang Technological University, Singapore

Important Dates

Special Session Proposals : April 15, 2018
Paper Submissions   : June 15, 2018
Notification to Authors   : August 15, 2018
Final Submission   : September 15, 2018
Early Registration   : September 15, 2018

Contact Details

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