

IEEE CIS Task Force

Security, Surveillance and Defense Applications

Technical Committee

Intelligent System Applications

Task Force Committee

The following is a list of the confirmed members of this task force:

- Rami Abielmona, Larus Technologies, Canada (*Chair*)
- Slawo Wesolkowski, DRDC-CORA, Canada (*Vice-Chair*)
- James Keller, University of Missouri-Columbia, US (*Vice-Chair*)
- Hussein Abbass, University of South Wales, Australia
- Emil Petriu, University of Ottawa, Canada
- Moufid Harb, Larus Technologies, Canada

List of Technical Activities

The following is a list past and future technical activities of this task force:

- 2011 IEEE Symposium on Computational Intelligence for Security and Defense Applications (IEEE CISDA): Planned Symposium for SSCI 2011 April 11-15, 2011 in Paris, France
- 2010 IEEE Symposium on Computational Intelligence for Security and Defense Applications (IEEE CISDA): Accepted Workshop at WCCI 2010 (IJCNN, CEC and FUZZ-IEEE)
- Multi-Sensor Systems for Security and Defence Applications: Accepted Special Session at WCCI 2010 (IJCNN)
- Evolutionary Algorithms for Defense Applications: Accepted Special Session at WCCI 2010 (CEC)
- 2009 IEEE Symposium on Computational Intelligence for Security and Defense Applications (IEEE CISDA - <http://www.ieee-cisda.org>): July 8-10, 2009 in Ottawa, Canada

Task Force Purpose

Given the current global security environment, there has been increased interest within the security, surveillance 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*. As the problems of surveillance and security have become more prominent within the public and private sectors, it would be a great investment into the future for our Society to have a Task Force that deals with these challenging problems. This Task Force would serve to fulfill that purpose.

This task force will explore the recent advancements and applications of computational intelligence for security, surveillance and defense applications. The purpose of the task force 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, surveillance and defense problems. For example, the task force will present and discuss the theoretical developments and practical applications of multimodal (e.g. video, audio, positional, chemical/biological/radiation, intrusion, radar, moving target indicator sources, environmental, field databases, operator reports) intelligent multi-sensor technologies for data and information fusion, situational assessment, decision-support, collaborative/distributed environment systems deployed in real-world security, surveillance and defense applications.

Technical Community

The technical community includes defense and military organizations, private security firms, video surveillance organizations, first responder units, emergency preparedness units, hazardous materials units, public safety and monitoring organizations. The community also includes outbreak management centres, public health assessment units, transportation planning offices, traffic management centres, police research centres, military establishments and departments, intelligence departments and defense research organizations.