International

Innovation in Knowledge Based and Intelligent Engineering Systems

INVITED SESSION SUMMARY

Title of Session:
Agent and Multi-Agent Based Technologies in Current and Future Combat and Mission Systems

Name of Chair:
Dr. Angela Consoli, DST Group, Department of Defence

Details of Session:

The superiority and survivability of a military platform is dependent on how effectively its combat and mission system is able to gather, process and assess tactical information to identify threats, and determine behaviours and intentions. Over the past decade, the battlespace environment has seen the emergence of a more complex and contested environment with smarter and non-conventional threats. As a result, current and future combat and mission systems need to be more innovative and adaptive in how they evaluate, process and assess tactical information and threats, and enhance their situation awareness. The teaming of homogeneous and heterogeneous combat and mission systems is fast becoming an area of great importance, due to its potential for improving threat evaluation and assessment, and situation awareness.

The aim of this special session is to bring together researchers who are interested in enhancing and improving tactical information processing and assessment, threat assessment and evaluation, and situation awareness. Submitted papers should focus on using agent and multi-agent systems techniques and technologies for individual and teams of current and future manned and unmanned tactical mission and combat systems.

Topics of Interest:
You are invited to submit papers on the following topics.

- Agent and multi-agent techniques and technologies for tactical information processing and assessment
- Agent-based architectures for automated combat and mission systems
- Self-organising autonomous and adaptive combat and mission systems
- Cognitive architectures and models for threat behaviour modelling
- Agent-based techniques for distributed and teaming of manned, unmanned and hybrid systems
- Coordination and cooperation between multiple homogeneous and heterogeneous systems
- Human/agent teaming
- Agent/multi-agent architectures for unmanned autonomous combat and mission systems
- Other related topics

This session aims to address topics from a practical and/or theoretical perspective.

Information for Authors:

The submitted papers should present results of the original and unpublished research. The papers will be reviewed by the International Program Committee. The best submissions will be selected for presentation and will be included in the conference proceedings.

The conference proceedings will be published by Springer as book chapters in a volume of the KES Smart Innovation Systems and Technologies series, submitted for indexing in Scopus and Thomson-Reuters Conference Proceedings Citation Index (CPCI) and the Web of Science.

Submitted papers should be prepared in Springer style and **not exceed 10 pages**. All papers must be submitted electronically via conference submission system.

Important Dates

Submission of papers: **16 January 2017**
Notification of acceptance: 13 February 2017
Camera ready papers submission: 13 March 2017

Please note: Publication files require either the word-processor (i.e. MS Word) or LaTeX file(s) together with a final PDF.

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