
Workshop on Defense Applications of Computational Intelligence

Sunday, July 13, 2008

to be held as part of the

2008 GENETIC AND EVOLUTIONARY COMPUTATION CONFERENCE (GECCO-2008)

July 12-16, 2008 (Saturday-Wednesday)

Renaissance Atlanta Hotel Downtown

590 West Peachtree Street NW, Atlanta, Georgia 30308 USA

Organized by ACM SIG-EVO

www.sigevo.org/GECCO-2008/

PAPER SUBMISSION DEADLINE FOR WORKSHOP: Friday, March 21, 2008

Organizers

Laurence D. Merkle (Rose-Hulman Institute of Technology)

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Description

Within the last decade, the use of computational intelligence techniques for solving challenging defense related problems has achieved widespread acceptance. The genesis of this interest lies in the fact that repeated attempts of using more traditional techniques have left many important problems unsolved, and in some cases, not addressed. Additionally, new problems have emerged that are difficult to tackle with conventional methods, since social, cultural, and human behavioral factors tend to be at the heart of these new types of problems (e.g., within the broad areas of the global war on terrorism, homeland security, and force protection).

The purpose of this full-day workshop is to introduce and discuss current and ongoing efforts in using computational intelligence techniques in attacking and solving defense-related problems, with a focus on genetic and evolutionary computation techniques. These include, but are not limited to, the following:

- * Genetic and evolutionary techniques in the design of military systems and sub-systems.
- * Genetic and evolutionary techniques for logistics and scheduling of military operations.
- * Genetic and evolutionary algorithms (GEAs) in strategic planning and tactical decision making.
- * Multiobjective GEAs for examining tradeoffs in military, security, and counter-terrorism procedures.
- * Automated discovery of tactics and procedures for site security, force protection, and consequence management.
- * Genetics-based knowledge discovery and data mining of large databases used to recognize patterns of individual behavior.
- * Co-evolution for simultaneous red-blue team strategic-tactical simulation and gaming.
- * Other computational intelligence techniques for applications in the areas listed above.

The workshop invites completed or ongoing work in using computational intelligence techniques for addressing these or any other applications to defense related problems. It is intended to encourage communication between active researchers and practitioners to better understand the current scope of efforts within this domain. The ultimate goal is to understand, discuss, and help set future directions for computational intelligence in defense problems.

Important Dates

Submission deadline: Friday, March 21, 2008
Acceptance notification: Friday, March 28, 2008
Camera ready deadline: Wednesday, April 9, 2008

Contact Point

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For additional information, please visit the workshop web site at:
<http://daci2008.cs.rose-hulman.edu/>.

For information about the annual Genetic and Evolutionary Computation Conference (GECCO) to be held in Atlanta, Georgia, USA, on July 12-16, 2008 (Saturday - Wednesday), please visit
<http://www.sigevo.org/gecco-2008/>.