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Machine Intelligence and Bio-inspired Computation: Theory and Applications VIII

**Misty Blowers
Jonathan Williams**
Editors

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Introduction

Almost since its inception, machine learning and bio-inspired computation has been applied to the solution of military problems. Given the current global security environment, there has been increased interest within the military and security communities in novel techniques for solving challenging problems within their domains. The genesis of this interest lies in the fact that repeated attempts of using traditional techniques leave problems unsolved and, in some cases, not addressed. Additionally, new problems have emerged within the broad areas of the global war on terrorism, homeland security, and force protection that are difficult to tackle with conventional methods. Social, cultural, and human behavioral factors tend to be at the heart of these new types of problems.

The purpose of the conference is to continue the discussion of current and ongoing efforts in using genetic algorithms, particle swarm, artificial neural networks, artificial immune systems, emergent systems and behaviors, evolutionary and neuromorphic computing, and other novel, intelligent, and bio-inspired computation techniques. We hope that you will come away from our conference with new ideas that will inspire you to help us solve some of these pressing problems facing the defense and security of the global community.

Misty Blowers
Jonathan Williams