

The 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems
Special Session on
Differential Evolution and Its Applications

Differential evolution (DE) is arguably one of the most powerful stochastic real-parameter optimizer more than a decade ago and has now developed into one of the most promising research areas in the field of evolutionary computation. This method has recently been shown to produce superior results in a wide variety of real-world applications. Nonetheless, the lack of systematic benchmarking of the DE related algorithms in different problem domains, the existence of many open problems in DE, and the emergence of new application areas call for an in-depth investigation of DE.

This special session aims at bringing together researchers and practitioners to review and re-analyze past achievements, to report and discuss latest advances, and to explore and propose future directions in this rapidly emerging research area.

Topics of interest for this special session include, but are not limited to:

- Theory of DE
- Synergy between DE and learning techniques
- Hybridization of DE with other optimization techniques (with local search and other soft computing approaches)
- DE for finding multiple global optima
- Studies on self-adaptive and tuning-free DE
- DE for noisy and dynamic objective functions
- DE for multi-objective optimization
- DE for constrained optimization
- Rotationally Invariant DE
- Studies on initialization, reproduction and selection schemes in DE
- Applications in diverse domains

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