

## Issues with Performance Measures for Dynamic Multi-objective Optimisation

Mardé Helbig  
CSIR: Meraka Institute  
Brummeria, South Africa; and  
University of Pretoria, Computer Science  
Pretoria, South Africa  
Email: [mhelbig@csir.co.za](mailto:mhelbig@csir.co.za)

Andries P. Engelbrecht  
University of Pretoria  
Computer Science Department  
Pretoria, South Africa  
Email: [engel@cs.up.ac.za](mailto:engel@cs.up.ac.za)

### Abstract

In recent years a number of algorithms were proposed to solve dynamic multi-objective optimisation problems. However, a major problem in the field of dynamic multi-objective optimisation is a lack of standard performance measures to quantify the quality of solutions found by an algorithm. In addition, the selection of performance measures may lead to misleading results. This paper highlights issues that may cause misleading results when comparing dynamic multi-objective optimisation algorithms with performance measures that are currently used in the field.