

# Hybrid Migrating Birds Optimization Strategy for t-way Test Suite Generation

H L Zakaria <sup>1,2</sup>, K Z Zamli <sup>1</sup> and Fakhrud Din <sup>1,3</sup>

1 Faculty of Computer Systems and Software Engineering, Universiti Malaysia Pahang,  
Kampus Gambang, 26300 Kuantan, Pahang, Malaysia

2 School of Computer and Communication Engineering, Universiti Malaysia Perlis,  
Kampus Pauh Putra, 02600 Arau, Perlis, Malaysia

3 Department of Computer Science & IT, University of Malakand, KPK, Pakistan

[E-mail: kamalz@ump.edu.my](mailto:kamalz@ump.edu.my)

## **Abstract:**

Hybrid meta-heuristics algorithms have gained popularity in recent years to solve t-way test suite generation problems due to better exploration and exploitation capabilities of the hybridization. This paper presents the implementation of meta-heuristic search algorithms that are Migrating Birds Optimization (MBO) algorithm and Genetic Algorithm (GA) hybrid to t-way test data generation strategy. The proposed strategy is called Elitist Hybrid MBO-GA Strategy (EMBO-GA). Based on the published benchmarking results, the result of these strategies is competitive with most existing strategies in terms of the generated test size in many of the parameter configurations. In the case where this strategy is not the most optimal, the resulting test size is sufficiently competitive.

**Keywords:** Serious Games; Framework; Diabetes; Healthcare

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