

## **A bat-inspired testing strategy for generating constraints pairwise test suite**

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### **ABSTRACT**

Indubitably, exhaustive testing is impractical in real world. Several sampling strategies have been introduced to minimize test data systematically. Complementing existing interaction based sampling strategies, pairwise testing has been extensively exploited resulting into many prototypes strategy implementations. Recently, the growing interests of adopting optimization algorithms as a backbone search engine for the new and upcoming search based software testing is increasing for newly developed test suite generation methods. This paper proposes an enhancement design and implementation of BTS strategy for constraints pairwise test generation based on the bat-inspired algorithm (BA). The benchmarking results of BTS show that it outperforms the generated test suite of the existing tools and strategies even in the presence of constraints.

### **KEYWORDS:**

Bat Algorithm; Combinatorial; Constraints Pairwise; Software Testing