

Title: *Hyperparameter optimization in gendered genetic algorithms.*

Speaker: Christopher Briggs

Affiliation: ERAU-Prescott

Abstract: Genetic algorithms (GA) are metaheuristics first introduced in their modern form by JH Holland in 1992. There are many variations, but essentially all involve an evolving population of candidate solutions. In 1996, Lis and Eiben proposed implementing gender as a population feature. Several researchers have since demonstrated robust performance of gender genetic algorithms (GGA) versus GA on various benchmark problems. In this study, we seek new evidence for robustness of GGA by giving statistical proof that meta-optimization on GGA populations will cause gender differentiation in mutation probability and tournament size.