1116-VC-2879   **Rommel G Regis*** (`rregis@sju.edu`), Saint Joseph's University, Department of Mathematics, 5600 City Avenue, Philadelphia, PA 19131. *On the Convergence of Adaptive Random Search Methods for Constrained and Multi-Objective Black-Box Optimization.* Preliminary report.

Although there are many theoretical results on the convergence of random search methods for continuous black-box global optimization, relatively few address the issue of black-box constraints and multiple black-box objective functions. This talk will present some results that guarantee the convergence in probability of a class of adaptive random search algorithms for constrained black-box global optimization. Then, these results are used to prove the convergence in probability of adaptive random search algorithms to Pareto optimal solutions in a multi-objective setting. (Received September 22, 2015)