A Stochastic Algorithm for Constrained Multiobjective Optimization

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A stochastic method is presented for solving constrained multiobjective optimization problems. This method may be thought of as an extension of Schäffler's method (which is based on solution of stochastic differential equation) for the solution of unconstrained multiobjective problems. Several methods for constraint handling are presented in this paper. Numerical results on several test problems are given. Problems with a large number of variables as well as with complex search space can be handled by this method. Finally using the above stochastic method an algorithm for constrained global multiobjective optimization is presented.