1025-49-247   **Ivan L Raykov*** (`raykov@math.ohiou.edu`), Department of Mathematics, Ohio University, Athens, OH 45701. *Quasi-Consistent Approximation of Effective Diagonalization Strategies for the Solution of a Class of Optimal Design Problems.*

This paper continues some works of E. Polak. We determine successive approximation algorithm which consists of a sequence of progressively finer stages of discretization, *diagonalization* method, with a prescribed number of iterations of the optimization algorithm carried in each stage. The solutions of these problems are discretization strategies which minimize the time needed to reduce the initial cost-error by prescribed amount. (Received January 23, 2007)