

Preface

This issue contains selected papers presented at the conference (organized by C. A. Floudas and P. M. Pardalos) on 'Recent Advances in Global Optimization' held at Princeton University, May 10–11, 1991. The conference presented current research in global optimization and related applications in science and engineering.

All of the talks were invited and the papers were refereed. The papers of this issue cover a wide spectrum of approaches in global optimization. The paper by Horst *et al.* describes a new simplicial branch and bound outer approximation algorithm for solving general concave minimization problems. This new algorithm has been implemented and computational results are reported. Tuy discusses the importance of exploiting the complementary convex structure for developing efficient algorithms for nonconvex problems with a special structure, such as concave minimization problems with few nonlinear variables (sparse problems) and bilevel linear optimization problems. The paper by Hansen and Jaumard study the quadratically constrained indefinite quadratic problems. An approach is presented where the original problem is reduced to a bilinear program. Tuy and Al-Khayyal present an algorithm for solving a nonconvex single facility location problem using sequential unconstrained convex maximization. The papers by Visweswaran and Floudas, and Sherali and Tuncbilek present different algorithms for computing the global minimum of polynomials.

We would like to take this opportunity to thank the anonymous referees, Air Force Office of Scientific Research, Penn State University, and Princeton University for their help and support of the conference.

Other papers of this conference will be published in a forthcoming issue of this journal.

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