



Preface

This special volume is dedicated to Professor Reiner Horst, the founding managing editor of the *Journal of Global Optimization*, on the occasion of his 60th birthday.

Reiner was born in Germany, January 24, 1942. He studied mathematics and theoretical physics in Germany and France, and obtained his PhD degree and Habilitation in mathematics in 1971 and 1975, respectively, at the Technical University of Darmstadt. He served as a consultant in operations research and as a professor of mathematics at the Universities of Darmstadt, Oldenburg and Trier, where, since 1986, he holds the chair of Operations Research.

Through international cooperations and visits Reiner made many friends in various countries between Canada/USA and Vietnam/Japan. Some of these friends and colleagues have contributed to this special volume.

Reiner has published almost 100 articles in a diversity of fields such as theoretical mechanics, statistics, numerical analysis, combinatorial programming, non-linear optimization and operations research. Since 1976, however, when he published the first algorithm for globally minimizing a concave function over convex sets, most of his interests focused on deterministic global optimization, where he pioneered several areas of current research. His achievements here encompass theoretical foundations of branch and bound and of outer approximation, optimality conditions and duality, various decomposition techniques and algorithmic approaches for several classes of global optimization problems.

Reiner authored and coauthored five books, among which “Global Optimization: Deterministic Approaches” and “Introduction to Global Optimization” that belong to the fundamental textbooks in global optimization.

Reiner served the global optimization community in many ways: In program committees and as organizer of several conferences and workshops, as (co)editor of important books such as, e.g., the “Handbook of Global Optimization”, and as the first managing editor of the *Journal of Global Optimization*. It was in 1989 when an active group of researchers in global optimization felt that the field has reached a certain maturity which justified the foundation of a special journal. Reiner was asked to establish such a journal with an appropriate publisher and to serve as its first managing editor. He assumed this task full of dedication and enthusiasm, and has considerably contributed to the successes of the journal.

This special volume consists of 19 papers contributed from those who have had some interaction with Reiner Horst, some as friends and some as research cooperators. The topics of the papers are focused on theoretical aspects, solutions

methods and applications of important and interesting problem classes in global optimization. We would like to sincerely thank all of the contributors and the referees for their efforts and cooperation.

We wish Reiner Horst good health and look forward to many additional years of active research and stimulating interactions in global optimization.

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