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Preface

Global Optimization has emerged as one of the most exciting new areas of mathematical programming. Global optimization has received a wide attraction from many fields in the past few years, due to the success of new algorithms for solving previously intractable problems from diverse areas such as computational chemistry and biology, biomedicine, structural optimization, computer sciences, operations research, economics, and engineering design and control.

This issue of JOGO contains refereed invited papers submitted at the 4th international conference on *Frontiers in Global Optimization* held at Santorini, Greece during June 8-12, 2003. Santorini is one of the few sites of Greece, with wild beauty created by the explosion of a volcano which is in the middle of the gulf of the island. The mystic landscape with its numerous multi-extrema, was an inspiring location particularly for researchers working on global optimization.

The first paper by Akrotirianakis and Floudas introduces a new class of improved convex underestimators for twice continuously differentiable functions. The second paper by Kreinovich addresses interval computations with partial information on probabilities. The third paper by Lin and Stadtherr presents interval methods based advances for parameter estimation and molecular modeling problems. The fourth paper by Lucia, DiMaggio and Depa introduces a geometric terrain approach for global optimization. The fifth paper by Ejov, Filar and Gondzio addresses the Hamiltonian Cycle problem through indefinite quadratic programming and interior point approaches.

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