



## PREFACE

### A SPECIAL ISSUE ON OPTIMIZATION THEORY AND RELATED TOPICS IS DEDICATED TO THE MEMORY OF PROFESSOR HOANG TUY

This special issue on Optimization Theory and Related Topics is dedicated to the memory of Professor Hoang Tuy.

Professor Hoang Tuy was an prominent Vietnamese applied mathematician. He is one of two founders of the mathematical institutions of Vietnam. Hoàng Tuy's early career coincided with the French war (1946–1954), which interrupted his studies. In December 1946, after two months as a mathematics student at Hanoi University, he had to return to the south, because the French had invaded and seized Hanoi, and the University had closed. Hoàng Tuy taught secondary school in Quang Ngãi province in the Fifth Liberated Zone from 1947 to 1951, during which time he wrote a geometry textbook. In the early 1950s, Hoàng Tuy studied in the university in a liberated zone in the far north near the Chinese border. In September 1957 he went to the Soviet Union, where he studied real analysis under the supervision of D. E. Menshov and G. E. Shilov. Hoàng Tuy received his PhD in mathematics from Moscow State University in 1959.

After returning to Vietnam from the Soviet Union, Hoàng Tuy changed his area of research from real analysis to operations research, a field of applied mathematics. Since that time Hoàng Tuy has worked mainly in the field of global optimization, where he did pioneering work. He had a long career with the Institute of Mathematics of the Vietnamese Academy of Science and Technology, where he was director from 1980 to 1989. He published more than 160 refereed journal and conference articles.

In 1997, a workshop in honor of Hoàng Tuy was organized at Linköping University, Sweden. In December 2007, an international conference on Nonconvex Programming was held in Rouen, France, to pay tribute to him on the occasion of his 80th birthday, in recognition of his pioneering achievements that advanced the field of global optimization. In September 2011, Professor Hoàng Tuy was named as the first-ever recipient of the Constantin Carathéodory Prize of the International Society of Global Optimization for his pioneering work and fundamental contributions to global optimization.

In this special issue we present papers authored by a selected group of experts in the area of optimization. The special issue contains eight papers contributed by researchers from Australia, Chile, Israel, Russia and Vietnam. These papers cover a wide spectrum of important problems and topics of current research interest, including the generic approach to modern optimization, solving resource allocation problems in disaster management using linear programming relaxations, a notion of conjugacy for nonconvex set-valued mappings on the real-line and related properties, applications and issues in abstract convexity, Branch-and-bound algorithms for solving a modified consumer problem, global optimality conditions for dc-constrained optimal control problems, rational activation functions in neural network with uniform norm based loss function and its application in classification and an algorithm based on a set-valued nonexpansive mapping.

We hope that this special issue will serve as a source of ideas for many mathematicians, who are interested in pursuing recent developments in optimization and its applications .

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