Foreword

Jean-Pierre Raymond · Michel Théra

Consisting of 16 referred papers authored by 35 experts and providing a fine snapshot of the research and also suggesting some new directions of research in the domain of Variational Analysis, Optimization, Optimal Control and applications, this special issue of Set-Valued and Variational Analysis is dedicated to Professor Jean-Baptiste Hiriart-Urruty on the occasion of his 60th birthday, on December 27, 2009. Jean-Baptiste (known usually as JBHU) was born in Hasparren (in the French side of the Basque country). He graduated in mathematics at the Universities of Pau and Bordeaux, and obtained the "Agrégation de Mathématiques" in 1972. He went to the University Blaise Pascal in Clermont-Ferrand for his Thèse d'Etat, awarded in 1977, under the supervision of Alfred Auslender. He has been Professor at the University Paul Sabatier in Toulouse since October 1981.

His research interests include a variety of areas of applied mathematics: variational analysis (convex and nonsmooth analysis), and optimization. He also takes an active interest in issues of mathematics education and popularization of science.

Professor Jean-Baptiste Hiriart-Urruty has authored or co-authored about 100 publications. With Claude Lemaréchal he has written a two-volume research monograph Convex Analysis and Minimization Algorithms (Springer-Verlag, 1993, reedited in 1996) and Fundamentals of Convex Analysis, also with Claude Lemaréchal (Springer-Verlag, 2001) which are classical.

He is also the author of a popular-level booklet on optimization (series "Que sais-je?", PUF, 1996), and has published three books of exercises one on linear and bilinear algebra (Editions Cepadues, 1988), a second one on convex analysis and

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optimization (series "Mathématiques", PUF, 1998), and a third one on differential calculus and differential equations (Dunod 2002).

The most recent booklets he authored are entitled *Les Mathématiques du Mieux Faire: Vol. 1 First Steps in Optimization*, published in December 2007, *Vol. 2 Optimal Control for Beginners*, published in January 2008, both at Ellipses Editions.

It is worth mentioning that Jean-Baptiste Hiriart-Urruty has been a driving force for the French community working in optimization and related areas. Jean-Baptiste's professional contributions are numerous. He has in particular chaired the Optimization group (Groupe Mode) of the French Applied and Industrial Mathematical Society (SMAI) where he has been a member of the administrative council. He has been appointed to several editorial boards of important journals related to the theory of Optimization.

His work has produced many significant results through his many deep and elegant papers. It is not possible to list all Jean-Baptiste's work in this short preface, but as an example, one of his most famous contributions appeared in Journal of Fuctional Analysis is a joint work with Bob Phelps, where they presented formulas for the subdifferentials of the sum without assuming any additional hypotheses, by utilizing only ε-subdifferentials. Certainly his list of open problems has focused the research efforts of the entire optimization community (see for example, Potpourri of Conjectures of Open Questions in Nonlinear Analysis and Optimization, SIAM Review, (2007), Volume 49, Number 2, 255–273).

Last but not least, within the optimization community in France and outside, we are very fortunate to know JBHU as an encouraging human being, who continues to mentor the younger community members, and to deeply inspire many of us.

The editors of this special issue would like to extend their gratitude to all the authors who agreed with such enthusiasm to contribute to this volume. We would like to thank all the referees, who will have to remain anonymous for their careful work to ensure the quality and relevance of the papers included in the volume and for their timely contribution. Finally, the guest editors want to warmly thank Boris Mordukhovich and Biagio Ricceri for agreeing to sponsor this special issue.

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