The mathematics of Peter L. Hammer (1936–2006): graphs, optimization, and Boolean models

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1 Preface

This volume of the *Annals of Operations Research*, contains a collection of papers published in memory of Peter L. Hammer (1936–2006).

As we recall further down, Peter made substantial contributions to several areas of operations research and discrete mathematics, including, in particular, mathematical programming (linear and quadratic 0–1 programming, pseudo-Boolean optimization, knapsack problems, etc.), combinatorial optimization (transportation problems, network flows, MAXSAT, simple plant location, etc.), graph theory (special classes of graphs, stability problems, and their applications), data mining and classification (Logical Analysis of Data), and, last but not least, Boolean theory (satisfiability, duality, Horn functions, threshold functions, and their applications).

The Call for Papers invited authors to submit research papers in all of these areas. We were very happy to receive a large number of high quality submissions along the lines explored by Peter, and eventually we selected 23 original contributions to appear in this special

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volume. We have no doubt that he would have been very proud of this collection of papers, and we are happy to dedicate it to him.

We would like to thank all authors of this special volume for their contributions, all our enthusiastic experts who served as volunteer referees for their help in selecting and improving these submissions, and Ms. Katie D'Agosta, the Managing Editor of the journal, for her continuous support and help with this volume.

Unfortunately, shortly before the volume was completed, fate struck again: On October 10, 2010, our dear friend and co-editor Bruno Simeone (born in 1945) passed away unexpectedly. Bruno was one of Peter Hammer's first doctoral students, and one of his closest and most faithful friends. He obtained his Ph.D. at the University of Waterloo in 1979, with a thesis entitled *Quadratic 0–1 Programming, Boolean Functions and Graphs*. Throughout the years, he remained in continuous contact with Peter, and together they co-authored about 30 scientific papers. Besides being a creative and dedicated researcher, Bruno was a friendly and cheerful person. He is deeply missed by all those who knew him.

The Editors: *Endre Boros*,[1] *Yves Crama*,[2] *Dominique de Werra*,[3] *Pierre Hansen*,[4] and *Frédéric Maffray*[5]

2 Peter L. Hammer (1936–2006)

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