

Preface to the First Edition

We first had the idea for this book over 3 years ago. It grew out of a one-day workshop entitled *Introductory Tutorials in Search, Optimization and Decision Support Methodologies (INTROS)*, which was held in Nottingham in August 2003. The aim of the workshop was to deliver basic introductions to a broad spectrum of search methodologies from across disciplinary boundaries. It was supported by the UK Engineering and Physical Sciences Research Council (EPSRC) and the London Mathematical Society (LMS) and was attended by over one hundred delegates from all over the world. We were very fortunate to have 11 of the world's leading scientists in search methodologies presenting a range of stimulating and highly informative tutorials. All of the INTROS presenters have contributed to this volume, and we have enhanced the content by inviting additional, specifically targeted, complementary chapters. We are pleased to be able to present such a comprehensive, multidisciplinary collection of tutorials in this crucially important research area.

We would like to take this opportunity to thank the many people who have contributed towards the preparation of this book. We owe a great debt of gratitude to the authors of the chapters. As one would expect from such a distinguished group of scientists, they have prepared their excellent contributions in a thoroughly reliable and professional manner. Without them, of course, the book would not have been possible. We are extremely grateful to our copy editor, Piers Maddox, who excelled himself in bringing together, in one coherent structure, the various documents that were sent to him. We are also very grateful to Gary Folven, Carolyn Ford, and their staff at Springer who have provided us with invaluable advice and support during every step of the way. We would like to offer our gratitude to Fred Glover for writing the foreword for this book. His warm praise is particularly pleasing. A special thank you should go to Emma-Jayne Dann and Alison Payne for all the administrative support they have given us, both in the preparation of this volume and in the organization of the INTROS workshop that underpinned it. We are also very thankful to EPSRC and LMS for the financial support they gave us to hold this workshop. Finally, we offer a special thank you to the INTROS delegates for their enthusiasm and their encouragement.

We hope you enjoy reading this volume as much as we have enjoyed putting it together. We are already planning a second edition, and if you have any comments which can help us improve the book, please do not hesitate to contact us. We would welcome your advice.

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Edmund K. Burke
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Preface to the Second Edition

The first edition of this book, which appeared in 2005, grew out of a 1-day workshop entitled Introductory Tutorials in Search, Optimization and Decision Support Methodologies (INTROS), which was held in Nottingham, UK, in August 2003. It had 19 chapters which gave broad coverage of the predominant search methodologies at the time.

This second edition contains updated versions of the chapters, and we have also included three additional chapters (Scatter Search, Chap. 5; GRASP: Greedy Randomized Adaptive Search Procedures, Chap. 11; and Very Large-Scale Neighborhood Search, Chap. 13). These new chapters, along with the revised chapters, we believe, provide significant insight to the most popular search methodologies that are in use today.

There are many people that we need to thank. Without their help and support, this book would not have been possible. We are grateful to Jacek Blazewicz for writing such a generous and positive foreword for this second edition. We are deeply indebted to all the authors for their contributions and for their patience about the time that it took to get this edition into press. The authors represent a distinguished group of scientists who have all prepared, and updated, excellent contributions in a conscientious and professional way. We are also grateful to our excellent copy editor, Piers Maddox. We recognize that we did not always provide him with the material in a form that he would have preferred. However, he dealt with everything very quickly and extremely dilligently. We would also like to extend our thanks to the staff at Springer, particularly Matthew Amboy, who have supported the preparation of this book from the very beginning.

We hope you enjoy reading this book and gain as much from it as we gained in editing it.

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Search Methodologies

Introductory Tutorials in Optimization and Decision

Support Techniques

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2014, XIV, 716 p. 135 illus., 15 illus. in color., Hardcover

ISBN: 978-1-4614-6939-1