# Preface

This book is a comprehensive study of the tractability of multivariate problems. We present various existing results obtained by many researchers in the last years, as well as numerous new results. We hope that this book will encourage many people to study tractability and further advance our understanding of tractability. In the course of the book we present a lot of open problems and we would be delighted to see the solution of these problems in the near future.

This book consists of several volumes. The first volume begins with a general introduction to tractability, which is provided by twelve examples of particular multivariate problems, along with a survey of results in information-based complexity that are especially relevant to tractability. The rest of Volume I is devoted to tractability for the case of algorithms using linear information (arbitrary continuous linear functionals). Volumes II and III deal with algorithms using mostly function values. In Volume II we approximate functionals, whereas in Volume III we approximate general operators.

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