

# Preface

Analytic inequalities are widely acknowledged as one of the major driving forces behind the development of various branches of mathematics and many applied sciences. The study of inequalities has increased enormously over recent decades as it has been demonstrated that they have applications in many diverse fields of mathematics. There exists, for example, a very rich literature related to the Čebyšev, Grüss, Trapezoid, Ostrowski, Hadamard and Jensen inequalities. This monograph is an attempt to organize recent progress related to these in the hope that it will further broaden developments and the scope of applications. It does not intend to be comprehensive, but rather it is meant to be a representative overview of the recent research related to the fundamental inequalities noted above.

A large part of the material included in the book can only be found in the research literature although it should be understandable to any reader with a reasonable background in real analysis and its related areas. It will be a valuable source of reference in the field for a long time to come. All results are presented in an elementary way and it could also serve as a textbook for an advanced graduate course.

The author is grateful to Professor Jan van Mill and Arjen Sevenster for the opportunity to publish this book and their invaluable professional cooperation for the work reported here. I am also indebted to the editorial and production staff of the publisher for the care they have taken with this book. I would like to thank my family members for providing their strong support and constant encouragement during the writing of this monograph.

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<http://www.springer.com/978-94-91216-43-5>

Analytic Inequalities

Recent Advances

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2012, X, 306 p., Hardcover

ISBN: 978-94-91216-43-5

A product of Atlantis Press