Contents

Foreword v

Introduction 1
C. E. Sandifer, R. E. Bradley

Leonhard Euler: Life and Thought 5
R. S. Calinger

Leonhard Euler and Russia 61
P. Hoffmann

Princess Dashkova, Euler, and the Russian Academy of Sciences 75
R. S. Calinger, E. N. Polyakhova

Leonhard Euler and Philosophy 97
W. Breidert

Images of Euler 109
F. Fasanelli

Euler and Applications of Analytical Mathematics to Astronomy 121
C. Wilson

Euler and Indian Astronomy 147
K. Plofker

Euler and Kinematics 167
T. Koetsier

Euler on Rigid Bodies 195
S. G. Langton

Euler's Analysis Textbooks 213
V. J. Katz

Euler and the Calculus of Variations 235
R. Thiele

Euler, D'Alembert and the Logarithm Function 255
R. E. Bradley

Some Facets of Euler's Work on Series 279
C. E. Sandifer

The Geometry of Leonhard Euler 303
H. S. White

Cyclotomy: From Euler through Vandermonde to Gauss 323
O. Neumann

Euler and Number Theory: A Study in Mathematical Invention 363
J. Suzuki

Euler and Lotteries 385
D. R. Bellhouse

Euler's Science of Combinations 395
B. Hopkins, R. Wilson

The Truth about Königsberg 409
B. Hopkins, R. Wilson

The Polyhedral Formula 421
D. Richeson

On the Recognition of Euler among the French, 1790 - 1830 441
I. Grattan-Guinness

Euler's Influence on the Birth of Vector Mechanics 459
S. Caparrini

Euler's Contribution to Differential Geometry and its Reception 479
K. Reich

Euler's Mechanics as a Foundation of Quantum Mechanics 503
D. Suisky

Index **527**