

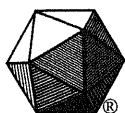
Euler and Modern Science

Edited by

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Translated from Russian by

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Euler was also actively involved in the preparation and sale of scientific books, and while in Berlin, of scientific almanacs. In addition to this survey of his contributions to science, we find here material otherwise very difficult to find detailed accounts of Euler's family life and the careers pursued by his children and grandchildren. Readers otherwise well-informed about Euler and his work will find here much to enhance their appreciation of this extraordinary scientist and human being.

About the Author. Robert Burns, the translator of this collection, is a professor of mathematics at York University in Canada.

Chapter 18 Euler and Lotteries. Chapter 19 Euler's Science of Combinations. Chapter 20 The Truth about Königsberg. Chapter 21 The Polyhedral Formula.

Operating within Enlightenment rivalries, in his case with Jean d'Alembert, Alexis Clairaut, Daniel Bernoulli, and Colin Maclaurin, he led in transforming mechanics and astronomy into modern exact sciences based on calculus. Euler founded continuum mechanics and advanced the study of ballistics, cartography, dioptrics, the theory of elasticity, hydraulics, hydro-dynamics, music theory, number theory, optics, and ship theory. Massive and fearless computations, an extraordinary application of analysis and analogies, an appeal to his near unerring instinct, and clarity in writing characterize his... What is the difference between ancient science and modern science? Science was invented about the time of the American revolution. There was no "ancient" science. For instance, Archimedes two books on hydrostatics form the base of a field in which Torricelli, Pascal, Descartes, Newton and Euler all made advances. The same could be said of Theophrastus' and Aristotle's work in biology, and Ptolemy's work in optics and astronomy. If anything, and this is anecdotal, the ancient scientists trusted logic and their math more than they trusted data from experience. Modern science loves data collection, and experiment, and is less trusting of theory than the ancients were.

3.3K views. Anand Gupta.