

The Authors

John Archibald Wheeler (Ph.D., Johns Hopkins University) is one of the world's foremost relativists. He is Joseph Henry Professor Emeritus at Princeton University and, until his retirement in 1986, Blumberg Professor of Physics and Director, Center for Theoretical Physics, at the University of Texas at Austin. A past president of the American Physical Society, he is a recipient of the Enrico Fermi Award (1968), the National Medal of Science (1971), and the Niels Bohr International Gold Medal (1982).

Since the appearance of the First Edition of *Spacetime Physics*, John Wheeler has published a graduate text in general relativity, *GRAVITATION*, with Kip S. Thorne and Charles W. Misner (W. H. Freeman, 1970), and a popular treatment of gravity, *A Journey into Gravity and Spacetime* (Scientific American Library, 1990; distributed by W. H. Freeman).

Edwin F. Taylor (Ph.D., Harvard University) taught physics for 26 years at the Massachusetts Institute of Technology. He is currently Research Professor in the Department of Physics at Boston University. He is the author of a textbook on introductory mechanics and *An Introduction to Quantum Physics* with A. P. French (W. W. Norton, 1978). He has served as Editor of the *American Journal of Physics*.

With MIT undergraduates, Edwin Taylor produced interactive computer programs to help students visualize and solve problems in special relativity. These won the 1988 EDUCOM/NCRIPTAL Higher Education Software Awards for Best Physics Software and Best Tool Software.

THE BOOK

Collaboration on the First Edition of *Spacetime Physics* began in the mid-1960s when Edwin Taylor took a junior faculty sabbatical at Princeton University where John Wheeler was a professor. The resulting text emphasized the unity of space- time and those quantities (such as proper time, proper distance, mass) that are invariant, the same for all observers, rather than those quantities (such as space and time separations) that are relative, different for different observers. The text has become a standard for modern physics and relativity courses, as well as introductory physics.

The Second Edition of *Spacetime Physics* embodies what the authors have learned during an additional quarter century of teaching and research. They have updated

the text to reflect the immense strides in physics during the same period and modernized and increased the number of exercises, for which the First Edition was famous. Enrichment boxes provide expanded coverage of intriguing topics. Sample problems encourage students to exercise their newfound power. An enlarged final chapter on general relativity includes new material on gravity waves, black holes, and cosmology.

The Second Edition of *Spacetime Physics* provides a new generation of students with a deep and simple overview of the principles of relativity.