

The Genesis of Relativity

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New insights into the premises, assumptions and preconditions that underlie Einstein's Relativity Theory, as well as the intellectual, and cultural contexts that shaped it, are the subject of a comprehensive study published this month by Springer.

The publication of *The Genesis of General Relativity* marks the outcome of 10 years of research into the origins of Einstein's General Relativity Theory, one of the most important physical theories of the 20th century. It provides a comprehensive study and in-depth analysis of how the work of Albert Einstein and his contemporaries changes our understanding of space, time and gravitation.

Edited by Jürgen Renn, Director at the Max Planck Institute for the History of Science, the work is the result of an international team of authors. Split into four volumes, it retraces Einstein's path towards establishing the general theory of relativity.

- The first two volumes offer a detailed reconstruction of the research that led Einstein from special to general relativity. Taken together, they offer an encompassing view of Einstein's contributions to the genesis of general relativity. At the center of this reconstruction, is a commentary of Einstein's unpublished research notes, so-called "Zurich Notebook", presented in their entirety for the first time.

- The second set of two volumes reviews alternative approaches to the problem of gravitation around the time of Einstein's work. Most of the sources are presented in translation for the first time and are

accompanied by essays by leading historians of relativity, which offer new insights into the broader scientific context from which Einstein's theory emerged.

The aim of this decade of work was to reach a systematic understanding of both the knowledge base in classical physics that formed the point of departure for Einstein and his contemporaries, and the nature of the process through which their research eventually overcame some of the conceptual foundations of classical, as well as special-relativistic, physics.

Commenting on the publication of *The Genesis of General Relativity*, Bernard Schutz, director at the Max Planck Institute for Gravitational Physics said: "As a physicist living at a time when physicists are re-inventing gravity once again, I find this history not only fascinating and compelling but deeply relevant."

Roger Stuewer, professor of history of science and physics at the University of Minnesota, adds that these volumes are an "extraordinary intellectual achievement, one without parallel in the history and philosophy of science."

Renn, Jürgen (Ed.)

The Genesis of General Relativity

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