



The Noether Theorems [Invariance and Conservation Laws in the Twentieth Century

/

Kosmann-Schwarzbach, Yvette

Springer New York,
2011

Monografía

In 1915 Emmy Noether was invited by Klein and Hilbert to Göttingen to assist them in understanding the law of conservation of energy in Einstein's new general theory of relativity. She succeeded brilliantly. In the *Invariante Variationsprobleme*, published in 1918, she proved a fundamental theorem linking invariance properties and conservation laws in any theory formulated in terms of a variational principle, and she stated a second theorem which put a conjecture of Hilbert in perspective and furnished a proof of a much more general result. This book makes the *Invariante Variationsprobleme* accessible in an English translation. It presents an analysis of the work of Noether's precursors, reformulates her argument in a more modern mathematical language, and recounts the strange history of the article's reception in the mathematics and physics communities. This study shows how her two theorems ultimately became the basis for any deep understanding of the role of symmetries in both classical and quantum physics. The *Noether Theorems*, a translation of *Les Théorèmes de Noether* whose French text has been revised and expanded, provides rich documentation drawn from both primary and secondary sources. This book will be of interest to historians of science, to teachers of mathematics, mechanics and physics, and to mathematicians and mathematical physicists. Also by Yvette Kosmann-Schwarzbach: *Groups and Symmetries: From Finite Groups to Lie Groups*, 2010 Springer, ISBN: 978-0-387-78865-4

<https://rebiunoda.pro.baratznet.cloud:38443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMTk2MjgzNDU>

Título: The Noether Theorems [Recurso electrónico] Invariance and Conservation Laws in the Twentieth Century by Yvette Kosmann-Schwarzbach

Edición: 1st ed

Editorial: New York, NY Springer New York 2011

Descripción física: XIII, 205 p., 8 il

Mención de serie: Sources and Studies in the History of Mathematics and Physical Sciences Springer eBooks

Contenido: Preface.-Acknowledgements -- I. "Invariant Variational Problems". II -- Invariance and Conservation Laws in the Twentieth Century. The Inception and Reception of the Noether Theorems. - 1. The Inception of the Noether Theorems. -2. The Noether Theorems.-3. The Noether Theorems as Seen by Contemporaries and by Historians of Science.-4. From Bessel-Hagen to Hill, 1921–1951.-5. The Reception of Noether's First Theorem after 1950.-6. The Reception of Noether's Second Theorem after 1950.-7. After 1970—Genuine Generalizations.- Conclusion.-Appendix I. Postcard from Noether to Klein.-Appendix II. Letter from Noether to Klein. -Appendix III. Letter from Klein to Pauli.-Appendix IV. Letter from Noether to Einstein.-Lectures at the Mathematical Society of Göttingen.-References.-Index

Detalles del sistema: Forma de acceso: World Wide Web

ISBN: 9780387878683

Entidades: SpringerLink

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es