

1. Record Nr.	UNINA9910806278703321
Autore	Hassani Sadri
Titolo	From atoms to galaxies : a conceptual physics approach to scientific awareness // by Sadri Hassani
Pubbl/distr/stampa	Boca Raton, FL : , : CRC Press, an imprint of Taylor and Francis, , 2010
ISBN	0-429-06685-6 1-4398-8284-3
Edizione	[First edition.]
Descrizione fisica	1 online resource (728 p.)
Disciplina	530
Soggetti	Physics - Philosophy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Includes CD-ROM"--Title page verso.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Front cover; Contents; Preface; Note to the Reader; Note to the Instructor; Part I: In the Beginning . . . ; Chapter 1: Science Kindles; Chapter 2: A Dark Interlude; Chapter 3: Science Rekindles; Chapter 4: From Heaven to Earth; Chapter 5: Epilogue: Underdetermination?; Part II: Newtonian Era; Chapter 6: Kinematics: Describing Motion; Chapter 7: Dynamics: Cause of Motion; Chapter 8: Further Topics on Motion; Chapter 9: Gravitation; Chapter 10: Epilogue: Determinism; Part III: Waves and Electromagnetism; Chapter 11: Waves; Chapter 12: Electricity; Chapter 13: Magnetism and Electricity Chapter 14: Electromagnetic WavesChapter 15: Epilogue: Mind and Matter; Part IV: Thermodynamics; Chapter 16: Introduction to Probability; Chapter 17: Statistical Mechanics; Chapter 18: Temperature and Heat; Chapter 19: Epilogue: Whole and Parts; Part V: Twentieth Century Physics:Quantum Theory; Chapter 20: Birth of Quantum Theory; Chapter 21: The Atoms; Chapter 22: Quantum Theory I; Chapter 23: Quantum Theory II; Chapter 24: Epilogue: No ""Interpretation""; Part VI: Twentieth Century Physics:Relativity Theory; Chapter 25: Birth of Relativity; Chapter 26: Relativity of Time and Space Chapter 27: Spacetime GeometryChapter 28: E = mc ² ; Chapter 29: General Theory of Relativity; Chapter 30: Epilogue: No ""Marketplace""; Part VII: Twentieth Century Physics:Microcosmology; Chapter 31: On the Experimental Front; Chapter 32: On the Theoretical Front; Chapter 33: Classifying Particles and Forces; Chapter 34: The Standard Model;

Chapter 35: New Age "Physics"; Chapter 36: Epilogue: The Eye of Physics; Part VIII: Twentieth Century Physics: Macrocosmology; Chapter 37: Physics of the Cosmos; Chapter 38: Early Universe; Chapter 39: The Last Epoch
Chapter 40: Epilogue: The Closing Dialogue Part IX: Nature of Science; Chapter 41: Misconceptions about Science; Chapter 42: Characteristics of Science; Chapter 43: Science versus Pseudoscience; Glossary; Answers to Selected Exercises; Bibliography; Back cover

Sommario/riassunto

College students in the United States are becoming increasingly incapable of differentiating between proven facts delivered by scientific inquiry and the speculations of pseudoscience. In an effort to help stem this disturbing trend, *From Atoms to Galaxies: A Conceptual Physics Approach to Scientific Awareness* teaches heightened scientific acuity as it educates students about the physical world and gives them answers to questions large and small. Written by Sadri Hassani, the author of several mathematical physics textbooks, this work covers the essentials of modern physics, in a way that is as thorough as it is compelling and accessible.
