1.	Record Nr.	UNINA9910851988203321
	Autore	Manoukian Edward B.
	Titolo	How Energy Considerations Have Shaped Our Fundamental Modern Theories of Physics : Theory and Key Historical Moments / / by E. B. Manoukian
	Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
	ISBN	9783031511998 3031511999
	Edizione	[1st ed. 2024.]
	Descrizione fisica	1 online resource (XX, 267 p. 59 illus.)
	Disciplina	509
	Soggetti	Physics - History Mathematical physics History of Physics and Astronomy Theoretical, Mathematical and Computational Physics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Chapter 1. The quantum world at Low Energies -- Chapter 2. Higher Energies, Arena of Fundamental Particles, their Classifications and Underlying Symmetries -- Chapter 3. Fields and Dynamical descriptions of Fundamental Particles, the Key Role of Renormalization and its underlying physics -- Chapter 4. High Energies and Switching on Gravity: General Relativity and Great Achievements -- Chapter 5. Quantum Gravity and Difficulties of treatments by Conventional Methods -- Chapter 6. Putting Everything Together to Create the Universe from Scratch and observing it as it ages.
	Sommario/riassunto	At long last, with sufficient technical details, emphasizing key historical moments, a book that develops all of fundamental modern theoretical physics from energy considerations in a compact form. Starting with a few electron-volts of atoms in the quantum world at low energies extending up to quantum gravity and beyond to the birth of the Universe, readers will experience the entire spectrum of fundamental modern theoretical physics, with one theory leading to another in an integrated unified manner. Energy considerations lead to the development of special and general relativity, quantum field theory,

renormalization theory, modern quantum electrodynamics, electro-weak theory, the standard model of particle physics, grand unified theories, string theory, the current standard model of inflationary big bang theory, and even to the birth of the Higgs field, and in developments of quantum gravity. Unfortunately, due to strong specialization within their fields, students and many practicing physicists are exposed only to parts of the beautiful story of modern fundamental physics. Here the entire story is told! This is a must-read book for graduate students, advanced undergraduate students, instructors and professionals who are interested in all aspects of fundamental modern theoretical physics and key historical moments in its development.

2.	Record Nr.	UNINA9910966807603321
	Autore	Atienza Rowel
	Titolo	Advanced deep learning with TensorFlow 2 and Keras : apply DL, GANs, VAEs, deep RL, unsupervised learning, object detection and segmentation, and more / / Rowel Atienza
	Pubbl/distr/stampa	Birmingham, UK : , : Packt Publishing, , 2020
	ISBN	9781838825720
		183882572X
	Edizione	[Second edition.]
	Descrizione fisica	1 online resource (1 volume) : illustrations
	Disciplina	005.133
	Soggetti	Artificial intelligence
		Machine learning
		Python (Computer program language)
		Neural networks (Computer science)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Sommario/riassunto	Updated and revised second edition of the bestselling guide to advanced deep learning with TensorFlow 2 and Keras Key Features Explore the most advanced deep learning techniques that drive modern

AI results New coverage of unsupervised deep learning using mutual information, object detection, and semantic segmentation Completely updated for TensorFlow 2.x Book Description Advanced Deep Learning with TensorFlow 2 and Keras, Second Edition is a completely updated edition of the bestselling guide to the advanced deep learning techniques available today. Revised for TensorFlow 2.x, this edition introduces you to the practical side of deep learning with new chapters on unsupervised learning using mutual information, object detection (SSD), and semantic segmentation (FCN and PSPNet), further allowing you to create your own cutting-edge AI projects. Using Keras as an open-source deep learning library, the book features hands-on projects that show you how to create more effective AI with the most up-to-date techniques. Starting with an overview of multi-layer perceptrons (MLPs), convolutional neural networks (CNNs), and recurrent neural networks (RNNs), the book then introduces more cutting-edge techniques as you explore deep neural network architectures, including ResNet and DenseNet, and how to create autoencoders. You will then learn about GANs, and how they can unlock new levels of AI performance. Next, you'll discover how a variational autoencoder (VAE) is implemented, and how GANs and VAEs have the generative power to synthesize data that can be extremely convincing to humans. You'll also learn to implement DRL such as Deep Q-Learning and Policy Gradient Methods, which are critical to many modern results in AI. What you will learn Use mutual information maximization techniques to perform unsupervised learning Use segmentation to identify the pixel-wise class of each object in an image Identify both the bounding box and class of objects in an image using object detection Learn the building blocks for advanced techniques - MLPss, CNN, and RNNs Understand deep neural networks - including ResNet and DenseNet Understand and build autoregressive models – autoencoders, VAEs, and GANs Discover and implement deep reinforcement learning methods Who this book is for This is not an introductory book, so fluency with Python is required. The reader should also be familiar with some machine learning approaches, and practical experience with DL will also be hel...