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	Altri autori (Persone)	LombardiFabrizio <1955->
		HuangJing <1970->
	Disciplina	621.395
	Soggetti	Cellular automata
		Digital electronics - Design and construction
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	Nota di contenuto	Design and Test of Digital Circuits byQuantum-Dot Cellular Automata; Contents; Preface; Chapter 1 Introduction 1; Chapter 2 Nano Devices and Architectures Overview 11; Chapter 3 QCA 37; Chapter 4 QCA Combinational Logic Design 69; Chapter 5 Logic-Level Testing and Defect Characterization 91; Chapter 6 Two-Dimensional Schemes for Clocking/Timing of QCA Circuits 143; Chapter 7 Tile-Based QCA Design 171; Chapter 8 Sequential Circuit Design in QCA 213; Chapter 9 QCA Memory 247; Chapter 10 Implementing Universal Logic in QCA 287; Chapter 11 QCA Model for Computing and Energy Analysis 305 Chapter 12 Fault Tolerance of Reversible QCA Circuits 327Chapter 13 Conclusion and Future Work 349; Appendix A Preliminary for QCA Mechanical Model 353; Appendix B Validation of Mechanical Model 357; Appendix C Energy Dissipation Analysis of Circuit Units 363; About the Authors 367

Sommario/riassunto   Probing both the science and the engineering involved, this one-of-a-kind resource reviews current microchip fabrication methods and architectures and discusses fundamentals of nanoscale design and DNA self-assembly. Moreover, the book surveys current limitations and challenges, and features detailed case studies of lightweight self-organizing computer architectures. This roadmap to DNA microchip synthesis is essential reading for all engineers and researchers involved in developing nanoscale computer structures, devices, and applications.

2.	Record Nr.	UNINA9911035050703321
	Autore	Hadjali Allel
	Titolo	Deep Learning Theory and Applications : 6th International Conference, DeLTA 2025, Bilbao, Spain, June 12–13, 2025, Proceedings / / edited by Allel Hadjali, Emanuele Maiorana, Oleg Gusikhin, Carlo Sansone
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	Descrizione fisica	1 online resource (525 pages)
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	Altri autori (Persone)	MaioranaEmanuele GusikhinOleg SansoneCarlo
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Nota di contenuto	-- End-to-End ASR Model with Iterative Attention Mechanism Enhanced RNN Model for Phoneme Recognition. -- Diagnostic Trouble Codes Prediction with DTC-GOAT and Ensembles. -- A Fast Fourier Transform-Aided Diffusion-Based U-Net Architecture for Microscopic Medical Image Segmentation. -- Non-Cooperative Game Theory-Aided Learning of CNN Models for Skin Lesion Classification. -- LoRA-Based Summarization of Data Privacy Clauses in Terms and Conditions Documents Aligned with India's 2023 Digital Personal Data Protection Act. -- Comparison of AI Speech-to-Text Systems and Their Application in Artillery Command and Fire Control Systems. -- Rhythm Fusion: Synchronizing Audio and Motion Features for Music-Driven Dance Generation. -- Leveraging Synthetic Data for Deep-Learning-Based Road Crack Segmentation from UAV Imagery. -- Trojan Vulnerabilities in Host-Based Intrusion Detection Systems. -- Identification of Key Feature Interactions via PDP Decomposition. -- Variational Mode Decomposition (VMD) Parameter Selection Using Sine-Cosine Algorithm (SCA): Application on Vibration Signals for Rotating Machinery Monitoring. -- Forecasting Ethereum Prices with Machine Learning, Deep Learning, and Explainable Artificial Intelligence Using Multi-Source Market Articles and Hybrid Sentiment Analysis. -- Application of Neural Networks to Ultrasonic Data for Discrimination of Fat Types in Muscle Tissue Models. -- SwiNight: Class Imbalanced Night-Time Accident Detection with Swin Transformer. -- Enhancing Off-Policy Method SAC with KAN for Continuous Reinforcement Learning. -- Context-Aware Deep Learning for Longitudinal Data Imputation in Parkinson's Disease. -- Investigating Zero-Shot Diagnostic Pathology in Vision-Language Models with Efficient Prompt Design. -- Achieving Zero False Negatives: Optimizing Anomaly Detection with Genetic Neural Architecture Search. -- Whisper-Conformer: A Modified Automatic Speech Recognition for Thai Speech Recognition. -- RevCD: Reversed Conditional Diffusion for Generalized Zero-Shot Learning. -- Toward an Explainable Heatmap-Based Deep Neural Network for Product Defect Classification and Machine Failure Prediction in Industry 4.0. -- Question Answering in a Low-Resource Language: Dataset and Deep Learning Adaptations for Sinhala.
Sommario/riassunto	This book constitutes revised selected papers from the 6th International Conference on Deep Learning Theory and Applications, DeLTA 2025, which took place in Bilbao, Spain, during June 12-13, 2025. The 9 full papers and 13 short papers presented in this volume were carefully reviewed and selected from 42 submissions. The conference is focusing on models and algorithms; machine learning; Big Data analytics; computer vision applications; and natural language understanding. .