

1. Record Nr.	UNINA9910136139503321
Autore	Hoekstra Jaap <1955, >
Titolo	Introduction to nanoelectronic single-electron circuit design / / Jaap Hoekstra
Pubbl/distr/stampa	Singapore : , : Pan Stanford Publishing Pte. Ltd., , [2016] ©2014-2016
ISBN	1-315-34081-X 1-315-36448-4 981-4745-57-X
Edizione	[Second edition.]
Descrizione fisica	1 online resource (349 pages) : illustrations
Disciplina	621.381
Soggetti	Nanoelectronics Electronic circuit design Integrated circuits - Design and construction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction -- 2. Tunneling experiments in nanoelectronics -- 3. Current in electrodynamics and circuit theory -- 4. Free electrons in quantum mechanics -- 5. Current and tunnel current in quantum physics -- 6. Energy in circuit theory -- 7. Energy in the switched two-capacitor circuit -- 8. Impulse circuit model for single-electron tunneling : zero tunneling time -- 9. Impulse circuit model for single-electron tunneling : nonzero tunneling times -- 10. Generalizing the theory to multijunction circuits -- 11. Single-electron tunneling circuit examples -- 12. Circuit design methodologies -- 13. More potential applications and challenges.