1. Record Nr. UNINA9910143747403321

Autore	Enz Christian
Titolo	Charge-based MOS transistor modeling [[electronic resource]] : the EKV model for low-power and RF IC design / / Christian C. Enz, Eric A. Vittoz
Pubbl/distr/stampa	Chichester, England ; ; Hoboken, NJ, : John Wiley, c2006
ISBN	1-280-64993-3 9786610649938 0-470-85546-0 0-470-85545-2
Descrizione fisica	1 online resource (329 p.)
Altri autori (Persone)	VittozEric A. <1938->
Disciplina	621.3815284
Soggetti	Metal oxide semiconductors - Mathematical models Metal oxide semiconductor field-effect transistors - Mathematical models Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. [291]-298) and index.
Nota di contenuto	Charge-based MOS Transistor Modeling; Contents; Foreword; Preface; List of Symbols; 1 Introduction; 1.1 The Importance of Device Modeling for IC Design; 1.2 A Short History of the EKV MOS Transistor Model; 1.3 The Book Structure; Part I The Basic Long-Channel Intrinsic Charge-Based Model; 2 Definitions; 2.1 The N-channel Transistor Structure; 2.2 Definition of Charges, Current, Potential, and Electric Fields; 2.3 Transistor Symbol and P-Channel Transistor; 3 The Basic Charge Model; 3.1 Poisson's Equation and Gradual Channel Approximation; 3.2 Surface Potential as a Function of Gate Voltage 3.3 Gate Capacitance3.4 Charge Sheet Approximation; 3.5 Density of Mobile Inverted Charge; 3.5.1 Mobile Charge as a Function of Gate Voltage and Surface Potential; 3.5.2 Mobile Charge as a Function of Channel Voltage and Surface Potential; 3.6 Charge-Potential Linearization; 3.6.1 Linearization of Qi (s); 3.6.2 Linearized Bulk Depletion Charge Qb; 3.6.3 Strong Inversion Approximation; 3.6.4 Evaluation of the Slope Factor; 3.6.5 Compact Model Parameters; 4

Sommario/riassunto

Modern, large-scale analog integrated circuits (ICs) are essentially composed of metal-oxide semiconductor (MOS) transistors and their interconnections. As technology scales down to deep sub-micron dimensions and supply voltage decreases to reduce power consumption, these complex analog circuits are even more dependent on the exact behavior of each transistor. High-performance analog circuit design requires a very detailed model of the transistor, describing accurately its static and dynamic behaviors, its noise and matching limitations and its temperature variations. The charge-based EKV (Enz

2. Record Nr.	UNINA9910765536303321
Titolo	Future Housing / / edited by Alessandra Battisti, Assed Haddad
Pubbl/distr/stampa	London : , : IntechOpen, , 2023
ISBN	1-83768-177-5
Descrizione fisica	1 online resource (184 pages)
Disciplina	363.5
Soggetti	Housing policy Housing - Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Perspective Chapter: Imperative of Nigerian Demographics for Green Housing -- 2. Perspective Chapter: Promoting Circular Design Strategies in Housing Delivery in Nigeria -- 3. Experimental Living and Housing Forms: Cities of the Future as Sustainable and Integrated Places of Food Production -- 4. Mobile Housing as an Initial Proposal to Manage Informal Territories Exposed to Disaster Risks -- 5. Morphological Evolution of Single-Family Dwellings: A Prospective towards 2100 -- 6. Regenerate Corviale -- 7. Perspective Chapter: Reimaging Affordable Housing through Adaptive Reuse of Built Heritage -- 8. Contemporary Challenges and Future Strategies to Mitigate Social Inequality in Urban Housing: An Austrian Perspective -- 9. Perspective Chapter: Is Expecting Older People to Downsize to Help Solve the Nation's Housing Crisis Really Such a Good Move?.
Sommario/riassunto	Global population growth, exposure to climate-driven risks, continuous ongoing economic crises, persistent levels of poverty, migration phenomena, exponential increase in the use of digital technology and consequent digital divide, and the urgent demand for more equal spaces are amongst the major drivers of change within the housing sector. This book seeks to envision some of the future housing scenarios, outlining a series of possible transformations that will affect the global housing models in the coming years. The essays in the book are not intended to provide predictions on housing, but rather to try to grasp how social attitudes, economic values, and technologies

employed are changing. The issues addressed range from exploring the potential of green and digital strategies both in regenerating existing building heritage and in new construction within developing countries to addressing the humanitarian challenges of climate change and mitigating social inequality.