1. Record Nr. UNINA9910787277203321

Titolo	Scientific computing in electrical engineering / / Jan Sykulski, editor
Pubbl/distr/stampa	Bradford, [England] : , : Emerald Insight, , 2014 2014
ISBN	1-78350-765-9
Descrizione fisica	1 online resource (417 p.)
Collana	COMPEL - The international journal for computation and mathematics in electrical and electronic engineering, , 0332-1649 ; ; Volume 33, Number 4
Disciplina	621.3
Soggetti	Electrical engineering - Data processing Electrical engineering
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.
Nota di contenuto	Cover; Editorial advisory board; Editorial; A reduced basis method for microwave semiconductor devices with geometric variations; Broadband surface impedance boundary conditions for higher order time domain discontinuous Galerkin method; Polynomial fitting of nonlinear sources with correlating inputs; Multiscale simulation of organic heterojunction light harvesting devices; Index-aware model order reduction: LTI DAEs in electric networks; Dielectric breakdown simulations of an OLTC in a transformer ; Robust DC and efficient time-domain fast fault simulation Efficient convolution based impedance boundary conditionsOptimal frequency sweep method in multi-rate circuit simulation; Heat generation in silicon nanometric semiconductor devices; An efficient algorithm for a certain class of robust optimization problems; Quasi 3D modelling and simulation of axial flux machines; Convergence behaviour of coupled pressure and thermal networks; Extended Brauer model for ferromagnetic materials: analysis and computation; Analyzing distortion contributions in a complex device model; Modeling of streamers in transformer oil using OpenFOAM Back-reflector design in thin-film silicon solar cells by rigorous 3D light propagation modeling A novel and fast voltage estimation scheme for assessment of power system component outages; A two-step

	model to optimise transcutaneous electrical stimulation of the human upper arm; A multi-valve controlled saturable reactor and its harmonic optimization; Distorted constriction contact resistance between clamped slabs; Efficient evaluation of the earth return mutual impedance of overhead conductors over a horizontally multilayered soil Simulation of charge packet formation in layered polymer filmIso-geometric shape optimization of magnetic density separators; Design and performance analysis of live model of Bessel beamformer for adaptive array system; Control of limit cycles in buck converters; Through silicon vias: from a physical point of view to a compact models initiation
Sommario/riassunto	The Scientific Computing in Electrical Engineering (SCEE) 2012 conference was held September 11-14, 2012 in Zurich Switzerland.The focus of SCEE is on the following topics, with an emphasis on communicating new ideas and algorithms for numerical simulations: computational electromagnetics; circuit and device modelling and simulation; coupled problems; mathematical and computational methods; and model order reduction.Seventeen selected contributions to the conference are published in this ebook of COMPEL and were subject to the journal's regular peer-reviewing procedures.