

1. Record Nr.	UNINA9910554815403321
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Titolo	Transient analysis of power systems : a practical approach / / edited by Juan A. Martinez-Velasco, Retired Professor, Polytechnic University of Catalonia, Barcelona, Spain
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley-IEEE Press, , 2020 [Piscataway, New Jersey] : , : IEEE Xplore, , [2019]
ISBN	1-119-48049-3 1-119-48054-X 1-119-48030-2
Descrizione fisica	1 online resource (621 pages)
Disciplina	621.31921
Soggetti	Transients (Electricity) - Simulation methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
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Sommario/riassunto

"This book is aimed at illustrating how the traditional capabilities and the new software and hardware capabilities can be used to carry out the usual transient studies and making possible new and more complex studies. The topics span an introduction to some advanced applications, involving the creation of custom-made models and tools, and the application of multicore environments for advanced studies. All studies will be supported by practical examples and simulation results. Although an introduction to the electromagnetic transients analysis of power systems is covered, a minimum knowledge on power systems transients is advisable. Part I will cover general aspects of the transient analysis (e.g. modelling guidelines, solution techniques, capabilities of a transients tool). Part II will be dedicated to the usual application of a transient tool (e.g. overvoltages, power quality studies, simulation of power electronics devices) plus an introduction to the transient analysis using the ATP. Part III will illustrate how to expand ATP capabilities and applications by creating new models, library of models, or building open systems for optimum selection of power system component parameters"--