Record Nr. UNINA9910483652803321 Transactions on computational science VII / / Marina L. Gavrilova, C.J. **Titolo** Kenneth Tan (eds.) Pubbl/distr/stampa Berlin; ; New York, : Springer-Verlag, c2010 **ISBN** 1-280-38545-6 9786613563378 3-642-11389-3 Edizione [1st ed. 2010.] Descrizione fisica 1 online resource (163 p. 73 illus.) Lecture notes in computer science, , 0302-9743;; 5890 Collana Altri autori (Persone) GavrilovaMarina L TanC. J. Kenneth (Chih Jeng Kenneth) Disciplina 518 Soggetti Computational complexity Computer science Numerical calculations - Data processing Research - Data processing Science - Data processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1: Computations of Stochastic Systems Guest Editor: Magdy A. El-Tawil -- Mean Square Convergent Numerical Methods for Nonlinear Random Differential Equations -- A Discrete-Time Geo/G/1 Retrial Queue with Starting Failures and Impatient Customers -- Using Homotopy-WHEP Technique in Solving Nonlinear Diffusion Equation with Stochastic No Homogeneity -- Itô-Stratonovitch Formula for the Wave Equation on a Torus -- The Solution of Non-linear Diffusion Equation under Stochastic Nonhomogeneity Using Symbolic WHEP and Pickard Algorithms -- 2: Computational Methods for Complex Systems -- An Analysis of Secure Processor Architectures -- Compensation of the Scheme Dispersion and Dissipation by Artificial Non-linear Additions --Retracted: New Mathematical Conception and Computation Algorithm for Study of Quantum 3D Disordered Spin System under the Influence

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System under the Influence of External Field.

## Sommario/riassunto

The LNCS journal Transactions on Computational Science reflects recent developments in the field of Computational Science, conceiving the field not as a mere ancillary science but rather as an innovative approach supporting many other scientific disciplines. The journal focuses on original high-quality research in the realm of computational science in parallel and distributed environments, encompassing the facilitating theoretical foundations and the applications of large-scale computations and massive data processing. It addresses researchers and practitioners in areas ranging from aerospace to biochemistry, from electronics to geosciences, from mathematics to software architecture, presenting verifiable computational methods, findings and solutions and enabling industrial users to apply techniques of leadingedge, large-scale, high performance computational methods. The 7th issue of the Transactions on Computational Science journal is devoted to core computational science techniques, such as grid computing, advanced numerical methods, and stochastic systems. It has been divided into two parts. The five papers in Part I focus on computations of stochastic systems and the four papers in Part II focus on computational methods for complex systems.