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Nota di contenuto	On a Continuous Energy Monte Carlo Simulator for Neutron Transport: Optimisiation with Fission, Intermediate, and Thermal Distributions -- The Use of Similarity Indices in the Analysis of Temporal Distribution of Mammals -- The Method of Superposition for Near-Field Acoustic Holography in a Semi-anechoic Chamber -- Application of Stochastic Dynamic Programming in Demand Dispatch-ased Optimal Operation of a Micro-grid -- Spectral Boundary Element Algorithms for Multi-Length Interfacial Dynamics -- Kinect Depth Recovery Based on Local Filters and Plane Primitives -- On the Neutron Point Kinetic Equation with Reactivity Decomposition Based on Two Time Scales -- Iterated Kantorovich vs Kulkarni Method for Fredholm Integral Equations -- Infiltration Simulation in Porous Media: A Universal Functional Solution for Unsaturated Media -- Mathematical Models of Cell Clustering Due to Chemotaxis -- An Acceleration Approach for Fracture Problems in

the Extended Boundary Element Method (XBEM) Framework -- Flux Characterization in Heterogeneous Transport Problems by the Boundary Integral Method -- GPU Based Mixed Precision PWR depletion Calculation -- 2D Gauss-Hermite Quadrature Method for Jump-Diffusion PIDE Option Pricing Models -- Online Traffic Prediction Using Time Series: A Case Study -- Mathematical Modeling of One-Dimensional Oil Displacement by Combined Solvent-Thermal Flooding -- Collocation Methods for Solving Two-Dimensional Neural Field Models on Complex Triangulated Domains -- Kulkarni Method for the Generalized Airfoil Equation -- Droplet Deposition and Coalescence in Curved Pipes -- Shifting Strategy in the Spectral Analysis for the Spectral Green's Function Nodal Method for Slab-Geometry Adjoin Transport Problems in the Discrete Ordinates Formulation -- A Metaheuristic Approach for an Optimized Design of a Silicon Carbide Operational Amplifier -- Severe Precipitation in Brazil: Data Mining Approach -- Shifting the Boundary Conditions to the Middle Surface in the Numerical Solution of Neumann Boundary Value Problems Using Integral Equations -- Performance Assessment of a New FFT Based High Impedance Fault Detection Scheme -- H2 Matrix and Integral Equation for Electromagnetic Scattering by a Perfectly Conducting Object -- Fast Parameter Estimation for Cancer Cell Progression and Response to Therapy -- Development of a Poroelastic Model of Spinal Cord Cavities -- A Semi-analytical Solution for a Buildup Test for a Horizontal Well in an Anisotropic Gas Reservoir -- Counter-Gradient Term Applied to the Turbulence Parameterization in the BRAMS -- Index.

Sommario/riassunto

This contributed volume contains a collection of articles on the most recent advances in integral methods. The second of two volumes, this work focuses on the applications of integral methods to specific problems in science and engineering. Written by internationally recognized researchers, the chapters in this book are based on talks given at the Fourteenth International Conference on Integral Methods in Science and Engineering, held July 25-29, 2016, in Padova, Italy. A broad range of topics is addressed, such as: • Boundary elements • Transport problems • Option pricing • Gas reservoirs • Electromagnetic scattering This collection will be of interest to researchers in applied mathematics, physics, and mechanical and petroleum engineering, as well as graduate students in these disciplines, and to other professionals who use integration as an essential tool in their work.