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Soggetti	Computer mathematics Applied mathematics Engineering mathematics Physics Fluid mechanics Probabilities Statistics Computational Science and Engineering Applications of Mathematics Numerical and Computational Physics, Simulation Engineering Fluid Dynamics Probability Theory and Stochastic Processes Statistics for Business, Management, Economics, Finance, Insurance
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1 Frequency Domain and Time Domain Response of the Horizontal Grounding Electrode Using the Antenna Theory Approach: D. Poljak -- 2 On the Use of Analytical Methods in Electromagnetic Compatibility and Magnetohydrodynamics: S. Sesnic and D. Poljak -- 3 Analysis of Horizontal Thin-Wire Conductor Buried in Lossy Ground: New Model for Sommerfeld Type Integral: M. Rancic et al -- 4 Comparison of TL, Point-Matching and Hybrid Circuit Method Analysis of a Horizontal

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#### Sommario/riassunto

This book highlights the latest advances in engineering mathematics with a main focus on the mathematical models, structures, concepts, problems and computational methods and algorithms most relevant for applications in modern technologies and engineering. In particular, it features mathematical methods and models of applied analysis, probability theory, differential equations, tensor analysis and computational modelling used in applications to important problems concerning electromagnetics, antenna technologies, fluid dynamics, material and continuum physics and financial engineering. The individual chapters cover both theory and applications, and include a wealth of figures, schemes, algorithms, tables and results of data analysis and simulation. Presenting new methods and results, reviews of cutting-edge research, and open problems for future research, they equip readers to develop new mathematical methods and concepts of their own, and to further compare and analyse the methods and results discussed. The book consists of contributed chapters covering research developed as a result of a focused international seminar series on mathematics and applied mathematics and a series of three focused international research workshops on engineering mathematics organised by the Research Environment in Mathematics and Applied Mathematics at Mälardalen University from autumn 2014 to autumn 2015: the International Workshop on Engineering Mathematics for Electromagnetics and Health Technology; the International Workshop on Engineering Mathematics, Algebra, Analysis and Electromagnetics; and the 1st Swedish-Estonian International Workshop on Engineering Mathematics, Algebra, Analysis and Applications. It serves as a source of inspiration for a broad spectrum of researchers and research students in applied mathematics, as well as in the areas of applications of mathematics considered in the book. .

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