1. Record Nr. UNINA9910464036003321 Autore Makarov Sergey N. Titolo Low-frequency electromagnetic modeling for electrical and biological systems using MATLAB / / Sergey N. Makarov, Gregory M. Noetscher, Ara Nazarian Hoboken, New Jersey:,: Wiley,, 2016 Pubbl/distr/stampa ©2016 **ISBN** 1-119-05246-7 Descrizione fisica 1 online resource (619 p.) Disciplina 621.382/24028553 Soggetti ELF electromagnetic fields - Mathematical models Electromagnetic devices - Computer simulation Electromagnetism - Computer simulation Bioelectromagnetism - Computer simulation Electronic books. 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 at the end of each chapters and index. Title Page: Copyright Page: Contents: Preface: Acknowledgments: About Nota di contenuto the Companion Website; Part I Low-Frequency Electromagnetics. Computational Meshes. Computational Phantoms; Chapter 1 Classification of Low-Frequency Electromagnetic Problems. Poisson and Laplace Equations in Integral Form; INTRODUCTION; 1.1 CLASSIFICATION OF LOW-FREQUENCY ELECTROMAGNETIC PROBLEMS; PROBLEMS; 1.2 POISSON AND LAPLACE EQUATIONS, BOUNDARY CONDITIONS, AND INTEGRAL EQUATIONS; PROBLEMS; REFERENCES; Chapter 2 Triangular Surface Mesh Generation and Mesh Operations; INTRODUCTION: 2.1 TRIANGULAR MESH AND ITS QUALITY PROBLEMS2.2 DELAUNAY TRIANGULATION. 3D VOLUME AND SURFACE MESHES; PROBLEMS; 2.3 MESH OPERATIONS AND TRANSFORMATIONS; PROBLEMS: 2.4 ADAPTIVE MESH REFINEMENT AND MESH DECIMATION: 2.5 SUMMARY OF MATLAB® SCRIPTS; PROBLEMS; REFERENCES; Chapter 3 Triangular Surface Human Body Meshes for Computational Purposes;

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