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| Nota di contenuto       | Title Page; Copyright Page; Contents; Preface; Acknowledgments; About 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; INTRODUCTION; 3.1 REVIEW OF AVAILABLE COMPUTATIONAL HUMAN |

BODY PHANTOMS AND DATASETS; 3.2 TRIANGULAR HUMAN BODY SHELL MESHES INCLUDED WITH THE TEXT; PROBLEMS; 3.3 VHP-F WHOLE-BODY MODEL INCLUDED WITH THE TEXT; PROBLEMS;

## REFERENCES

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Chapter 4 Electrostatics of Conductors. Fundamentals of the Method of Moments. Adaptive Mesh Refinement; INTRODUCTION; 4.1 ELECTROSTATIC OF CONDUCTORS. MoM (SURFACE CHARGE FORMULATION); PROBLEMS; 4.2 GAUSSIAN QUADRATURES. POTENTIAL INTEGRALS. ADAPTIVE MESH REFINEMENT; PROBLEMS; 4.3 SUMMARY OF MATLAB® MODULES; REFERENCES; Chapter 5 Theory and Computation of Capacitance. Conducting Objects in External Electric Field; INTRODUCTION; 5.1 CAPACITANCE DEFINITIONS: SELF-CAPACITANCE; PROBLEMS  
5.2 CAPACITANCE OF TWO CONDUCTING OBJECTS PROBLEMS; 5.3 SYSTEMS OF THREE CONDUCTING OBJECTS; PROBLEMS; 5.4 ISOLATED CONDUCTING OBJECT IN AN EXTERNAL ELECTRIC FIELD; PROBLEMS; 5.5 SUMMARY OF MATLAB® MODULES; REFERENCES; Chapter 6 Electrostatics of Dielectrics and Conductors; INTRODUCTION; 6.1 DIELECTRIC OBJECT IN AN EXTERNAL ELECTRIC FIELD; PROBLEMS; 6.2 COMBINED METAL-DIELECTRIC STRUCTURES; PROBLEMS; 6.3 APPLICATION EXAMPLE: MODELING CHARGES IN CAPACITIVE TOUCHSCREENS; PROBLEMS; 6.4 SUMMARY OF MATLAB® MODULES; REFERENCES  
Chapter 7 Transmission Lines: Two-Dimensional Version of the Method of Moments INTRODUCTION; 7.1 TRANSMISSION LINES: VALUE OF THE ELECTROSTATIC MODEL-ANALYTICAL SOLUTIONS; PROBLEMS; 7.2 THE 2D VERSION OF THE MOM FOR TRANSMISSION LINES; PROBLEMS; 7.3 SUMMARY OF MATLAB® MODULES; REFERENCES; Chapter 8 Steady-State Current Flow; INTRODUCTION; 8.1 BOUNDARY CONDITIONS. INTEGRAL EQUATION. VOLTAGE AND CURRENT ELECTRODES; PROBLEMS; 8.2 ANALYTICAL SOLUTIONS FOR DC FLOW IN VOLUMETRIC CONDUCTING OBJECTS; PROBLEMS; 8.3 MoM ALGORITHM FOR DC FLOW. CONSTRUCTION OF ELECTRODE MESH; PROBLEMS  
8.4 APPLICATION EXAMPLE: EIT

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