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Nota di contenuto	Particle-in-Cell Simulation of Plasmas— A Tutorial -- Parallel 3-D Electromagnetic Particle Code Using High Performance FORTRAN: Parallel TRISTAN -- Full Particle Electromagnetic Simulation of Collisionless Shocks -- Simulation of Electron Beam Instabilities and Nonlinear Potential Structures -- Kinetic Simulation of Inhomogeneous Plasma with a Variable Sized Grid System -- Low Noise Electrostatic and Electromagnetic Delta-f Particle-in-Cell Simulation of Plasmas -- Particle Simulation of Dusty Plasmas -- Hybrid Simulation Codes: Past, Present and Future—A Tutorial -- Hall Magnetohydrodynamics - A Tutorial -- Fluid Plasma Simulation of Coupled Systems: Ionosphere and Magnetosphere -- Global Magnetohydrodynamics — A Tutorial --

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Sommario/riassunto	This topical volume has been written with the explicit aim to provide a high-level introductory book for a field where there were no elementary textbooks available. It addresses postgraduate students and young scientists investigating space plasma physics or planning to specialize in this field. Experienced researchers will find this book to be a comprehensive source of reference as well as a source of advanced topics for their courses.