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Nota di contenuto	<p>Intro -- NEURAL COMPUTATION AND PARTICLE ACCELERATORS: RESEARCH, TECHNOLOGY AND APPLICATIONS -- NEURAL COMPUTATION AND PARTICLE ACCELERATORS: RESEARCH, TECHNOLOGY AND APPLICATIONS -- CONTENTS -- PREFACE --</p> <p>Chapter 1 MAGNETIC FRINGE FIELDS AND INTERFERENCE IN HIGH-INTENSITY ACCELERATORS -- Abstract -- I. Introduction -- II. Magnet Modeling -- A. Overview of Simulation Codes -- B. A Modeling Example -- III. 3D Field Multipole Expansion -- A. Review of Theory -- B. Expansion Techniques -- C. On-Axis Gradients -- D. A 5th-Order Representation -- E. Higher-Order Effects -- IV. Particle Optics in a Single Quad -- A. Simulation Model and 3D Multipole Expansion -- B. Form Factor Theory on Magnetic Fringe Field -- C. Linear Transfer Matrices from the Trajectory Equations -- D. Lens Parameters and Hard Edge Models -- E. Third-Order Aberrations -- F. Particle Optics In 30Q44 -- V. Magnetic Interference between Two Magnets -- A. Change in Linear Focusing Function -- B. Magnetic Interference as a First-Order Perturbation -- C. Hard Edge Models for a Perturbed Quad -- VI. Particle Optics in Quad Doublet Assembly -- A. Two-Dimensional Field Parameters -- B. Magnetic Fringe and Interference -- C. Linear Transfer Matrices and Hard Edge Models -- D. Third-Order Aberrations -- E. Verification of Particle Trajectories -- VII. Particle Tracking in Beam Lines -- A. SNS Ring Injection and Beam Losses in Its Dump Line -- B.</p>

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