

Frances Bauer
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Magnetohydrodynamic Equilibrium and Stability of Stellarators



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Magnetohydrodynamic Equilibrium And Stability Of Stellarators

Arjun Goswami



Magnetohydrodynamic Equilibrium And Stability Of Stellarators:

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Stellarator and Heliotron Devices Masahiro Wakatani, 1998 This monograph describes plasma physics for magnetic confinement of high temperature plasmas in nonaxisymmetric toroidal magnetic fields or stellarators. The techniques are aimed at controlling nuclear fusion for continuous energy production. While the focus is on the nonaxisymmetric toroidal field or heliotron developed at Kyoto University, the physics applies equally to other stellarators and axisymmetric tokamaks. The author covers all aspects of magnetic confinement: formation of magnetic surfaces, magnetohydrodynamic equilibrium and stability, single charged particle confinement, neoclassical transport and plasma heating. He also reviews recent experiments and the prospects for the next generation of devices.

Computational Techniques And Applications: Ctac 95 - Proceedings Of The Seventh Biennial Conference Robert L May, Alan K Easton, 1996-08-30 This proceedings contains seven invited papers and 100 contributed papers. The topics covered range from studies of theoretical aspects of computational methods through to simulations of large scale industrial processes with an emphasis on the efficient use of computers to solve practical problems. Developers and users of computational techniques who wish to keep up with recent developments in the application of modern computational technology to problems in science and engineering will find much of interest in this volume.

Fundamentals of Plasma Physics and Controlled Fusion Arjun Goswami, 2025-02-20 Fundamentals of Plasma Physics and Controlled Fusion is a comprehensive guide to plasma physics and the quest for controlled fusion energy. We explore the study of plasmas, the fourth state of matter made up of charged particles, and delve into the potential of controlled fusion to create clean energy by fusing atomic nuclei. We cover the basics of plasma physics including plasma behavior and

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