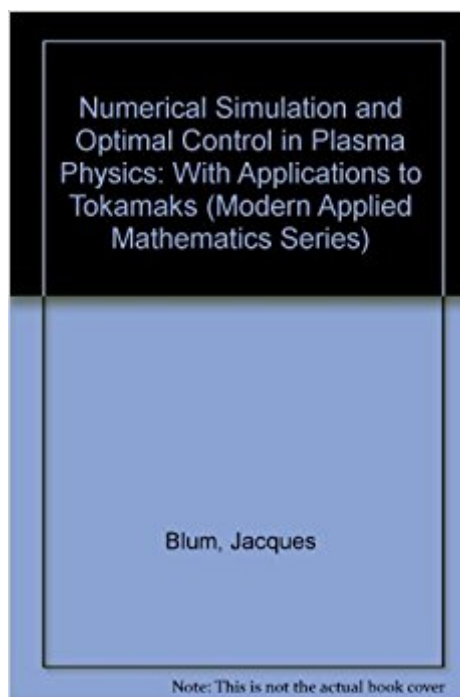




The book was found

Numerical Simulation And Optimal Control In Plasma Physics: With Applications To Tokamaks (Modern Applied Mathematics Series)



Synopsis

This monograph on modelling, numerical simulation, and optimal control of equilibrium of the plasma in Tokamak fusion reactors covers new generation designs which have just entered service (JET, TFTR, and JT60), are under construction (TORE Supra), or are projected (INTOR and NET). The first five chapters deal with the stationary problem of axisymmetric equilibrium of the plasma--modelling and numerical simulation, mathematical existence of a solution for a simplified model, and identification and static control of the boundary of the plasma. Two final chapters treat the evolution of equilibrium on the time-scale of thermal diffusion in the plasma, and the stability and dynamic control of displacements of the plasma.

Book Information

Series: Modern Applied Mathematics Series (Book 6)

Paperback: 382 pages

Publisher: Wiley; 1 edition (March 1989)

Language: English

ISBN-10: 0471921874

ISBN-13: 978-0471921875

Product Dimensions: 7.5 x 1 x 10.6 inches

Shipping Weight: 2 pounds

Average Customer Review: Be the first to review this item

Best Sellers Rank: #8,910,158 in Books (See Top 100 in Books) #48 in [Books > Textbooks > Engineering > Nuclear Engineering](#) #1598 in [Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Nuclear](#) #5006 in [Books > Science & Math > Physics > Solid-State Physics](#)

Customer Reviews

This monograph on modelling, numerical simulation, and optimal control of equilibrium of the plasma in Tokamak fusion reactors covers new generation designs which have just entered service (JET, TFTR, and JT60), are under construction (TORE Supra), or are projected (INTOR and NET). The first five chapters deal with the stationary problem of axisymmetric equilibrium of the plasma--modelling and numerical simulation, mathematical existence of a solution for a simplified model, and identification and static control of the boundary of the plasma. Two final chapters treat the evolution of equilibrium on the time-scale of thermal diffusion in the plasma, and the stability and dynamic control of displacements of the plasma.

[Download to continue reading...](#)

Numerical Simulation and Optimal Control in Plasma Physics: With Applications to Tokamaks (Modern Applied Mathematics Series) Fundamental Aspects of Plasma Chemical Physics: Transport (Springer Series on Atomic, Optical, and Plasma Physics) Introduction to plasma physics and controlled fusion. Volume 1, Plasma physics Tokamak Plasma: A Complex Physical System, (Plasma Physics) Industrial Plasma Engineering: Applications to Nonthermal Plasma Processing, Vol. 2 Laser Interaction and Related Plasma Phenomena (Laser Interaction & Related Plasma Phenomena) Tokamaks (The International Series of Monographs on Physics) Differential Equations and Their Applications: An Introduction to Applied Mathematics (Texts in Applied Mathematics) (v. 11) Numerical Mathematics (Texts in Applied Mathematics) Quantum Entanglement in Electron Optics: Generation, Characterization, and Applications (Springer Series on Atomic, Optical, and Plasma Physics) Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics) (International Series in Pure & Applied Mathematics) Stochastic Models, Information Theory, and Lie Groups, Volume 2: Analytic Methods and Modern Applications (Applied and Numerical Harmonic Analysis) The Physics Of Laser Plasma Interactions (Frontiers in Physics) Introduction to Plasma Physics: With Space, Laboratory and Astrophysical Applications Numerical Analysis: Mathematics of Scientific Computing (The Sally Series; Pure and Applied Undergraduate Texts, Vol. 2) Numerical Solution of Partial Differential Equations: Finite Difference Methods (Oxford Applied Mathematics and Computing Science Series) Applied Functional Analysis: Applications to Mathematical Physics (Applied Mathematical Sciences) (v. 108) Introduction to the Foundations of Applied Mathematics (Texts in Applied Mathematics) Functions, Spaces, and Expansions: Mathematical Tools in Physics and Engineering (Applied and Numerical Harmonic Analysis) Tokamaks (Oxford Engineering Science Series)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)