

Zeitschrift: L'Enseignement Mathématique
Herausgeber: Commission Internationale de l'Enseignement Mathématique
Band: 48 (2002)
Heft: 1-2: L'ENSEIGNEMENT MATHÉMATIQUE

Kapitel: Mécanique quantique

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 06.08.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

governed primarily by their propagation environments. The topics covered include reflection, refraction, the propagation of interfacial waves, integral representations, radiation and diffraction, and propagation in closed and open waveguides.

Mécanique des fluides, acoustique

B. E. LAUNDER, N. D. SANDHAM, (Editors). — **Closure strategies for turbulent and transitional flows.** — Un vol. relié, 18,5×25, de XIII, 754 p. — ISBN 0-521-79208-8. — Prix: £85.00. — Cambridge University Press, Cambridge, 2002.

Turbulence modelling is a critically important area in any industry dealing with fluid flow, having many implications for computational fluid dynamics (CFD) codes. The work, which has grown out of a two-week instructional conference at the Newton Institute in Cambridge, is designed to serve as a graduate-level textbook and, equally, as a reference book for research workers in industry or academia. It is structured in three parts: physical and numerical techniques, flow types and processes, future directions.

Thermodynamique classique, propagation de la chaleur

Glenn R. FULFORD, Philip BROADBRIDGE. — **Industrial mathematics: case studies in the diffusion of heat and matter.** — Australian Mathematical Society lecture series, vol. 16. — Un vol. broche, 15×23, de XII, 202 p. — ISBN 0-521-00181-1. — Prix: £17.95 (relié: £47.50). — Cambridge University Press, Cambridge, 2001.

The focus in this text is on mathematical modelling stimulated by contemporary industrial problems involving heat conduction and mass diffusion. These include continuous metal casting, laser drilling, spontaneous combustion of industrial waste, water filtration and crop irrigation. The industrial problems prove to be an excellent setting for the introduction and reinforcement of modelling skills, equation solving techniques, qualitative understanding of partial differential equations and their dynamical properties. Mathematical topics include setting up partial differential equations and boundary conditions, dimensional analysis, scaling, perturbation expansions, boundary values problems, Fourier series, symmetry reductions, Stefan problems and bifurcations.

Mécanique quantique

Victor KAC, Pokman CHEUNG. — **Quantum calculus.** — Universitext. — Un vol. broché, 15,5×23,5, de IX, 112 p. — ISBN 0-387-95341-8. — Prix: € 34.95. — Springer, New York, 2002.

Simply put, quantum calculus is ordinary calculus without taking limits. This undergraduate text develops two types of quantum calculi, the q -calculus and the h -calculus. As this book develops quantum calculus along the lines of traditional calculus, the reader discovers, with a remarkable inevitability, many important notions and results of classical mathematics. This book is based on lectures and seminars given by Professor Kac over the last few years at MIT.

Astronomie et astrophysique

Mikhail Ya. MAROV, Aleksander V. KOLESNICHENKO. — **Mechanics of turbulence of multicomponent gases.** — Astrophysics and space science library, vol. 269. — Un vol. relié, 16,5×24,5, de XIII, 375 p. — ISBN 1-4020-0103-7. — Prix: € 144.00. — Kluwer Academic Publishers, Dordrecht, 2002.

This book develops a new mathematical approach for modeling multicomponent gas turbulence that adequately describes the combined processes of dynamics and heat and mass