

Zeitschrift: L'Enseignement Mathématique
Herausgeber: Commission Internationale de l'Enseignement Mathématique
Band: 45 (1999)
Heft: 3-4: L'ENSEIGNEMENT MATHÉMATIQUE

Kapitel: Equations différentielles ordinaires

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: 19.08.2025

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

Fonctions spéciales

Adhemar BULTHEEL, Pablo GONZALEZ-VERA, Erik HENDRIKSEN, Olav NJASTAD. — **Orthogonal rational functions.** — Cambridge monographs on applied and computational mathematics, vol. 5. — Un vol. relié, $15,5 \times 23,5$, de xiv, 403 p. — ISBN 0-521-65006-2. — Prix : £37.50. — Cambridge University Press, Cambridge, 1999.

This book generalizes the classical theory of orthogonal polynomials on the complex unit circle or on the real line to orthogonal rational functions whose poles are among a prescribed set of complex numbers. The first part treats the case where these poles are all outside the unit disk or in the lower half plane. Classical topics such as recurrence relations, numerical quadrature, interpolation properties, Favard theorems, convergence, asymptotics, and moment problems are generalized and treated in detail. The same topics are discussed for the different situation where the poles are located on the unit circle or on the extended real line. In the last chapter, several applications are mentioned including linear prediction, Pisarenko modeling, lossless inverse scattering, and network synthesis.

P.A. DEIFT. — **Orthogonal polynomials and random matrices: a Riemann-Hilbert approach.** — Courant lecture notes in mathematics, vol. 3. — Un vol. broché, $15 \times 22,5$, de 273 p. — ISBN 0-9658703-2-4. — Prix: US\$20.00. — Courant Institute of Mathematical Sciences, New York, 1999.

Riemann-Hilbert problems. — Jacobi operators. — Orthogonal polynomials. — Continued fractions. — Random matrix theory. — Equilibrium measures. — Asymptotics for orthogonal polynomials. — Universality.

Équations différentielles ordinaires

D.W. JORDAN, P. SMITH. — **Nonlinear ordinary differential equations: an introduction to dynamical systems.** — Third edition. — Oxford applied and engineering mathematics, vol. 2. Un vol. broché, $15,5 \times 23,5$, de x, 550 p. — ISBN 0-19-856562-3. — Prix : £21.95. — Oxford University Press, Oxford, 1999.

The text of this third edition has been completely revised to bring it into line with current interest and research in the subject, including an expansion of the material on bifurcation and chaos. The book is directed towards practical application of the theory, with several hundred examples and problems covering a wide variety of applications. Prerequisites are kept to a minimum. Further topics covered include phase plane analysis, nonlinear damping, small parameter expansions and singular perturbations, subharmonic responses, stability, Liapunov methods, existence theory of limit cycles, Poincaré sequences and homoclinic bifurcation.

Équations aux dérivées partielles

Heinrich G.W. BEGEHR, Robert P. GILBERT, Guo-Chen WEN, (Editors). — **Partial differential and integral equations.** — International Society for Analysis, Applications and Computation, vol. 2. — Un vol. relié, $17 \times 24,5$, de x, 369 p. — ISBN 0-7923-5482-6. — Prix : Dfl. 280.00. — Kluwer Academic Publishers, Dordrecht, 1999.

Recent results on partial differential equations as well as with complex analytic methods, on singular integral equations and on related subjects are presented. Many of the contributions are survey articles. Topics ranging from elliptic, parabolic, hyperbolic, mixed-type equations and