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interacting particle systems, and various topics related to statistical mechanics. In the last several years, substantial progress has been made in a number of directions: fluctuations of 2-dimensional growth processes, Wulf constructions in higher dimensions for percolation, Potts and Ising models, classification of random walks in random environments, the introduction of the stochastic Loewner equation, the rigorous proof of intersection exponents for planar Brownian motion, and finally the proof of conformal invariance for critical percolation on the triangular lattice. All of the articles are an outgrowth of the fourth Brazilian School of Probability, held in Mambucaba, Brazil, August 2000.

Statistique

C. HUBER-CAROL, N. BALAKRISHNAN, M. S. NIKULIN, M. MESBAH, (Editors). — **Goodness-of-fit tests and model validity**. — Statistics for industry and technology. — Un vol. relié, 18×26, de xxxiii, 507 p. — ISBN 0-8176-4209-9. — Prix: SFr. 198.00. — Birkhäuser, Boston, 2002.

The 37 expository articles in this volume provide broad coverage of important topics relating to the theory, methods, and applications of goodness-of-fit tests and model validity. The book is divided into eight parts, each of which presents topics written by expert researchers in their areas. Key features include: state-of-the-art exposition of modern model validity methods, graphical techniques, and computer-intensive methods; systematic presentation with sufficient history and coverage of the fundamentals of the subject; exposure to recent research and a variety of open problems; many interesting real-life examples for practitioners; extensive bibliography, with special emphasis on recent literature; subject index. This comprehensive reference work will serve the statistical and applied mathematics communities as well as practitioners in the field.

Konstantin PROTASSOV. — **Analyse statistique des données expérimentales**. — Collection Grenoble sciences. — Un vol. broché, 17×25, de 148 p. — ISBN 2-86883-590-2. — Prix: € 13.71. — EDP Sciences, Les Ulis, 2002.

Après une rapide présentation des causes d'incertitudes, les distributions les plus connues sont présentées. Ensuite, des notions plus complexes de statistique sont abordées. Cette partie peut être parcourue rapidement par ceux qui désirent utiliser les résultats sans entrer dans les aspects théoriques. Par contre, une lecture plus attentive permet de comprendre les corrélations qui existent entre les diverses distributions et pourquoi telle distribution est adaptée à telles conditions de mesure. Le lecteur possède ainsi les outils nécessaires à l'analyse des données expérimentales dans différentes situations (petit nombre de mesures, deux mesures, propagation des erreurs, précision de l'incertitude, ajustement de fonction). Des conseils pratiques sont proposés. Ils permettent d'améliorer les mesures des expériences et leur analyse.

Lothar SACHS. — **Angewandte Statistik: Anwendung statistischer Methoden**. — Zehnte, überarbeitete und aktualisierte Auflage. — Un vol. broché, 16,5×24, de xxxvii, 889 p. — ISBN 3-540-42448-2. — Prix: € 49.95. — Springer, Berlin, 2002.

Dieses Buch erläutert statistische Ansätze, ergänzt die Software und gibt leichtfasslich, anschaulich und praxisnah Schülern, Studenten, Praktikern und Dozenten die notwendigen Details, um Daten zu gewinnen, zu beschreiben und zu beurteilen. Es dient zum Lernen, Anwenden und Nachschlagen bei unterschiedlichen Vorkenntnissen und breitgestreuten Interessen in Schulen, Hochschulen und in der Praxis. Neben zahlreichen Hinweisen und Empfehlungen zur Planung und Auswertung von Studien, einer anschaulich und anwenderbezogenen Darstellung von Konzepten, Begriffen, Beziehungen, Fehlerquellen und Fallstricken,

dienen Tips und Querverweise sowie ein sehr ausführliches und strukturiertes Sachverzeichnis mit einer Fülle erläuterter Stichworte auch zur Ergänzung von Statistik-Software-Handbüchern, insbesondere für Mediziner, Ingenieure und Naturwissenschaftler.

Neil H. TIMM. — **Applied multivariate analysis**. — Springer texts in statistics. — Un vol. relié, 18,5×24, de xxiv, 693 p. — ISBN 0-387-95347-7. — Prix: €89.95. — Springer, New York, 2002.

The presentation integrates theory and practice including both the analysis of formal linear multivariate models and exploratory data analysis techniques. Each chapter contains the development of basic theoretical results with numerous applications illustrated using examples from the social and behavioral sciences as well as from other disciplines. All examples are analyzed using SAS. The book includes an overview of vectors, matrices, multivariate distribution theory, and multivariate linear models. Topics discussed include multivariate regression, multivariate analysis of variance for fixed and mixed models, seemingly unrelated regression models, and repeated measurement models. While standard procedures for estimating model parameters and testing multivariate hypotheses, as well as simultaneous test procedures, are discussed, the text also includes tests of multivariate normality with chi-square and beta plots, tests of multivariate non-additivity, tests of covariance structure, tests of nonnested hypotheses, and the assessment of model assumptions. Other topics discussed include discriminant and classification analysis, principal component analysis, canonical correlation analysis, exploratory factor analysis, cluster analysis, multidimensional scaling, and structural equation modeling.

Analyse numérique

H. M. ANTIA. — **Numerical methods for scientists and engineers**. — Second edition. — Un vol. broché, 19×25, de xxii, 842 p. — ISBN 3-7643-6715-6. — Prix: SFr. 79.00. — Birkhäuser, Boston, 2002.

This book presents an exhaustive and in-depth exposition of the various numerical methods used in scientific and engineering computations. It emphasizes the practical aspects of numerical computation and discusses various techniques in sufficient detail to enable their implementation in solving a wide range of problems. — *Features*: techniques for error-estimation in all cases of numerical computation discussed; limitations and pitfalls of various algorithms described; comparative study of different numerical techniques provided; pathological or difficult problems discussed; advanced topics like multiple integration, optimization and integral equations discussed; over 100 worked out examples illustrating numerical algorithms and their limitations/pitfalls; over 500 unsolved problems with answers; over 200 FORTRAN and C programs covering all topics; accompanying CD containing the FORTRAN and C programs and examples of usage.

Tobin A. DRISCOLL and Lloyd N. TREFETHEN. — **Schwarz-Christoffel mapping**. — Cambridge monographs on applied and computational mathematics, vol. 8. — Un vol. relié, 15,5×23,5, de xvi, 132 p. — ISBN 0-521-80726-3. — Prix: £30.00. — Cambridge University Press, Cambridge, 2002.

This book provides a comprehensive look at the Schwarz-Christoffel transformation, including its history and foundations, practical computation, common and less common variations, and many applications in fields such as electromagnetism, fluid flow, design and inverse problems, and the solution of linear systems of equations. The most important theoretical results are stated and proved, but the emphasis throughout remains on concrete understanding and implementation, as evidenced by the 76 figures based on quantitatively correct illustrative examples. There are more than 150 classical and modern reference works cited for readers needing more details.