ADVANCES IN APPLIED PROBABILITY

INCLUDING A SECTION ON

STOCHASTIC GEOMETRY AND STATISTICAL APPLICATIONS

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ADVANCES IN APPLIED PROBABILITY

This is a companion publication to the *Journal of Applied Probability* published by the Applied Probability Trust. It contains reviews and expository papers in applied probability, as well as mathematical and scientific papers of interest to probabilists, letters to the editor and a section devoted to stochastic geometry and statistical applications (SGSA). An annual volume of up to 1200 pages is published in four issues appearing in March, June, September and December.

All correspondence relating to the submission of papers should be sent to: The Executive Editor, Applied Probability, School of Mathematics and Statistics, University of Sheffield, Sheffield S3 7RH, UK. Subscription rates and notes for contributors are to be found on the inside back cover.

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NEW BOOK ANNOUNCEMENT

ETHIER, S. N. (2010). ***The Doctrine of Chances***

is a new volume in the series

Probability and Its Applications

published by Springer in collaboration with the Applied Probability Trust.

Three centuries ago Montmort and De Moivre published two of the first books on probability theory, then called the doctrine of chances, emphasizing its most important application at that time, games of chance. This volume, on the probabilistic aspects of gambling, is a modern version of those classics. While covering the classical material such as house advantage and gambler's ruin, it also takes up such 20th-century topics as martingales, Markov chains, game theory, bold play, and optimal proportional play. In addition there is extensive coverage of specific casino games such as roulette, craps, video poker, baccarat, and twenty-one.

The volume addresses researchers and graduate students in probability theory, stochastic processes, game theory, operations research, statistics but it is also accessible to undergraduate students, who have had a course in probability.

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NEW BOOK ANNOUNCEMENT

Feng, S. (2010). ***The Poisson–Dirichlet Distribution and Related Topics***

is a new volume in the series

Probability and Its Applications

published by Springer in collaboration with the Applied Probability Trust.

The Poisson–Dirichlet distribution is an infinite dimensional probability distribution. It was introduced by Kingman over thirty years ago, and has found applications in a broad range of areas including Bayesian statistics, combinatorics, differential geometry, economics, number theory, physics, and population genetics. This monograph provides a comprehensive study of this distribution and some related topics, with particular emphasis on recent progresses in evolutionary dynamics and asymptotic behaviors. One central scheme is the unification of the Poisson–Dirichlet distribution, the urn structure, the coalescent, the evolutionary dynamics through the grand particle system of Donnelly and Kurtz. It is largely self-contained. The methods and techniques used in it appeal to researchers in a wide variety of subjects.

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