IMS Lecture Notes-Monograph Series **Volume 3**

Series Editor, Shanti S. Gupta

Empirical Processes *by Peter Gaenssler*

This volume is mainly concerned with Glivenko-Cantelli results for empirical measures and with functional Central Limit Theorems for empirical C-processes. Specifically, the functional Central Limit Theorems assume independent, identically distributed observations in arbitrary sample spaces and are derived using a general theory of weak convergence for non-Borel measures on a metric space. This theory, initiated by R.M. Dudley and further studied by M.J. Wichura, is developed here in full and in a context that leads to a broad unification and simplication of previous methods for obtaining functional Central Limit Theorems. The approach applies to results beginning with Donsker's famous theorem for the uniform empirical process up to the most general cases known today.

The basic point of view of this volume is probabilistic, but it is hoped that the presentation, with its set-indexed context, might also lead to new approaches to inference for spatial data.

The main topics covered are as follows:

Glivenko-Cantelli convergence
- The Vapnik-Chervonenkis Theory with some extensions

Weak convergence of non-Borel measures on a metric space
- Portmanteau Theorem
- Continuous mapping theorems
- Product spaces
- Sequential compactness
- Skorokhod-Dudley-Wichura Representation Theorem
- The space D[0, 1]
- Random change of time

Functional Central Limit Theorems
- For empirical C-processes
- For weighted empirical processes

List price $20.00
IMS member price $12.00

Order prepaid from:

The Institute of Mathematical Statistics
3401 Investment Boulevard, Suite 6
Hayward, California 94545 (USA)

The Annals of Statistics

Vol. 16 **June 1988** **No. 2**

Articles

Acknowledgment of Priority

IMS Lecture Notes–Monograph Series **Volume 5**

Series Editor, Shanti S. Gupta

Inequalities in Statistics and Probability *edited by Y.L. Tong, with the cooperation of I. Olkin, M.D. Perlman, F. Proschan and C.R. Rao*

This volume comprises the proceedings of the Symposium on Inequalities in Statistics and Probability held in Lincoln, Nebraska during October 1982. (The Symposium was sponsored by the National Science Foundation, the Office of Naval Research, and the University of Nebraska. Typesetting of the volume was supported by the University of Nebraska.)

List price $25.00
IMS member price $15.00

Order prepaid from:

The Institute of Mathematical Statistics
3401 Investment Boulevard, Suite 7
Hayward, California 94545 (USA)