

Contents

Preface	
<i>Evarist Giné, Vladimir Koltchinskii, Wenbo Li, Joel Zinn</i>	v
Contributors	
.	vii
DEPENDENCE, MARTINGALES	
Stochastic integrals and asymptotic analysis of canonical von Mises statistics based on dependent observations	
<i>Igor S. Borisov and Alexander A. Bystrov</i>	1
Invariance principle for stochastic processes with short memory	
<i>Magda Peligrad and Sergey Utev</i>	18
Binomial upper bounds on generalized moments and tail probabilities of (super)martingales with differences bounded from above	
<i>Iosif Pinelis</i>	33
Oscillations of empirical distribution functions under dependence	
<i>Wei Biao Wu</i>	53
STOCHASTIC PROCESSES	
Karhunen–Loève expansions of mean-centered Wiener processes	
<i>Paul Deheuvels</i>	62
Fractional Brownian fields, duality, and martingales	
<i>Vladimir Dobrić and Francisco M. Ojeda</i>	77
Risk bounds for the non-parametric estimation of Lévy processes	
<i>José E. Figueroa-López and Christian Houdré</i>	96
Random walk models associated with distributed fractional order differential equations	
<i>Sabir Umarov and Stanly Steinberg</i>	117
Fractal properties of the random string processes	
<i>Dongsheng Wu and Yimin Xiao</i>	128
OPERATORS IN HILBERT SPACE	
Random sets of isomorphism of linear operators on Hilbert space	
<i>Roman Vershynin</i>	148
EMPIRICAL PROCESSES	
Revisiting two strong approximation results of Dudley and Philipp	
<i>Philippe Berthet and David M. Mason</i>	155
Modified empirical CLT's under only pre-Gaussian conditions	
<i>Shahar Mendelson and Joel Zinn</i>	173
Empirical and Gaussian processes on Besov classes	
<i>Richard Nickl</i>	185
On the Bahadur slope of the Lilliefors and the Cramér–von Mises tests of normality	
<i>Miguel A. Arcones</i>	196

APPLICATIONS OF EMPIRICAL PROCESSES

Some facts about functionals of location and scatter

R. M. Dudley 207

Uniform error bounds for smoothing splines

P. P. B. Eggermont and V. N. LaRiccia 220

Empirical graph Laplacian approximation of Laplace–Beltrami operators:

Large sample results

Evarist Giné and Vladimir Koltchinskii 238

A new concentration result for regularized risk minimizers

Ingo Steinwart, Don Hush and Clint Scovel 260