

Contents

Noise and Dissipation in Rigid Body Motion	1
Alexis Arnaudon, Alex L. De Castro and Darryl D. Holm	
An Open Problem in the Theory of Regularization by Noise for Nonlinear PDEs	13
Franco Flandoli	
Surface Integrals in Hilbert Spaces for General Measures and Applications	31
Giuseppe Da Prato	
Geometric Analysis of Noisy Perturbations to Nonholonomic Constraints	57
François Gay-Balmaz and Vakhtang Putkaradze	
Degenerate Diffusions and Harmonic Analysis on $SE(3)$: A Tutorial . . .	77
Gregory S. Chirikjian	
Covariant Central Extensions of Gauge Lie Algebras	101
Bas Janssens and Karl-Hermann Neeb	
Four Chapters on Low-Dimensional Gauge Theories	115
Thierry Lévy and Ambar Sengupta	
Some Variational and Stochastic Methods for the Euler Equations of Incompressible Fluid Dynamics and Related Models	169
Yann Brenier	
Introduction to Homogenization Theory	191
Gregory A. Checkin	
Modeling, Minimizing and Managing the Risk of Fatigue for Mechanical Components	219
L. Bittner, H. Gottschalk, M. Gröger, N. Moch, M. Saadi and S. Schmitz	
Index	257

Stochastic Geometric Mechanics

CIB, Lausanne, Switzerland, January-June 2015

Albeverio, S.; Cruzeiro, A.B.; Holm, D.D. (Eds.)

2017, XVI, 265 p. 25 illus., 10 illus. in color., Hardcover

ISBN: 978-3-319-63452-4