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Nota di contenuto	Foreword -- Public lecture by N. Bouleau, Can there be excessive mathematization of the world? -- Part I: Stochastic analysis and random fields R. Balan, Recent advances related to SPDEs with fractional noise -- G. Di Nunno, S.Sjursen, On chaos representation and orthogonal polynomials for the doubly stochastic Poisson process -- R. Eden, F. Viens, General upper and lower tail estimates using Malliavin calculus and Stein's equations -- B. Ferrario, Uniqueness and absolute continuity for semilinear SPDE's -- I. Gyöngy, P.R. Stinga, Rate of convergence of Wong-Zakai approximations for SPDEs -- A. Kohatsu- Higa, H -- L. Ngo, Weak approximations for SDE's driven by Lévy processes -- V. Mandrekar, B. Ruediger, S. Tappe, Itô's formula for Banach space valued jump processes driven by Poisson random measures -- C. Marinelli, Well-posedness for a class of dissipative stochastic evolution equations with Wiener and Poisson noise -- L.M. Morato, S. Ugolini, Localization of relative entropy in Bose-Einstein

condensation of trapped interacting bosons -- I. Nourdin, G. Peccati, R. Speicher, Multidimensional semicircular limits on the free Wigner chaos -- S.S. Sritharan and M. Xu, Malliavin Calculus for stochastic point vortex and Lagrangian models -- W. Stannat, Two remarks on the Wasserstein Dirichlet form -- J. Manuel, Erratum -- Part II: Stochastic methods in financial models F. Biagini, Evaluating hybrid products: the interplay between financial and insurance markets -- F.E. Benth, H. Eyjolfsson, Stochastic modeling of power markets using stationary processes -- S. Cawston, L. Vostrikova, F-divergence minimal equivalent martingale measures and optimal portfolios for exponential Lévy models with a change-point -- C. Ceci, Optimal investment-consumption for partially observed jump-diffusions -- R. Cogo, A. Gombani, W.J. Runggaldier, Stochastic control and pricing under swap measures -- D. Filipovic, Variance swap curve models -- B. Jourdain, M. Sbai, Efficient second order weak scheme for stochastic volatility models -- T. Lim, V. Ly Vath, J -- M. Sahut, S. Scotti, Bid-ask spread modelling, a perturbation approach -- A.R.L. Valdez, T. Vargiolu, Optimal portfolio in a regime-switching model.

Sommario/riassunto

This book presents refereed research or review articles presented at the 7th Seminar on Stochastic Analysis, Random Fields and Applications, which was held at the Centro Stefano Franscini (Monte Verità) in Ascona, Switzerland, in May 2011. The seminar mainly focused on: • stochastic (partial) differential equations, especially with regard to jump processes, construction of solutions and approximations • Malliavin calculus and Stein methods, and other techniques in stochastic analysis, especially chaos representations and convergence, and applications to models of interacting particle systems • stochastic methods in financial models, especially models for power markets or for risk analysis, empirical estimation and approximation, stochastic control and optimal pricing. The notes of the public lecture held by Nicolas Bouleau on the fundamental question of whether there can be an excessive mathematization of the world in an economic context are also included. The book will be a valuable resource for researchers working in stochastic analysis and for professionals interested in stochastic methods in finance. Contributors: R. Balan F.E. Benth F. Biagini N. Bouleau S. Cawston C. Ceci R. Cogo G. Di Nunno R. Eden H. Eyjolfsson B. Ferrario D. Filipovic A. Gombani I. Gyöngy B. Jourdain A. Kohatsu-Higa T. Lim V. Ly Vath V. Mandrekar C. Marinelli L.M. Morato H.-L. Ngo I. Nourdin G. Peccati B. Rüdiger W.J. Runggaldier J.-M. Sahut M. Sbai S. Scotti S. Sjursen R. Speicher S.S. Sritharan W. Stannat P.R. Stinga S. Tappe S. Ugolini A.R.L. Valdez T. Vargiolu F. Viens L. Vostrikova M. Xu.
