

1. Record Nr.	UNINA9910300106803321
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Titolo	Ambit Stochastics // by Ole E. Barndorff-Nielsen, Fred Espen Benth, Almut E. D. Veraart
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-94129-1
Edizione	[1st ed. 2018.]
Descrizione fisica	XXV, 402 p. : gráf. ; ; 25 cm
Collana	Probability Theory and Stochastic Modelling, , 2199-3149 ; ; 88
Disciplina	519.2
Soggetti	Probabilities Mathematical physics Social sciences - Mathematics Statistics Probability Theory Mathematical Physics Mathematics in Business, Economics and Finance Statistics in Business, Management, Economics, Finance, Insurance Statistics in Engineering, Physics, Computer Science, Chemistry and Earth Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	MSC 60Gxx
Nota di bibliografia	Incluye referencias bibliográficas (p. 385-397) e índice
Nota di contenuto	Part I The purely temporal case -- 1 Volatility modulated Volterra processes -- 2 Simulation -- 3 Asymptotic theory for power variation of LSS processes -- 4 Integration with respect to volatility modulated Volterra processes -- Part II The spatio-temporal case -- 5 The ambit framework -- 6 Representation and simulation of ambit fields -- 7 Stochastic integration with ambit fields as integrators -- 8 Trawl processes -- Part III Applications -- 9 Turbulence modelling -- 10 Stochastic modelling of energy spot prices by LSS processes -- 11 Forward curve modelling by ambit fields -- Appendix A: Bessel functions -- Appendix B: Generalised hyperbolic distribution -- References -- Index.
Sommario/riassunto	Drawing on advanced probability theory, Ambit Stochastics is used to model stochastic processes which depend on both time and space. This

monograph, the first on the subject, provides a reference for this burgeoning field, complete with the applications that have driven its development. Unique to Ambit Stochastics are ambit sets, which allow the delimitation of space-time to a zone of interest, and ambit fields, which are particularly well-adapted to modelling stochastic volatility or intermittency. These attributes lend themselves notably to applications in the statistical theory of turbulence and financial econometrics. In addition to the theory and applications of Ambit Stochastics, the book also contains new theory on the simulation of ambit fields and a comprehensive stochastic integration theory for Volterra processes in a non-semimartingale context. Written by pioneers in the subject, this book will appeal to researchers and graduate students interested in empirical stochastic modelling.
