1. Record Nr. UNINA9910968477703321

Autore	Lax Melvin J
Titolo	Random processes in physics and finance / / Melvin Lax, Wei Cai, Min Xu
Pubbl/distr/stampa	Oxford ; ; New York, : Oxford University Press, 2006
ISBN	9780191513787 0191513784 9780191718359 0191718351 9781429459327 1429459328 9780199673803 0199673802 9781280845659 1280845651
Edizione	[1st ed.]
Descrizione fisica	xiii, 327 p. : ill
Collana	Oxford finance
Altri autori (Persone)	CaiWei XuMin
Disciplina	530.15828
Soggetti	Stochastic processes Finance - Statistical methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (p. [307]-321) and index.
Nota di contenuto	Intro -- Contents -- A Note from Co-authors -- 1 Review of probability -- 1.1 Meaning of probability -- 1.2 Distribution functions -- 1.3 Stochastic variables -- 1.4 Expectation values for single random variables -- 1.5 Characteristic functions and generating functions -- 1.6 Measures of dispersion -- 1.7 Joint events -- 1.8 Conditional probabilities and Bayes' theorem -- 1.9 Sums of random variables -- 1.10 Fitting of experimental observations -- 1.11 Multivariate normal distributions -- 1.12 The laws of gambling -- 1.13 Appendix A: The Dirac delta function -- 1.14 Appendix B: Solved problems -- 2 What is a random process -- 2.1 Multitime probability description -- 2.2 Conditional probabilities -- 2.3 Stationary, Gaussian and Markovian

processes -- 2.4 The Chapman-Kolmogorov condition -- 3 Examples of Markovian processes -- 3.1 The Poisson process -- 3.2 The one dimensional random walk -- 3.3 Gambler's ruin -- 3.4 Diffusion processes and the Einstein relation -- 3.5 Brownian motion -- 3.6 Langevin theory of velocities in Brownian motion -- 3.7 Langevin theory of positions in Brownian motion -- 3.8 Chaos -- 3.9 Appendix A: Roots for the gambler's ruin problem -- 3.10 Appendix B: Gaussian random variables -- 4 Spectral measurement and correlation -- 4.1 Introduction: An approach to the spectrum of a stochastic process -- 4.2 The definitions of the noise spectrum -- 4.3 The Wiener-Khinchine theorem -- 4.4 Noise measurements -- 4.5 Evenness in &amp -- #969 -- of the noise? -- 4.6 Noise for nonstationary random variables -- 4.7 Appendix A: Complex variable notation -- 5 Thermal noise -- 5.1 Johnson noise -- 5.2 Equipartition -- 5.3 Thermodynamic derivation of Johnson noise -- 5.4 Nyquist's theorem -- 5.5 Nyquist noise and the Einstein relation -- 5.6 Frequency dependent diffusion constant -- 6 Shot noise -- 6.1 Definition of shot noise.
6.2 Campbell's two theorems -- 6.3 The spectrum of filtered shot noise -- 6.4 Transit time effects -- 6.5 Electromagnetic theory of shot noise -- 6.6 Space charge limiting diode -- 6.7 Rice's generalization of Campbell's theorems -- 7 The fluctuation-dissipation theorem -- 7.1 Summary of ideas and results -- 7.2 Density operator equations -- 7.3 The response function -- 7.4 Equilibrium theorems -- 7.5 Hermiticity and time reversal -- 7.6 Application to a harmonic oscillator -- 7.7 A reservoir of harmonic oscillators -- 8 Generalized Fokker-Planck equation -- 8.1 Objectives -- 8.2 Drift vectors and diffusion coefficients -- 8.3 Average motion of a general random variable -- 8.4 The generalized Fokker-Planck equation -- 8.5 Generation-recombination (birth and death) process -- 8.6 The characteristic function -- 8.7 Path integral average -- 8.8 Linear damping and homogeneous noise -- 8.9 The backward equation -- 8.10 Extension to many variables -- 8.11 Time reversal in the linear case -- 8.12 Doob's theorem -- 8.13 A historical note and summary (M. Lax) -- 8.14 Appendix A: A method of solution of first order PDEs -- 9 Langevin processes -- 9.1 Simplicity of Langevin methods -- 9.2 Proof of delta correlation for Markovian processes -- 9.3 Homogeneous noise with linear damping -- 9.4 Conditional correlations -- 9.5 Generalized characteristic functions -- 9.6 Generalized shot noise -- 9.7 Systems possessing inertia -- 10 Langevin treatment of the Fokker-Planck process -- 10.1 Drift velocity -- 10.2 An example with an exact solution -- 10.3 Langevin equation for a general random variable -- 10.4 Comparison with Ito's calculus lemma -- 10.5 Extending to the multiple dimensional case -- 10.6 Means of products of random variables and noise source -- 11 The rotating wave van del Pol oscillator (RWVP) -- 11.1 Why is the laser line-width so narrow?.
11.2 An oscillator with purely resistive nonlinearities -- 11.3 The diffusion coefficient -- 11.4 The van der Pol oscillator scaled to canonical form -- 11.5 Phase fluctuations in a resistive oscillator -- 11.6 Amplitude fluctuations -- 11.7 Fokker-Planck equation for RWVP -- 11.8 Eigenfunctions of the Fokker-Planck operator -- 12 Noise in homogeneous semiconductors -- 12.1 Density of states and statistics of free carriers -- 12.2 Conductivity fluctuations -- 12.3 Thermodynamic treatment of carrier fluctuations -- 12.4 General theory of concentration fluctuations -- 12.5 Influence of drift and diffusion on modulation noise -- 13 Random walk of light in turbid media -- 13.1 Introduction -- 13.2 Microscopic statistics in the direction space -- 13.3 The generalized Poisson distribution p[sub(n)] (t) -- 13.4 Macroscopic statistics -- 14 Analytical solution of the elastic

transport equation -- 14.1 Introduction -- 14.2 Derivation of cumulants to an arbitrarily high order -- 14.3 Gaussian approximation of the distribution function -- 14.4 Improving cumulant solution of the transport equation -- 15 Signal extraction in presence of smoothing and noise -- 15.1 How to deal with ill-posed problems -- 15.2 Solution concepts -- 15.3 Methods of solution -- 15.4 Well-posed stochastic extensions of ill-posed processes -- 15.5 Shaw's improvement of Franklin's algorithm -- 15.6 Statistical regularization -- 15.7 Image restoration -- 16 Stochastic methods in investment decision -- 16.1 Forward contracts -- 16.2 Futures contracts -- 16.3 A variety of futures -- 16.4 A model for stock prices -- 16.5 The Ito's stochastic differential equation -- 16.6 Value of a forward contract on a stock -- 16.7 Black-Scholes differential equation -- 16.8 Discussion -- 16.9 Summary -- 17 Spectral analysis of economic time series -- 17.1 Overview.
17.2 The Wiener-Khinchine and Wold theorems -- 17.3 Means, correlations and the Karhunen-Loeve theorem -- 17.4 Slepian functions -- 17.5 The discrete prolate spheroidal sequence -- 17.6 Overview of Thomson's procedure -- 17.7 High resolution results -- 17.8 Adaptive weighting -- 17.9 Trend removal and seasonal adjustment -- 17.10 Appendix A: The sampling theorem -- Bibliography -- Index -- A -- B -- C -- D -- E -- F -- G -- H -- I -- J -- K -- L -- M -- N -- O -- P -- Q -- R -- S -- T -- U -- V -- W -- Z.

Sommario/riassunto

This book uniquely presents the theoretical treatment of random processes in physics and finance, including applications to laser and semiconductor physics, light propagation in scattering media and investment decisions.

2. Record Nr. UNINA9911019256703321

Autore	Massou Luc
Titolo	Analyzing Websites
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2024
ISBN	9781394264964 1394264968 9781394264957 139426495X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (317 pages)
Collana	Computer science. Digital Documentation
Altri autori (Persone)	Mpondo-DickaPatrick PinedeNathalie
Disciplina	025.042
Soggetti	Web sites
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- Foreword -- Introduction -- Part 1. Websites as a Socio-technical Device -- Chapter 1. Observing the Web through the Lens of Websites -- 1.1. Introduction -- 1.2. The website as a space and an architecture -- 1.3. The pioneer Web (before 2000) -- 1.4. The citation Web (from 2000 to 2005) -- 1.5. The Web known as Web 2.0 (from 2005 to 2010) -- 1.6. The social Web (from 2010 to 2015) -- 1.7. An affective and artificial Web (2015 to the present) -- 1.8. Conclusion -- 1.9. References -- Chapter 2. Is the Web a Semiodiscursive Object? -- 2.1. Introduction -- 2.2. How to do relevant data sets with Web data? The making of a complex object of research -- 2.2.1. Sociotechnical devices and the construction of the object -- 2.2.2. From the research question to the data sets: knowledge and documentation of the device -- 2.2.3. Notional tools for semiodiscursive approaches -- 2.3. Standing the test of time: surveys and methods -- 2.3.1. Tangled temporalities -- 2.3.2. Defining the right way to select and collect data sets -- 2.3.3. From the notion of corpus to the notion of digital corpus -- 2.4. Violence against data: issues of interpretation -- 2.4.1. Formatting of issues by research instrumentation -- 2.4.2. Limits and challenges of interpretation:

taking the illusion of immediacy and standardization of meaning into account -- 2.5. Conclusion -- 2.6. References -- Chapter 3. Expertise from Websites: Pedagogical Perspectives in Information and Communication -- 3.1. Introduction -- 3.2. What is the role of website expertise in information and communication? -- 3.2.1. Example of a 3-year educational program -- 3.2.2. From analysis to website expertise -- 3.3. What are the benefits of semio-rhetorical, critical and socio-technical approaches for the learner?.
3.3.1. An "external" expertise to put results into perspective -- 3.3.2. Several points in common with our scientific analyses -- 3.4. Conclusion -- 3.5. Appendices -- 3.6. References -- Part 2. The Website as a Semiodiscursive Device -- Chapter 4. Semiotics of Digital Design: From Ethos to Ethics -- 4.1. Introduction -- 4.2. Semiotics of webdesign: from 2004 to 2021 -- 4.2.1. A realistic or hyper-realistic form of multimodal writing -- 4.2.2. A mythical or symbolic multimodal writing -- 4.2.3. A readable and redundant multimodal writing -- 4.2.4. A reality-removing and subversive multimodal writing -- 4.2.5. The semiotic functions of Web interfaces -- 4.3. Beyond its ethos, the ethical aim of digital design -- 4.3.1. Divergences between ethos and ethics -- 4.3.2. Websites in a tense relationship with other players in digital design -- 4.4. Interrogating the semiotic interrelations between the strata of digital design -- 4.4.1. The notions of prefiguration, configuration and figuration -- 4.4.2. Semiotic interrelationships between the strata -- 4.4.3. Digital design: from ethos to ethics -- 4.5. Conclusion -- 4.6. References -- Chapter 5. Social Semiotic Approach of Press Websites: Genesis of a Method -- 5.1. Introduction -- 5.2. Epistemological and methodological issues -- 5.2.1. Genesis of a method -- 5.2.2. Foundational concepts -- 5.2.3. Semiotic tools introduced in the field -- 5.3. The first field: a critical decoding of interfaces -- 5.3.1. Experimental protocol -- 5.3.2. Spontaneous opinions and impressions from viewing BFM TV's website -- 5.3.3. Identification of editorial units and first interpretations -- 5.3.4. Debating and choosing hypotheses -- 5.4. Second field: toward a social semiotic approach of websites -- 5.5. Interpretative hypotheses and interpretative filters.
5.5.1. "BFM, the information supermarket", from the lens of an anti-capitalist viewpoint and professional habits -- 5.5.2. The "sexist, right-wing BFM", through the prism of a feminist and intersectional perspective -- 5.5.3. "BFM as a counter-power", through the lens of a complicit or critical adherence to the state media -- 5.6. Conclusion -- 5.7. Appendices -- 5.8. References -- Chapter 6. Analyzing the Mobilization Against the LPR on Twitter: Theoretical Issues and Methodological Challenges -- 6.1. Introduction -- 6.2. Multidimensional approach to digital social networks -- 6.2.1. Shedding light on the notion of hypertextualized discourse -- 6.2.2. Shared images and participatory culture -- 6.2.3. Interdiscursivity, narrativity and argumentativity -- 6.3. Ethical questions and methodological challenges -- 6.3.1. Ethical concerns -- 6.3.2. Methodological challenges -- 6.4. Presentation of the six sub-corpora -- 6.4.1. Sub-corpus 1: the narrating Twitter user -- 6.4.2. Sub-corpus 2: the narrator-character Twitter user -- 6.4.3. Sub-corpus 3: calls to action -- 6.4.4. Sub-corpus 4: sharing visual gags and interactive mini-stories -- 6.4.5. Sub-corpus 5: sharing of inter-iconic images and double narratives -- 6.4.6. Sub-corpus 6: oppositions of discourse/counter-discourse -- 6.5. Outlook and analytical perspectives -- 6.6. Conclusion -- 6.7. References -- Chapter 7. Metaphor and Analysis of Websites: Transformations of a Media Object -- 7.1. Introduction -- 7.2. Uses of metaphors for analyzing websites

and digital communications -- 7.2.1. The "website" object: between documents, media and devices -- 7.2.2. The place of metaphor in the analysis of the "website" object -- 7.2.3. Metaphor and intermediality -- 7.2.4. Metaphors, remediatization and strategies of digital communications.
7.3. Websites that visualize open data: making sense using the metaphor as inquiry -- 7.3.1. Hypermedia maps in data visualization -- 7.3.2. The metaphor of the mosaic in data visualization -- 7.3.3. Metaphor as a framework for action: involvement of the Internet user and a sense of transparency -- 7.4. Conclusion -- 7.5. References -- Part 3. The Website as a Communication Device -- Chapter 8. Thematic Analysis of Hyperlinks: A Taxonomic Approach -- 8.1. Introduction -- 8.2. Analytical framework for an info-communicational reading of websites -- 8.3. The interest of a taxonomic reading grid for websites -- 8.4. Presentation of the methodological approach -- 8.4.1. Corpus of university websites -- 8.4.2. A semiodiscursive and taxonomic analysis of web pages -- 8.5. Primary results -- 8.5.1. Analysis of the main menus of the home pages -- 8.5.2. Generic approach to the HLU corpus -- 8.5.3. Informational profiles from the taxonomy of the HLUs -- 8.5.4. A closer look at a class: "User profiles" -- 8.6. Conclusion -- 8.7. Appendices -- 8.8. References -- Chapter 9. The Documediality of Cross-border Organizations -- 9.1. Introduction -- 9.2. Theoretical and methodological anchoring in semiotics applied to the media -- 9.3. First step: create a reading of three cross-border organizational models through the lens of documentality -- 9.3.1. Within the European Union (EU): the documentality of the Euroregions-fluids -- 9.3.2. On the borders of the EU: the documentality of the Euroregion buffers -- 9.3.3. In Southern Africa: the documentality of ecoregions -- 9.4. Step two: build a corpus of websites from the three cross-border organizational models considered -- 9.4.1. The website of the Tyrol Alto Adige Trentino Euroregion -- 9.4.2. The website of the Danube-Cri.-Mure.-Tisa Euroregion -- 9.4.3. The website of Kavango-Zambezi Transfrontier Conservation Area.
9.5. Stage three: identify the memory processes to unravel the skein of cross-border narratives presented to audiences -- 9.5.1. Call for a shared memory: anchoring within a territory-symbol -- 9.5.2. Call for a shared history: anchoring within a legitimate quest -- 9.5.3. The call for a shared heritage: an anchoring in shared living -- 9.6. Step four: qualitatively comparing the results -- 9.7. Conclusion -- 9.8. References -- Chapter 10. "Tell Us Your Data", Between Euphemization, Standardization, and Digital Poetics -- 10.1. Introduction -- 10.2. Epistemological and methodological issues -- 10.2.1. Performance, notoriety and visibility: a disruptive discourse -- 10.2.2. Empowered skills: a discourse on the method as a foundational basis -- 10.2.3. From social data to consumer knowledge: information rhetoric -- 10.3. A poetics of the visible and the audible -- 10.3.1. Revealing the visible and making ordinary conversations speak -- 10.3.2. Revealing what is visible through surveillance: between euphemized discourse and the desire to create a panopticon -- 10.4. Conclusion -- 10.5. References -- List of Authors -- Index -- EULA.

Sommario/riassunto

From a cluster of interconnected HTML pages to online service platforms, websites are constantly changing in form and function. These transformations have led, on the one hand, to human and social sciences renewing or inventing analytical methodologies; and on the other hand, to a reconsideration of the practices of non-specialists and digital professionals. The Web factory is equally included on the agenda of communication training, according to an alternative approach that is complementary to the one that has been implemented for computer

scientists. From these two perspectives and drawing upon several case studies, Analyzing Websites presents epistemological and methodological contributions from researchers in Information and Communication Sciences exploring websites as sociotechnical, semi-discursive and communicational devices. This study covers website design as well as their integration into the digital strategies of organizations in the public, associative and private sectors.