

1. Record Nr.	UNINA9910972371203321
Autore	Swift Randall J
Titolo	Stochastic Processes and Functional Analysis : New Perspectives
Pubbl/distr/stampa	Providence : , : American Mathematical Society, , 2021 ©2021
ISBN	9781470467166 147046716X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (286 pages)
Collana	Contemporary Mathematics ; ; v.774
Classificazione	46-0246-0660-0260-0660C0560G0760J2762-0262M15
Altri autori (Persone)	KrinikAlan SwitkesJennifer M
Disciplina	519.2/3 519.23
Soggetti	Stochastic processes Functional analysis Functional analysis {For manifolds modeled on topological linear spaces, see 57Nxx, 58Bxx} -- Research exposition (monographs, survey articles) Functional analysis {For manifolds modeled on topological linear spaces, see 57Nxx, 58Bxx} -- Proceedings, conferences, collections, etc Probability theory and stochastic processes {For additional applications, see 11Kxx, 62-XX, 90-XX, 91-XX, 92-XX, 93-XX, 94-XX} -- Research exposition (monographs, survey articles) Probability theory and stochastic processes {For additional applications, see 11Kxx, 62-XX, 90-XX, 91-XX, 92-XX, 93-XX, 94-XX} -- Proceedings, conferences, collections, etc Probability theory and stochastic processes {For additional applications, see 11Kxx, 62-XX, 90-XX, 91-XX, 92-XX, 93-XX, 94-XX} -- Combinatorial probability -- Combinatorial probability Probability theory and stochastic processes {For additional applications, see 11Kxx, 62-XX, 90-XX, 91-XX, 92-XX, 93-XX, 94-XX} -- Stochastic processes -- General theory of processes Probability theory and stochastic processes {For additional applications, see 11Kxx, 62-XX, 90-XX, 91-XX, 92-XX, 93-XX, 94-XX} -- Markov processes -- Continuous-time Markov processes on discrete state Statistics -- Research exposition (monographs, survey articles) Statistics -- Inference from stochastic processes -- Spectral analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa

Livello bibliografico	Monografia
Note generali	"AMS Special Session on Celebrating M.M. Rao's Many Mathematical Contributions as he Turns 90 Years Old November 9-10, 2019 University of California Riverside, California
Nota di bibliografia	Includes bibliographical references."
Nota di contenuto	<p>Cover -- Title page -- Contents -- Preface -- Stochastic Equations -- Biography of M. M. Rao -- Published Writings of M. M. Rao -- Ph.D. Theses Completed Under the Direction of M.M. Rao -- Celebrating M.M. Rao's Many Mathematical Contributions -- Sufficient conditions for Lorenz ordering with common finite support -- 1. Introduction -- 2. The usual Lorenz order and the role of Robin Hood -- 3. Other partial orders defined on -- 4. When and have common finite support -- 5. Robin Hood's role in the common finite support setting -- 6. Are the usual sufficient conditions for Lorenz ordering useful in the common finite support situation? -- 7. Discussion -- References -- Ergodicity and steady state analysis for interference queueing networks -- 1. Introduction and model -- 2. Main results -- 3. Proof of Theorem 2.1 and Corollary 2.2 -- 4. Proof of Theorem 2.3 -- Acknowledgments -- References -- How strong can the Parrondo effect be? II -- 1. Introduction -- 2. SLLN for random sequences of games -- 3. Stationary distribution of the random walk on the -cycle -- 4. Evaluation of rate of profit -- References -- Binary response models comparison using the -Chernoff divergence measure and exponential integral functions -- 1. Introduction -- 2. Exponential family of models -- 3. The -Chernoff divergence -- 4. First family of models -- 5. Exponential integral function and -Chernoff divergence -- 6. Second family of models -- 7. Interpretations, explanations and applications -- References -- Nonlinear parabolic equations with Robin boundary conditions and Hardy-Leray type inequalities -- 1. Introduction -- 2. Main result -- 3. Improved Hardy type inequalities and applications -- 4. Applications -- 5. The one and two-dimensional cases -- References -- Banach space valued weak second order stochastic processes -- 1. Introduction. 2. The spaces <math>(\cdot, \cdot)</math> and <math>(\cdot, \cdot)^*</math> -- 3. <math>(\cdot, \cdot)</math>-valued measures -- 4. <math>(\cdot, \cdot)^*</math>-valued measures and bimeasures -- 5. <math>(\cdot, \cdot)</math>-valued processes -- References -- Explicit transient probabilities of various Markov models -- 1. Introduction and summary -- 2. Matrix results -- 3. Strip probabilities and ballot box problems -- 4. Birth-death models with catastrophes -- 5. Odd tridiagonal matrices having constant main diagonal entries and alternating entries on the remaining diagonals -- 6. Circulant matrices -- Appendix A. Appendix -- Acknowledgments -- References -- On the use of Markovian stick-breaking priors -- 1. Introduction -- 2. Definition of the Markovian stick-breaking process -- 3. Results on moments, posterior distribution, and consistency -- 4. On use of the MSB(<math>\cdot</math>) measure as a prior -- 5. Proof of Theorem 4 -- Acknowledgments -- References -- Eulerian polynomials and Quasi-Birth-Death processes with time-varying-periodic rates -- 1. Introduction -- 2. The approach -- 3. Single-server queue -- 4. Single-server priority queue with finite Buffer -- 5. Conclusion -- Acknowledgment -- References -- Random measure algebras -- 1. Introduction -- 2. Preliminaries -- 3. A convolution by covariance method -- 4. O-dot product and convolution of bimeasures -- 5. Convolution by strict Morse-Transue integral -- References -- From additive to second-order processes -- 1. Counting processes -- 2. Random measures -- 3. Harmonic analysis as a bridge -- 4. Stable processes -- 5. Second order processes -- References -- The exponential-dual matrix method: Applications to Markov chain analysis</p>

-- 1. Introduction -- 2. Uniformization -- 3. Stochastic duality -- 4. Transient analysis using uniformization and duality -- 5. Generalization of the stochastic-dual: The exponential-dual matrix -- 6. Conclusions -- References.  
Two moment closure techniques for an interacting species model -- 1. Introduction -- 2. A generalized interacting species model -- 3. Stochastic interacting species model -- 4. Moment closure using normal distribution -- 5. Moment closure using lognormal distribution -- 6. Conclusions -- References -- Back Cover.

---

Sommario/riassunto

This volume contains the proceedings of the AMS Special Session on Celebrating M. M. Rao's Many Mathematical Contributions as he Turns 90 Years Old, held from November 9-10, 2019, at the University of California, Riverside, California. The articles show the effectiveness of abstract analysis for solving fundamental problems of stochastic theory, specifically the use of functional analytic methods for elucidating stochastic processes and their applications. The volume also includes a biography of M. M. Rao and the list of his publications.

---