# Long-Memory Processes: Probabilistic Properties and Statistical Methods

*Jan Beran, Yuanhua Feng, Sucharita Ghosh, Rafal Kulik*
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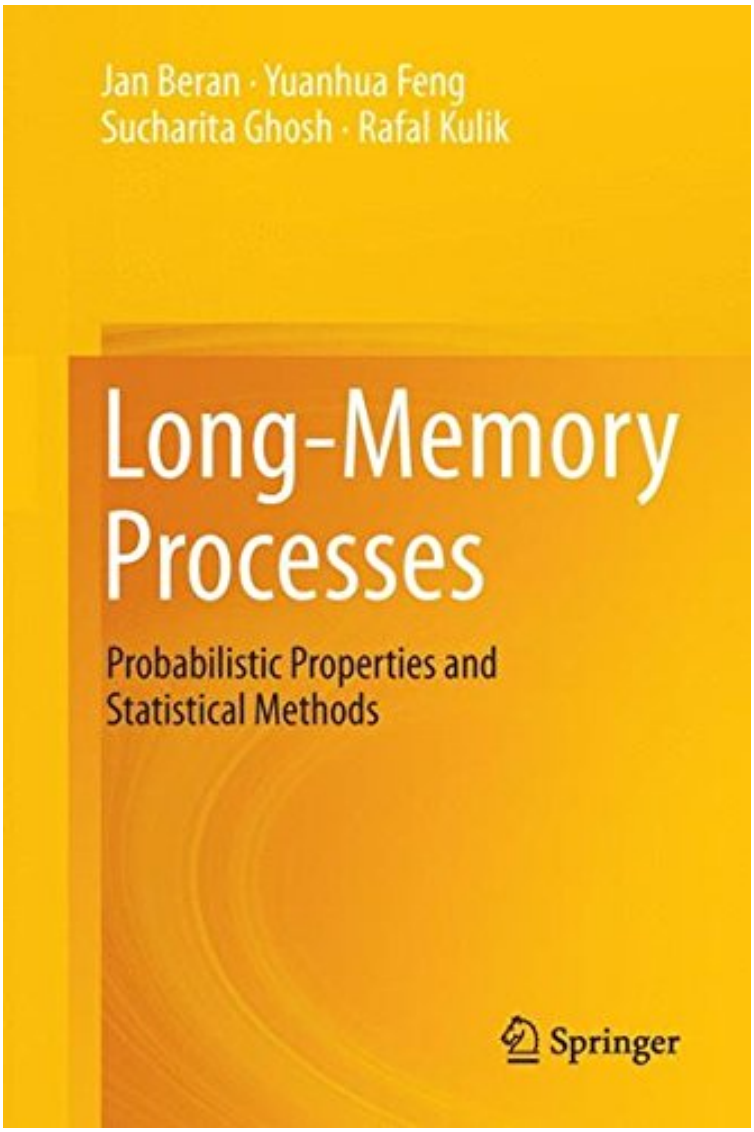




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**Jan Beran, Yuanhua Feng, Sucharita Ghosh, Rafal Kulik : Long-Memory Processes: Probabilistic Properties and Statistical Methods** before purchasing it in order to gage whether or not it would be worth my time, and all praised Long-Memory Processes: Probabilistic Properties and Statistical Methods:

Long-memory processes are known to play an important part in many areas of science and technology, including physics, geophysics, hydrology, telecommunications, economics, finance, climatology, and network engineering. In the last 20 years enormous progress has been made in understanding the probabilistic foundations and statistical principles of such processes. This book provides a timely and comprehensive review, including a thorough discussion of mathematical and probabilistic foundations and statistical methods, emphasizing their practical motivation and mathematical justification. Proofs of the main theorems are provided and data examples illustrate practical aspects. This book will be a valuable resource for researchers and graduate students in statistics, mathematics, econometrics and other quantitative areas, as well as for practitioners and applied researchers who need to analyze data in which long memory, power laws, self-similar scaling or fractal properties are relevant.

From the book reviews:This encyclopaedic book covers almost the whole literature on univariate and multivariate long-range dependent (LRD) processes, or long-memory processes or strongly dependent processes. This volume is then of strong interest for both researchers and teachers familiar with the topic, as it gives an overall, structured and balanced picture of the current state of the art. Readers less familiar with the topic will easily find their way in the vast literature on this issue, and will have their curiosity satisfied. (Gilles Teyssire, Mathematical s, October, 2014)This book aims to cover probabilistic and statistical aspects of long-memory processes in as much detail as possible, including a broad range of topics. The authors did an excellent job to reach their goals, and the book would be a must for researchers interested in long-memory processes and practioners on time series and data analysis. the book is an excellent choice for anyone who is working in fields related to long-memory processes with many update information and research topics. (Weiping Li, zbMATH, Vol. 1282, 2014)From the Back CoverLong-memory processes are known to play an important part in many areas of science and technology, including physics, geophysics, hydrology, telecommunications, economics, finance, climatology, and network engineering. In the last 20 years enormous progress has been made in understanding the probabilistic foundations and statistical principles of such processes. This book provides a timely and comprehensive review, including a thorough discussion of mathematical and probabilistic foundations and statistical methods, emphasizing their practical motivation and mathematical justification. Proofs of the main theorems are provided and data examples illustrate practical aspects. This book will be a valuable resource for researchers and graduate students in statistics, mathematics, econometrics and other quantitative areas, as well as for practitioners and applied researchers who need to analyze data in which long memory, power laws, self-similar scaling or fractal properties are relevant.About the AuthorJan Beran is a Professor of Statistics at the University of Konstanz (Department of Mathematics and Statistics). After completing his PhD in Mathematics at the ETH Zurich, he worked at several U.S. universities and the University of Zurich. He has a broad range of interests, from long-memory processes and asymptotic theory to applications in finance, biology and musicology. Yuanhua Feng is a Professor of Econometrics at the University of Paderborns Department of Economics. He previously worked at the Heriot-Watt University, UK, after completing his PhD and postdoctoral studies at the University of Konstanz. His research interests include financial econometrics, time series and semiparametric modeling. Sucharita Ghosh (M.Stat. Indian Statistical Institute; PhD Univ. Toronto) is a statistician at the Swiss Federal Research Institute WSL. She has taught at the University of Toronto, UNC Chapel Hill, Cornell University, the University of Konstanz, University of York and the ETH Zurich. Her research interests include space-time processes, nonparametric curve estimation and empirical transforms. Rafal Kulik is an Associate Professor at the University of Ottawas Department of Mathematics and Statistics. He has previously taught at the University of Wroclaw, University of Ulm and University of Sydney. His research interests include limit theorems for weakly and strongly dependent random variables, time series analysis and heavy-tailed phenomena, with applications in finance.