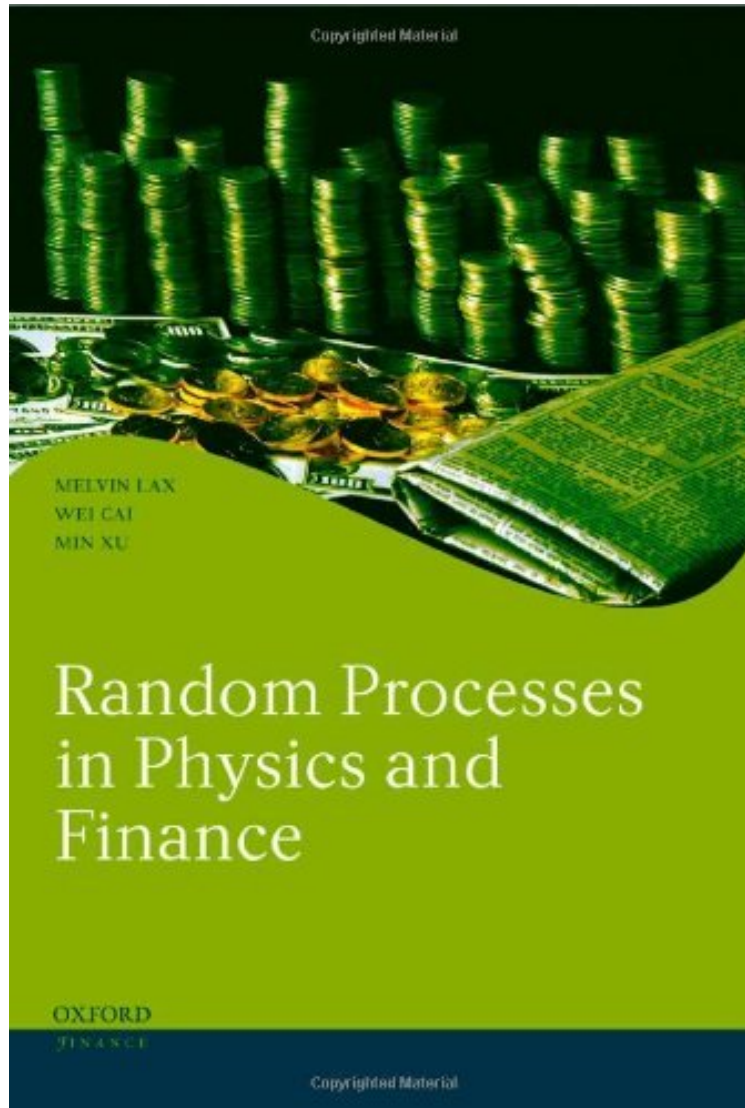


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Random Processes in Physics and Finance (Oxford Finance Series)

Melvin Lax, Wei Cai, Min Xu

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Melvin Lax, Wei Cai, Min Xu : Random Processes in Physics and Finance (Oxford Finance Series) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Random Processes in Physics and Finance (Oxford Finance Series):

2 of 2 people found the following review helpful. Well written but could use more examples or exercises By Joe Jordan The title of this book is a bit misleading. The only part of the book that covers finance is at the very end. This didn't bother me as I am more interested in physics but here too the treatment is not what I expected when I picked up the book. The book gives a bit more coverage to the presence of noise in physical systems, especially circuits, than to Brownian motion and Langevin dynamics. It is clear that the author (Lax) is very knowledgeable about noise in

electric circuits but I felt that the equations could have used a bit more motivation and that I would have benefited from more examples. In fact, aside from the first chapter, which is a concise review of probability, there are almost no examples. There are also no problems, which simply won't do for a book on physics or math. Nonetheless, I did learn a bit about random processes in physics, so I am not disappointed in this book, I just think it could be better. I also liked how readable this book was. I think the authors put in just enough steps in their derivations that you can follow them without it being either tedious or tortuous. 4 of 4 people found the following review helpful. misleading title; only short discussion on finance By W Boudville The book's title and image suggests at least an equal emphasis on physics and finance. Yet I suspect the book was rebranded after Lax's death. Most of the book reads as a pure text on noise in physical processes. Quite well done, regarded as that. Thus, you might want to consider getting the book even if you have no interest in finance. Of the 17 chapters, only towards the end, in chapter 16, is there any substantive discussion about randomness appearing in finance. Here, the seminal Black-Scholes equation is explained, for example. And chapter 17 does give another discussion that is tangential to finance. Despite the use of the term econophysics, there really is little done with it. Hence, I do think the title is somewhat misleading.

This respected high-level text is aimed at students and professionals working on random processes in various areas, including physics and finance. The first author, Melvin Lax (1922-2002) was a distinguished Professor of Physics at City College of New York and a member of the U. S. National Academy of Sciences, and is widely known for his contributions to our understanding of random processes in physics. Most chapters of this book are outcomes of the class notes which Lax taught at the City University of New York from 1985 to 2001. The material is unique as it presents the theoretical framework of Lax's treatment of random processes, from basic probability theory to Fokker-Planck and Langevin Processes, and includes diverse applications, such as explanations of very narrow laser width, analytical solutions of the elastic Boltzmann transport equation, and a critical viewpoint of mathematics currently used in the world of finance.

"A rich selection of material, presented with insight and sophistication. ... full of wisdom, and rewarding for the expert." --Michael Shlesinger, Office of Naval Research, Arlington, VA "... clear and well organized, with effective pedagogy. An important book." --Morrel Cohen, Rutgers University "... aside from its teaching qualities the book is a pleasure to read even for the expert. I warmly recommend this book for both, the beginner and the professional." -- Journal of Statistical Physics, 2008 "Other departures from traditional mathematical finance texts make Lax's book a refreshing and much clearer read ... One hopes that this text will inspire other physics students to continue Lax's legacy and contribute to this growing, diverse field." --H. Eugene Stanley, Physics Today, 2008 "Random Processes in Physics and Finance is a great book on classical aspects of random processes in physics." --Rosario Nunzio Mantegna, Nature Physics

About the Author Melvin Lax, Department of Physics, City College of New York, Wei Cai, Department of Physics, City College of New York, Min Xu, Department of Physics, Fairfield University, Connecticut Melvin Lax (Deceased) Distinguished Professor of Physics City College of New York Melvin Lax was a Distinguished Professor of Physics at the City College of the City University of New York (1971-2002), and a member of the U. S. National Academy of Sciences (1983-2002). He has been associated with Bell Laboratories as a member of the technical staff (1955-1972), as head of the Theoretical Physics Research Department (1962-1964) and as consultant to the Solid State Electronics Research Laboratory. After receiving his PhD in Physics from MIT (1947), Dr. Lax advanced from assistant to full professor of Physics at Syracuse University, (1947-55). He has also taught at Princeton (Spring 1961) and at Oxford (1961-1962). Dr. Lax has published more than 200 papers. In 1999 Lax shared the Willis Lamb Medal for Laser Science and Quantum Optics. Dr. Lax was listed Who's Who in America.

Wei Cai Senior research staff Institute for Ultrafast Spectroscopy and lasers Department of Physics City College of New York Wei Cai received Ph. D degree in Physics from University of Houston in 1985. He also received a MS degree in computer science from City College of City University of New York in 1992. He joined the Department of Physics at the City College of the City University of New York as a research associate in 1985. Recently, he is a senior member of the research staff at the Institute for Ultrafast Spectroscopy and Lasers. His main research interests are in radiative transfer and optical image processing. He has published 55 papers and holds 4 U. S. Patent.

Min Xu Research staff Institute for Ultrafast Spectroscopy and lasers Department of Physics City College of New York Min Xu received Ph. D degree in Physics from City University of New York in 2001. He is currently a research associate at the Institute for Ultrafast Spectroscopy and Lasers. He works at the interface of physics, engineering and biomedical sciences. His main research interests are in optical physics, stochastic processes and inverse problems in physical and biological sciences, in particular, biomedical optical spectroscopy and imaging. He has published 30 peer-reviewed journal papers and holds 1 U. S. Patent.