The winners of this year’s awards as voted by users of wilmott.com

Contribution to Quantitative Finance (Cutting Edge Research)

WINNER Bruno Dupire
Bruno Dupire has headed the Derivatives Research teams at Societe Generale, Paribas Capital Markets and Nikko Financial Products before joining Bloomberg to develop pricing, risk management and arbitrage models. He is best known for having pioneered the widely used Local Volatility model (simplest extension of the Black-Scholes-Merton model to fit all option prices) in 1993 and subsequent stochastic volatility extensions. His recent work includes pricing and hedging of volatility derivatives and optimal delta hedging strategies. Before these years, he obtained a Master’s Degree in Artificial Intelligence, a PhD in Numerical Analysis and introduced the use of Neural Networks for financial time series forecasting. He is a Fellow and Adjunct Professor at NYU.

REACTION
“This award reached me during my vacation in St Barth, and it has indeed been a very nice surprise, topping a gorgeous day filled with sun and beauty. I just finished reading a novel by André Gide and I was meditating on his sentence ‘Rien ne décourage plus la pensée que cette persistance de l’azur.’

“Life needs a balance between effort and idleness, and New York certainly gives strong incentives to the former. These last two years at Bloomberg in NY have been intense, stimulated by an excellent research environment and the opportunity to present in numerous places my recent results on volatility derivatives, optimal hedging strategies, technical analysis, skew modeling and volatility arbitrage, amongst other.

“I want to thank the people who judged my work worthy the award and wish to congratulate Wilmott for having established in a short span of time a respected publication and a hugely popular forum. Finally, I want to thank my wife and my two kids for their constant love and support.”

Contribution to Quantitative Finance (Implementation)

WINNER Emanuel Derman
Along with Fischer Black, Emanuel Derman is one of the people responsible for molding Goldman Sachs’ reputation of the late eighties and early nineties. Derman paid equal attention to financial modeling and its implementation in the trading world. The Black, Derman Toy (BDT) yield curve model and Derman-Kani local volatility model are now ubiquitous, as is the move from hard science to the markets – and it was Derman who helped beat that path. Derman joined Goldman in 1985 in its financial strategies group. After developing BDT, Derman moved to spearheading the GS-One object-oriented modeling library. He took a break from Goldman for a year working at the adjustable rate mortgage research group at Salomon Brothers at the end of the decade...
before returning to Goldman Sachs in 1990 as head of its equities division’s quantitative strategies group. Derman devoted the next ten years to developing models of volatility behavior, exotic options pricing and variance swaps, as well as building trading software for Goldman’s equity derivatives division. Derman moved to firmwide risk in early 2000 as head of its derivatives analysis group, where he ran Goldman’s quantitative risk strategies group in 2001. His hallmark has always been an ability to bring the best aspects of an academic approach to heel in the real world, as described in his recent book My Life as a Quant: Reflections on Physics and Finance.

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“T0 be very gratified to be the recipient of the Wilmott Award. I learned from experience to regard quantitative finance as a multi-disciplinary field, a mix of financial theory, mathematics and computer science, overlaid with a skeptical attitude and an ability to talk to and learn from the people who use this stuff to survive. “The mix of disciplines that makes the field so stimulating was easier to achieve when I started out in this business and everything was less specialized. I still like mixtures – combining pie-in-the-sky theory with the indignities of reality, working alone and then interacting with people. I suppose mixtures are part of the reason I like derivatives too. So, I’m particularly pleased to be the recipient in the Quantitative Finance (implementation) category. I thank Wilmott and its readers for this honor.

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mathematics (probability, statistical physics), social science/finance (opacity & incomplete information; why economists have no clue but think that they know a lot), and cognitive science (how we are “fooled” by randomness). He mainly derives his intuitions from a 2-decade long and intense practice of derivatives trading (“hoddlu” activities with plenty of randomness). The ideas are expressed in literary form in the trilogy: Fooled by Randomness (2001, 2004, 17 languages, confusion of luck and skills), The Black Swan (2006, epistemology/philosophy of history, history explained by large deviations), and Chance and the Logic of Happiness (c. 2007, ethics/ stoicism, nonhedonistic happiness).

REACTION

“This is an honor for me particularly that I give a small number of lectures. I lecture just as I write, from my guts not my brain, with no regards for formalism and with contempt for anything remotely academic. I never thought that it would ever be recognized. Thank you for putting up with me and giving me this award.”

NOMINEES

Mike Staunton

Mike has been demystifying the arcane of spreadsheet modelling for both academics and practitioners for two decades – and over that time has become rather good at it! He is the author (with Mary Jackson) of the blockbuster Advanced Modelling in Finance using Excel and VBA “the book with no exercises and lots of practical code that works”. His regular column in Wilmott magazine continues this service to the community with concision and applicability that are Mike’s hallmarks. Mike is based at the London Business School where he is a director of the London Share Price Database. Mike is visiting lecturer in Numerical Methods at Cass Business School in London, where he teaches on the Masters in Mathematical Trading and Finance.

Bill Ziemba

Bill is the Alumni Professor of Financial Modeling and Stochastic Optimization, Emeritus in the Sauder School of Business, University of British Columbia where he taught from 1968 to 2004. He now teaches as a visiting professor. His experience is regularly imparted to the readers of Wilmott through his regular column which provides insight into aspects of scenario management both historical and current and an always engaging insight into his research in asset-liability management, portfolio theory and practice, security market imperfections, Japanese and Asian financial markets, sports and lottery investments and applied stochastic programming. Bill is series editor for North Holland’s Handbooks in Finance series and is author or editor of a continuing stream of influential books in various areas of investments and financial markets, and is a frequent speaker at conferences and seminars around the world.

WINNER

Freakonomics

Steven D. Levitt, Stephen J. Dubner

Allen Lane – Penguin (2005)

Which is more dangerous, a gun or a swimming pool? What do school-teachers and sumo wrestlers have in common? Why do drug dealers still live with their moms? How much do parents really matter? What kind of impact did Roe v. Wade have on violent crime?

Through forceful storytelling and wry insight, Levitt and co-author Stephen J. Dubner show that economics is, at root, the study of incentives - how people get what they want, or need, especially when other people want or need the same thing. In Freakonomics they set out to explore the hidden side of everything. The truth about real-estate agents. The myths of campaign finance. The tell-tale marks of a cheating schoolteacher. The secrets of the Ku Klux Klan.

Freakonomics establishes this unconventional premise: if morality represents how we would like the world to work, then economics represents how it actually does work. It is true that readers of this book will be armed with enough riddles and stories to last a thousand cocktail parties. But Freakonomics can provide more than that. It will literally redefine the way we view the modern world.

NOMINEES

Fortune’s Formula: The Untold Story of the Scientific Betting System That Beat the Casinos and Wall Street

William Poundstone


In 1956 two Bell Labs scientists discovered the scientific formula for getting rich. One was mathematician Claude Shannon, neurotic father of our digital age, whose genius is ranked with Einstein’s. The other was John L. Kelly, Jr., a Texas-born, gun-toting physicist. Together they applied the science of information theory – the basis of computers and the Internet – to the problem of making as much money as possible, as fast as possible.

Shannon and MIT mathematician Edward O Thorp took the “Kelly formula” to the roulette and blackjack tables of Las Vegas. It worked. They realized that there was even more money to be made in the stock market, specifically in the risky trading known as arbitrage. Thorp used the Kelly system with his phenomenally successful hedge fund Princeton-Newport Partners. Shannon became a successful investor, too, topping even Warren Buffett’s rate of return and using his wealth to drop out of the scientific world. Fortune’s Formula traces how the Kelly formula sparked controversy even as it made fortunes at racetracks, casinos, and trading desks. It reveals the dark side of this alluring scheme, which is founded on exploiting an insider’s edge. The cast of character spans J. Edgar Hoover, Rudolph Giuliani, Michael Milken and Warren Buffett; Hollywood producers, Wall Street crooks, snarky Nobel Laureates, and
the Jewish mob. Fortune’s Formula explores a new and surprising side to the Shannon legacy. Based in part on Shannon’s previously unseen personal records as well as interviews with both of Shannon’s wives, Thorp, and many others, it is the first full-length treatment of a subject that is changing ideas about finance. Claude Shannon believed it was possible for a smart investor to beat the market – and Fortune’s Formula will convince you he was right.

**Busting Vegas: The MIT Whiz Kid Who Brought the Casinos to Their Knees**

Ben Mezrich


Semyon Dukach was known as the Darling of Las Vegas. A legend at age twenty-one, this cocky hotshot was the biggest high roller to appear in Sin City in decades, a mathematical genius with a system the casinos had never seen before and couldn’t stop – a system that has never been revealed until now; that has nothing to do with card counting, wasn’t illegal, and was more powerful than anything that had been tried before.


Dukach and his fellow MIT students hit them all and made millions. They came in hard, with stacks of cash; big, seemingly insane bets; women hanging on their arms; and fake identities. Although they were taking classes and studying for exams during the week, over the weekends they stormed the blackjack tables only to be harassed, banned from casinos, threatened at gunpoint, and beaten in Vegas’s notorious back rooms.

In the classroom, they were geeks. On the casino floor, they were unstoppable.

Busting Vegas is Dukach’s unbelievably true story; a riveting account of monumental greed, excess, hubris, sex, love, violence, fear, and statistics that is high-stakes entertainment at its best.

**Fischer Black and the Revolutionary Idea of Finance**

Perry Mehrling

Wiley (2005)

Fischer Black and the Revolutionary Idea of Finance explores Fischer Black’s intellectual journey from Harvard to the offices of ADL, from the University of Chicago to MIT, and then to Goldman Sachs. Years of research and interviews with Black’s business and academic associates, as well as family and friends, are distilled into a scholarly yet personal story of the formation and development of the extraordinary mind and unique character of this unassuming renegade. This poignant book tells the story of one man’s intellectual adventure at the very center of modern finance. It is a story about the birth of quantitative finance and financial engineering. It is also the story about the continuing human quest to defeat the “dark forces of time and ignorance,” as John Maynard Keynes famously put it.

**New Book of the Year (Quantitative Finance)**

**WINNER** Inside Volatility Arbitrage: The Secrets of Skewness

Alireza Javaheri

Wiley (2005)

Today’s traders want to know when volatility is a sign that the sky is falling (and they should stay out of the market), and when it is a sign of a possible trading opportunity. Inside Volatility Arbitrage can help them do this. Author and financial expert Alireza Javaheri uses the classic approach to evaluating volatility – time series and financial econometrics – in a way that he believes is superior to methods presently used by market participants. He also suggests that there may be “skewness” trading opportunities that can be used to trade the markets more profitably. Filled with in-depth insight and expert advice, Inside Volatility Arbitrage will help traders discover when “skewness” may present valuable trading opportunities as well as why it can be so profitable.

**NOMINEES**

**Finance and Derivatives: Theory & Practice**

Sebastien Bossu and Philippe Henrotte

Wiley (2005)

Finance & Derivatives: Theory & Practice by Bossu & Henrotte is a translation of the successful French language book Exercises de Finance des Marches, published by Dunod. It contains a selection of exercises, along with the relevant financial theory, that can be used by advanced undergraduate and postgraduate students. As well as being ideal for adoption on university courses, it will also be highly valuable as a self-study guide for practitioners.

**Asset Price Dynamics, Volatility, and Prediction**

Stephen J. Taylor


Stephen Taylor provides a comprehensive introduction to the dynamic behavior of asset prices, relying on finance theory and statistical evidence. He uses stochastic processes to define mathematical models for price dynamics but with less mathematics than in alternative texts. The key topics covered include random walk tests, trading rules, ARCH models, stochastic volatility models, high-frequency datasets, and the information that option prices imply about volatility and distributions.

**Quantitative Finance for Physicists**

Anatoly B Schmidt

Elsevier (2005)

With more and more physicists and physics students exploring the possibility of utilizing their advanced math skills for a career in the finance industry, this much-needed book quickly introduces them to fundamental and advanced finance principles and methods. Quantitative Finance for Physicists provides a short, straightforward introduction for those who already have a background in physics. Find out how fractals, scaling, chaos, and other physics concepts are useful in analyzing financial time series. Learn about key topics in quantitative finance such as option pricing, portfolio management, and risk.
measurement. This book provides
the basic knowledge in finance
required to enable readers with phys-
ics backgrounds to move successfully
into the financial industry.