

# Marco Avellaneda

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## Education

Licentiate in Mathematical Sciences (B.S. /M.S.), 1981, University of Buenos Aires

Ph.D. in Mathematics (Probability), 1985, University of Minnesota

## Academic

09/85 – 09/2005: **New York University, Courant Institute of Mathematical Sciences**

Director, Division of Financial Mathematics	1998 -
Professor of Mathematics	1995 -
Associate Professor (tenure)	1990 - 1995
Assistant Professor	1988 - 1990
Research Scientist	1987 - 1988
Instructor	1985 – 1987

Research interests: Applied Mathematics, Applied Physics, Mathematical Finance, Econometrics of Financial Markets, Derivative Securities, Risk-management. Directed 13 doctoral dissertations since 1988

## Non-Academic

1/2004-1/2005: **Capital Fund Management, S.A. (Paris)** (Leave of absence from NYU)  
Head of Volatility Arbitrage (Nimbus Hedge Fund)

Main activity: Directed team of 4 people that developed a new hedge fund specialized in trading options

- Developed relative-value trading strategies using equity options
- Back-tested RV strategies using US options database
- Directed team of programmers in implementation of full-scale trading platform
- Negotiated fees and market access with prime brokers
- Traded the strategies (90% electronic, 10% voice on CBOE)
- Participated actively in marketing of the fund to institutional investors
- Developed Eurozone strategy (not implemented)

12/96 - 02/98: **Morgan Stanley Dean Witter** (Leave of absence from NYU)  
Vice-President, Fixed-Income Research, Derivative Products Group

### **Consulting & Other Finance-related Activities**

1/2004-present: **Finance Concepts SARL**  
Founding Partner

Finance Concepts has 7 co-workers. Recipient of the 2004 ANVAR Prize for Young Innovating Company. Clients in 2004 included Fortune 500 banks and corporations, such as Total, Cisco Systems and Societe Generale.

2/2002-1/2003 **Royal Bank of Canada Capital Markets**  
Consultant to the Head of Trading and Research of Structured Credit Derivatives

1/2001-5/2003: **Gargoyle Strategic Investments, LLC.**  
Partner, Proprietary Trading, Listed Equity Options

6/1999-9/1999: **BNP Paribas, Fixed-Income Research**  
Consultant to the Head of Research

1/1998-12/1998: **Morgan Stanley & Co**  
Consultant to the Model Review Committee, and to the Head of Fixed-Income Research

3/1996-8/1996: **Banque Indosuez, New York**  
Consultant to the Foreign-Exchange Derivatives Trading Desk

### **Academic Service**

9/1995-present: **Courant Institute Mathematical Finance Seminar**  
This venue brings together academics and practitioners in Mathematical Finance in a New York City event every week. It was one of the first seminars in Mathematical Finance in the country that promoted exchanges between the university and the finance community

1/2004-present: **University of Coimbra, Portugal, International Center for Mathematics**  
Member, Scientific Program Committee

1/2004-4/2004: **Institute for Mathematics and Its Applications, University of Minnesota**  
Lead Organizer, Period of Concentration of Mathematical Finance

1/2003 to 12/2003: **University of Nice**  
Visiting Professor, Institut J. Dieudonne

1/2002-12/2004: **American Mathematical Society, Committee of Science Policy**  
Appointed Member. Committee duties involved meeting with U.S. Representatives and staff on science policy matters

12/1996 -1/1997: **Ecole Polytechnique**  
Member, review panel for 5-year assessment of the Applied Mathematics Laboratory (CNRS)

9/1995-5/1996: **Institute for Advanced Studies**  
Visiting Member

1991- 1998:       **Short-term summer academic appointments**

University of Paris VI, University of Paris VII, ETH-Zurich, Ecole Normale Supérieure de Cachan, Ecole Polytechnique, IMPA-Rio de Janeiro, University of Buenos Aires, Universidad Menéndez-Pelayo (Spain)

**Selected Invited Conferences**

**Institut Henri Poincaré**, *Conference in Honor of Nicole El Karoui*, 2004

**Stanford University**, *Conference in Honor of George Papanicolaou's 60<sup>th</sup> birthday*, 2003

**Scuola Normale Superiore di Pisa**, *Cattedra Galileiana*, 2001

**International Congress of Mathematicians, Berlin, 1998**, Invited 30 minute address

**International Congress of Mathematicians, Zurich, 1994**, Invited 30 minute address

**Books and Editorial**

*Quantitative Modeling of Derivative Securities* (with Peter Laurence), CRC Press, 1999

*Quantitative Analysis in Financial Markets, Vols. I, II, III*, World Scientific, 1999, 2000, 2001

*International Journal for Theoretical and Applied Finance*, Managing Editor, 1998- present

*Proceedings of IMA Workshop of Financial Modeling*, Springer, 2005 (with Rama Cont)

*Communications on Pure and Applied Mathematics*, Editorial Board Member

**List of Publications**

Attached separately

**Certifications**

NASD Series 7 and Series 63

**Languages**

English, Spanish, Portuguese, French, written and spoken fluently

Italian, conversational

**Brief Biography**

Elementary and high-school years in Rio de Janeiro, Buenos Aires and Paris. Moved from Europe to South America in 1970. Lived in Rio de Janeiro until mid-seventies and obtained a BS/MS in Mathematics at the University of Buenos Aires in 1981. Graduate studies at the University of Minnesota in the early 1980's. Joined the faculty of New York University in 1985. Travels extensively, with frequent visits to Latin America and Europe. U.S. Citizen since October 2002. Research focuses on the application of mathematics and statistics to real-life situations, and the development of technology that uses mathematics to handle information and data in real-time, such as statistical trading algorithms.