Marc Paolella

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Higher Education:

Post Doc (Habilitation), Kiel University, 2002.

Dr. sc. pol., Econometrics, 1998, Kiel University, 1998.

M.S., Statistics, 1993, Colorado State University, 1993.

Bachelor of Arts, Economics, 1990, State University of New York at Stony Brook, 1990.

Bachelor of Science, Applied Mathematics and Statistics, 1990, State University of New York at Stony Brook, 1990.

Academic Positions & Other Work Experience:

Full Professor — January 2007 - Present
Swiss Banking Institute, University of Zurich

Visiting Professor / Lecturer — 2008 - 2010
Department of Econometrics, University of Geneva

Associate Professor — September 2003 - December 2006
Swiss Banking Institute, University of Zurich

Director — April 2003 - August 2003
Institute of Statistics and Econometrics, Kiel University, Germany.

Assistant Professor — April 1999 - March 2003
Institute of Statistics and Econometrics, Kiel University, Germany.

Research Assistant — November 1993 - March 1999
Institute of Statistics and Econometrics, Kiel University, Germany.

Statistical Consultant — August 1992 - May 1993
Colorado State University Statistical Consulting Laboratory, Fort Collins, CO, USA.

Statistical Programmer — August 1990 - May 1991
Health Economics Research Inc., Waltham, MA, USA.

Member:

- Leading Scientist: Computational Optimization Methods in Statistics, Econometrics and Finance (COMISEF), http://comisef.wikidot.com/members
- Co-Chair: European Consortium for Informatics and Mathematics (ERCIM), Working Group: Computational Econometrics and Financial Time Series, http://www.dcs.bbk.ac.uk/ercim/TrackCFE.html
- Verein für Socialpolitik: Ausschuss für Ökonometrie

Editorial Work:

- Associate Editor: *e*conomics, http://www.economics-ejournal.org/
- Associate Editor: Computational Statistics & Data Analysis

Current Papers:

"An Asymmetric Multivariate Student's t Distributions with Different Degrees of Freedom and Possible Independent Marginals"

"Multivariate Asset Return Prediction with Mixture Models"

"ALRIGHT: Asymmetric LaRge-Scale (I)GARCH with Hetero-Tails"

"Saddlepoint Approximation of Expected Shortfall for Transformed Means", with S. Broda.

"A Simple and Powerful Test for the Stable Paretian Distribution", with S. Broda.

"Fast Estimation of Highly Parameterized GARCH Models", with J. Krause.

"Stable Mixture GARCH Models", with S. Broda, M. Haas, J. Krause and S.-C. Steude.

"Forecasting Financial Risk using GARCH: Normal with Outliers or Flexible Distribution Assumptions?", with C. Hartz and J. Krause.

"Approximately Exact Inference in Dynamic Panel Models", with S. Broda and Y. Tchopourian.

"Analyzing and Exploiting Asymmetries in the News Impact Curve", with M. Haas, J. Krause and S-C. Steude.

Refereed Journal Articles:

"CHICAGO: A Fast and Accurate Method for Portfolio Risk Calculation", with S. Broda, **Journal of Financial Econometrics**, Vol. 7(4), 2009.

"Evaluating the Density of Ratios of Noncentral Quadratic Forms in Normal Variables", with S. Broda, **Computational Statistics and Data Analysis**, Vol. 53(4), 2009.

"Asymmetric Multivariate Normal Mixture GARCH", with M. Haas and S. Mittnik, **Computational Statistics and Data Analysis**, Vol. 53(6), 2009.

"Assessing and Improving the Performance of Nearly Efficient Unit Root Tests in Small Samples", with S. Broda and K. Carstensen, **Econometric Reviews**, Vol. 28(5), 2009.

"An Econometric Analysis of Emission Trading Allowances", with Luca Taschini, **Journal of Banking and Finance**, Vol. 32, 2008.

"Risk Prediction: A DWARF-like Approach", with S-C. Steude, **The Journal of Risk Model Validation**, Vol. 2(1), 2008.

"Uniform Saddlepoint Approximations for Ratios of Quadratic Forms", with R. Butler. **Bernoulli**, Vol. 14(1), 2008.

"Bias–Adjusted Estimation in the ARX(1) Model", with S. Broda and K. Carstensen. **Computational Statistics and Data Analysis**, Vol. 51, 2007.

"Saddlepoint Approximations for the Doubly Noncentral t Distribution", with S. Broda. **Computational Statistics and Data Analysis**, Vol. 51, 2007.

"Accurate Value–at–Risk Forecasting Based on the Normal–GARCH Model", with C. Hartz and S. Mittnik. **Computational Statistics and Data Analysis**, Vol. 51, 2006.

"Modeling and Predicting Market Risk With Laplace-Gaussian Mixture Distributions", with S. Mittnik and M. Haas. **Applied Financial Economics**, Vol. 16, 2006.

"Value–at–Risk Prediction: A Comparison of Alternative Strategies", with K. Kuester and S. Mittnik. **Journal of Financial Econometrics**, Vol. 4, No. 1, 2006.
Reproduced in: The Foundations of Credit Risk Analysis, edited by Willi Semmler and Lucas Bernard, Edward Elgar Publishing, 2007.

"A New Approach to Markov-Switching GARCH Models", with S. Mittnik and M. Haas, **Journal of Financial Econometrics**, Vol. 2, No. 4, 2004.

"Modeling German Monthly Money Demand", **Applied Economics Quarterly**, Vol. 50, No. 2, 2004.

"Mixed Normal Conditional Heteroskedasticity", with S. Mittnik and M. Haas, **Journal of Financial Econometrics**, Vol. 2, No. 2, 2004.

"Computing Moments of Ratios of Quadratic Forms in Normal Variables", **Computational Statistics and Data Analysis**, Vol. 42, No. 3, 2003.

"Saddlepoint Approximation and Bootstrap Inference for the Satterthwaite Class of Ratios", with R. Butler, **Journal of the American Statistical Association**, Vol. 97, No. 459, 2002.

"Calculating the Density and Distribution Function for the Singly and Doubly Noncentral F", with R. Butler, **Statistics and Computing**, Vol. 12, No. 1, 2002.

"Stationarity of Stable Power–GARCH Processes", with S. Mittnik and S. Rachev, **Journal of Econometrics**, Vol. 106, 2002.

"Testing the Stable Paretian Assumption", **Mathematical and Computer Modelling**, Vol. 34, 2001.

"Diagnosing and Treating the Fat Tails in Financial Returns Data", with S. Mittnik and S. Rachev, **Journal of Empirical Finance**, Vol. 7, 2000.

"Conditional Density and Value-at-Risk Prediction of Asian Currency Exchange Rates", with S. Mittnik, **Journal of Forecasting**, Vol. 19, 2000.

"A Simple Estimator for the Characteristic Exponent of the Stable Paretian Distribution", with S. Mittnik, **Mathematical and Computer Modelling**, Vol. 29, 1999.

"Approximate Distributions for the Various Serial Correlograms", with R. Butler, **Bernoulli**, Vol. 4, No. 4, 1998.

"Unconditional and Conditional Distributional Models for the Nikkei Index", with S. Mittnik and S. Rachev, **Asia-Pacific Financial Markets**, Vol. 5, No. 2, 1998.

"A Tail Estimator for the Index of the Stable Paretian Distribution", with S. Mittnik and S. Rachev, **Communications in Statistics–Theory and Methods**, Vol. 27, No. 5, 1998.

Contributions in Edited Volumes:

"Expected Shortfall for Distributions in Finance", with Simon Broda, in Cizek, P.; Härdle, W.; and Weron, R, (eds.) **Statistical Tools for Finance and Insurance**, 2nd edition, 2010, Springer Verlag, Berlin.

"Prediction of Financial Downside–Risk with Heavy–Tailed Conditional Distributions", with S. Mittnik, **Handbook of Heavy Tailed Distributions in Finance**, Volume 1, Chapter 9, Elsevier North–Holland, 2003.

"On Median Unbiased Inference for First Order Autoregressive Models", with Kai Carstensen, Chap. 3 in **Contributions to Modern Econometrics: From Data Analysis to Economic Policy**, Kluwer Academic Publishers, 2003.

"Stable Paretian Modeling in Finance: Some Empirical and Theoretical Aspects", with S. Mittnik and S. Rachev, in Adler, R., Feldman, R. and Taqqu, M., (eds.) **A Practical Guide to Heavy Tailed Data**, 1998, Birkhäuser, Boston, MA.

Book Reviews:

"Financial Modeling Under Non-Gaussian Assumptions", by E. Jondeau, S.-H. Poon and M. Rockinger, Springer, 2007; forthcoming in **Journal of the American Statistical Association**, June, 2009.

Textbooks:

"Fundamental Probability: A Computational Approach", **John Wiley & Sons**, March 2006, 488 pages.
Reviewed in *The American Statistician*, May 2008, Vol. 62, No. 2.

"Intermediate Probability: A Computational Approach", **John Wiley & Sons**, September 2007, 415 pages.
Reviewed in *Journal of the American Statistical Association*, September 2009, Vol. 104, No. 487.

"Fundamental Statistics: A Computational Approach", in preparation.

"Intermediate Statistics: A Computational Approach", in preparation.

Conference Organization:

- Organizer, jointly with David Veredas (Free University of Brussels): Latest Developments in Heavy-Tailed Distributions, March 26-27, 2010, Brussels, Belgium.
- Scientific Programme Committee Member: 3rd International Conference on Computational and Financial Econometrics, October 29-31, 2009, Limassol, Cyprus.
- Co-Chair: 2nd International workshop on Computational and Financial Econometrics (CFE'08) 19-21 June 2008, Neuchâtel, Switzerland.
- Scientific Programme Committee Member: International Workshop on Computational and Financial Econometrics, April 20-22, 2007, Geneva, Switzerland.

Referee Work:

Advances in Statistical Analysis Annals of Operations Research, Computational Statistics, Computational Statistics and Data Analysis, Econometric Theory, Empirical Economics, Energy Economics, Journal of Applied Econometrics, Journal of Business and Economic Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Empirical Finance, Journal of Financial Econometrics, Journal of International Money and Finance, Journal of Risk, Journal of Statistical Computation and Simulation, Journal of Statistical Planning and Inference, Mathematical Finance, Nonlinear Dynamics, Research in International Business and Finance, Signal Processing, Statistica Neerlandica, Studies in Nonlinear Dynamics & Econometrics, Swiss Journal of Economics and Statistics, Quantitative Finance.

Invited Conference Presentations:

"Asymmetric Multivariate Student's t Distributions Endowed with Different Degrees of Freedom", Rmetrics Conference, Singapore, February, 2010.

"Chicago: A Fast and Accurate Method for Portfolio Risk Calculation", The Third Conference of Thailand Econometric Society, Chiang Mai, Thailand, January, 2010.

"Modern GARCH Models and VaR Prediction", International Summer School on Risk Measurement and Control 2006, Rome, Italy; June, 2006.

"Stable Mixture GARCH Models", Deutsche Bundesbank Conference on: Heavy tails and Stable Paretian Distributions in Finance and Macroeconomics – in Celebration of the 80th birthday of Professor Benoit B. Mandelbrot, Eltville, Germany; November, 2005.

"Analyzing and Exploiting Asymmetries in the News Impact Curve", Workshop on Financial Risk and Time Series Analysis (Satellite Workshop of the 2005 NBER/NSF Time Series Conference), Munich, Germany; September, 2005.

"Bias–Adjusted Autoregressive Point Estimation in the ARMAX(1,q) Model", Ausshuß für Ökonometrie (Verein für Socialpolitik), Marburg, Germany; March, 2005

"Bias–Adjusted Autoregressive Point Estimation in the ARMAX(1,q) Model", Workshop on Risk Analysis in Finance and Insurance, Munich, Germany; June, 2004.

"Value-at-Risk Prediction: A Comparison of Alternative Strategies", Center for Financial Studies workshop on New Directions in Financial Risk Management, Frankfurt, Germany; November, 2003.

"Diagnosing and Treating the Fat Tails in Financial Returns Data", Graduiertenkolleg "Angewandte Statistik", Department of Statistics, Dortmund, Germany; November, 2000.

"Diagnosing and Treating the Fat Tails in Financial Returns Data", Journal of Empirical Finance Conference on Risk Management, Algarve, Portugal; November, 1999.

Regular Conference Presentations:

4th Annual International Conference on Mathematics & Statistics, Athens, Greece, June 14-17, 2010.

Stochastic Modeling Techniques and Data Analysis, Chania, Crete, Greece, June 8-11, 2010.

Forecasting in Rio, Rio de Janeiro, Brazil, July 29-31, 2008.

International Workshop on Computational and Financial Econometrics, Geneva, Switzerland, April 20-22, 2007.

Swiss Society Of Economics And Statistics (SSES) Annual Meeting: Finance And Financial Econometrics, University of St. Gallen, Switzerland, March 22-23, 2007

Swiss Statistics Meeting, Lugano, Switzerland, November 15-17, 2006.

61st European Meeting of the Econometric Society (ESEM), Vienna, August 24-28, 2006.

International Association for Statistical Computing 3rd World Conference on Computational Statistics & Data Analysis, Cyprus, Greece; October, 2005.

Mixtures 2001, Hamburg, Germany; July, 2001.

Euroworkshop on Statistical Modelling—Mixed Models, Munich, Germany; November, 2000.

10th European Conferences of the Econom[etr]ics Community (EC^2), Financial Econometrics, Madrid, Spain; December, 1999.

52nd Session of the International Statistical Institute, Helsinki, Finland; August, 1999.

14th International Workshop on Statistical Modelling, Graz, Austria; July, 1999.

19th International Symposium on Forecasting, Washington D.C., USA; June, 1999.

5th International Conference of the Society for Computational Economics, MA, USA; June, 1999.

4th Spring Meeting of Young Economists, Amsterdam, The Netherlands; April, 1999.

9th European Conferences of the Econom[etr]ics Community (EC^2), Forecasting in Econometrics, Stockholm, Sweden; December, 1998.

Econometric Society European Meeting (ESEM), Berlin, Germany; August, 1998.

Barcelona Finance Meeting, Barcelona, Spain; September, 1997.

51st Session of the International Statistics Institute, Istanbul, Turkey; August, 1997.

2nd International Conference on Computing in Economics and Finance, Geneva, Switzerland; June, 1996.