

CURRICULUM VITAE

Name: **Michael Sørensen**

Official address: Department of Mathematical Sciences
University of Copenhagen
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DK-2100 Copenhagen Ø
Denmark

Date and place of birth: 20 March 1955, Aarhus, Denmark

Nationality: Danish

Academic degrees:

Cand.scient. (M.Sc.), January 1982, University of Aarhus
Ph.D., April 1986, University of Aarhus

Positions held:

1980 – 1981 *Scholarstipendium* (a research stipend for students from Aarhus University Research Foundation). Stays at University of Cambridge Imperial College of Science and Technology, London.

1982 *Assistant Professor* (Adjunkt), Department of Mathematics, University of Aarhus.

1983 – 1986 *Research Scholarship* (from the Danish Science Research Council), Department of Mathematics, University of Aarhus.

1986 – 1990 *Assistant Professor* (Adjunkt), Department of Mathematics, University of Aarhus.

1990 – 1997 *Associate Professor* (Lektor), Department of Mathematics, University of Aarhus.

Since 1997 *Professor*, Department of Mathematical Sciences, University of Copenhagen.

October 1989 – January 1990: Visiting Professor, Sektion Mathematik, Humboldt-Universität zu Berlin. April – June 1994: Visiting Researcher, Sonderforschungsbereich 373, Quantification and Simulation of Economic Processes, Humboldt-Universität zu Berlin. March – May 2003: Visiting Professor, Department of Statistics, University of Chicago. November 2008: Visiting Professor, Center for the Study of Finance and Insurance, University of Osaka.

Honours:

Member of The Royal Danish Academy of Sciences and Letters.

Elected member of the International Statistical Institute.

Elected fellow of the Institute of Mathematical Statistics.

Current research interests:

Statistical inference for stochastic processes, in particular discrete time sampling of continuous time processes such as models given by stochastic differential equations and jump processes. Estimating functions. Stochastic models and inference problems in the physics of wind blown sand, biology and finance.

Research management:

Scientist-in-charge of the Danish node of the EU research network Statistical Inference for Stochastic Processes (1993 – 1997).

Scientific Director of Centre for Analytical Finance at the University of Aarhus and Aarhus School of Business (1996 – 1999). Member of the board (1999 – 2001).

Principal investigator at the Centre for Mathematical Physics and Stochastics (1998 – 2004).

Scientific Coordinator of the EU research training network Statistical Methods for Dynamical Stochastic Models (2000 – 2004).

Principal investigator of the Copenhagen University Excellence Programme project Statistical Methods for Complex and High Dimensional Models (2008 – 2013).

Editorial work:

Associate Editor of Acta Mechanica Supplementum 1-2 (1990 – 1991).

Associate Editor of the Brazilian Journal of Probability and Statistics (Since 1991).

Co-ordinating Editor of Journal of Statistical Planning and Inference (1995 – 1998).

Associate Editor of Scandinavian Journal of Statistics (1997 – 2003).

Member of the Editorial Board of Statistical Inference for Stochastic Processes (Since 2001).

Associate Editor of Stochastic Processes and their Applications (Since 2002).

Associate Editor of ALEA - Latin American Journal of Probability and Mathematical Statistics (Since 2005).

Member of the Editorial Board of the Institute of Mathematical Statistics Collections series (2008 – 2009).

Member of the Editorial Board of the book series Springer Selected Works in Probability and Statistics (2009 – 2011).

Referee for numerous journals and book series in statistics, probability theory, geology, physics, econometrics, and finance.

Service to scientific organizations:

Board Member of the Danish Society for Theoretical Statistics (1989 – 1993).

Council Member of European Courses in Advanced Statistics (1991 – 2001).

Chairman of the Governing Board of the Scandinavian Journal of Statistics (Since 2004).
Member of the Board (Since 1999).

Chairman of the European Regional Committee of the Bernoulli Society (2000 – 2002).
Member of the committee (2002 – 2006). Programme Coordinator (2004 – 2006).

Member of the Committee on Meetings of the European Mathematical Society (2001 – 2006).

Member of the Steering Group of Séminaires Européens de Statistiques (Since 2002).

Member of the Research Section Committee of the Royal Statistical Society, London (2003 – 2007).

Member of the Danish Committee for Mathematics (Since 2004).

Member of the Nomination Committee of the International Statistical Institute (2007).

Chairman of the Publications Committee of the Bernoulli Society (Since 2008).

Member of the Publications Committee of the International Statistical Institute (Since 2008).

Member of the presidium of the Royal Danish Academy of Sciences and Letters (2009 – 2012).

Scientific advisory and assessment service:

Member of the jury for the Berardo prize (2001).

Member of the Review Panel for the Swiss National Centre of Competence in Research “Financial Valuation and Risk Management” (Since 2002).

Member of the International Advisory Committee of the Finnish National Visitors Program in Mathematics 2004-2005: New Techniques in Applied Stochastics.

Member of the Mathematics Subcommittee for Danish Bibliometric Research Indicators (2008 – 2012).

Member of the jury for the Elsevier/EMS Poster Award (2010).

Member of the Steering Committee for the project “Actulus - Actuarial Calculus and Computing” supported by the Danish National Advanced Technology Foundation (2011 – 2014).

Member of the Steering Committee for “HIPERFIT, Research Center for Functional High-Performance Computing for Financial Information Technology” funded by the Danish Council for Strategic Research (since 2011).

Evaluated Ph.D. theses in Australia, Denmark, France, Greece, Italy, the Netherlands, Sweden, and the United Kingdom.

Evaluated applicants for professor positions in Denmark, Germany, Sweden, U.K. and U.S.A.

Evaluated research proposals for the International Science Foundation and for research councils and similar organizations in Chile, Kuwait, the Netherlands, Norway, Sweden, Switzerland, U.K. and U.S.A.

Service to universities:

Member of the Board of the Department of Mathematics, University of Aarhus and chairman of the Department of Theoretical Statistics (1990 – 1994).

Associate chair of the Department of Mathematical Sciences, University of Copenhagen (2000 – 2001).

Acting chair of the Laboratory of Actuarial Mathematics, University of Copenhagen (2000).

Head of the Department of Applied Mathematics and Statistics, University of Copenhagen (2002 – 2006).

Associate Chair for Research at the Department of Mathematical Sciences, University of Copenhagen (Since 2007). Head of Department in 2009 – 2010.

Member of the Research Committee of the Faculty of Science, University of Copenhagen (Since 2007).

Advisor to the jury for the Niels Bohr Science Park competition (2010).

Member of the Committee for Scientific Practice at the University of Copenhagen (since 2011).

Organization of scientific meetings:

Organizing Committee of the 4th European Young Statisticians Meeting in Varna, Bulgaria (1985).

Co-organizer of the 5th European Young Statisticians Meeting in Aarhus (1987).

Co-organizer of Workshop on Sand, Dust and Soil in their Relation to Aeolian and Littoral Processes, Sandbjerg, Denmark (1990).

Organizer of a session on Statistics of Stochastic Processes at the 14th Nordic Conference in Mathematical Statistics in Røros, Norway (1992).

Chairman of the Organizing Committee of the 21st European Meeting of Statisticians, Aarhus (1995).

Organizer of Workshop on Statistical Inference for Stochastic Processes, Sandbjerg, Denmark (1996).

Member of the scientific programme committee of the Second Scandinavian–Ukrainian Conference in Mathematical Statistics, Umeå (1997).

Organizer of a workshop on analytical finance, Aarhus (1997).

Member of the scientific programme committee for the 17th Nordic Conference in Mathematical Statistics, Denmark (1998).

Organizer of a workshop on Statistical Inference for Stochastic Processes, Copenhagen (1998).

Co-organizer of a workshop on Turbulence and Finance, Aarhus (1999).

Co-organizer of the First T.N. Thiele Symposium on Stochastics in Insurance and Finance, Copenhagen (2000).

Co-organizer of the “Symposium in honour of Ole E. Barndorff-Nielsen”, Aarhus (2000).

Co-organizer of an Instructional Workshop on Empirical Process Techniques for Dependent Data, Copenhagen (2000).

Co-organizer of the workshop Stochastic Partial Differential Equations, Statistical Issues and Applications, Copenhagen (2001).

Co-organizer of a Concentrated Advanced Course on Long Range Dependence, Heavy Tails and Rare Events with Applications to Finance and Telecommunications, Copenhagen (2002).

Co-organizer of a Summer School with the title From Lévy Processes to Semimartingales - Recent Theoretical Developments and Applications to Finance, Aarhus (2002).

Co-organizer of the Second T.N. Thiele Symposium on Financial Econometrics, Copenhagen (2002).

Co-organizer of a workshop on Dynamical Stochastic Modeling in Biology, Copenhagen (2003).

Co-organizer of a workshop on Statistical Aspects of Microarray Data, Aarhus (2003).

Co-organizer of a workshop on Financial Methods in Insurance, Copenhagen (2003).

Co-organizer of a concentrated advanced course on Statistical Methods for Financial Risk Management, Copenhagen (2003).

Co-organizer of a workshop with the title Non-coding RNA in regulation and evolution - Testing the hypothesis of ncRNA-based regulatory networks, Copenhagen (2004).

Organizer of the workshop DYNSTOCH 2004, Copenhagen (2004).

Co-organizer of a workshop on Inference for Partially Observed Processes, Copenhagen (2004).

Member of the scientific programme committee for the 6th World Congress of the Bernoulli Society / 2004 IMS Annual Meeting, Barcelona (2004).

Co-organizer of a concentrated advanced course on Non-Linear Time Series Modeling, Copenhagen (2004).

Member of the scientific programme committee for the workshop ”Asymptotical Statistics of Stochastic Processes V”, Le Mans, France (2005).

Organizer of a session on Financial Statistics at the 25th European Meeting of Statisticians, Oslo, Norway (2005).

Co-organizer of the Third T.N. Thiele Symposium on Stochastic Volatility, Copenhagen (2005).

Co-organizer of the Conference on Stochastics in Science in honour of Ole E. Barndorff-Nielsen, CIMAT, Guanajuato, Mexico (2006).

Co-organizer of the 5th International Conference on Lévy Processes: Theory and Applications, Copenhagen (2007).

Member of the scientific programme committee of the 18th Brazilian Symposium on Probability and Statistics (2008).

Co-organizer of Bio-Math Summer School and Workshop on Stochastic Differential Equation Models with Applications to the Insulin-Glucose System and Neuronal Modelling, Middelfart, Denmark (2008).

Member of the scientific committee of the Dynstoch 2010 Conference, University of Angers, France (2010).

Member of the programme committee of the 2nd Humboldt-Copenhagen Conference on Financial Econometrics, Copenhagen, Denmark (2011).

Member of the programme and organizing committee for a conference on Dynamic Statistical Models, a satellite meeting of 58th World Statistics Congress, Copenhagen, Denmark (2011).

Organizer of a session on Inference for Stochastic Processes at the 24th Nordic Conference in Mathematical Statistics in Umeå, Sweden (2012).

Member of the scientific programme committee for the 8th World Congress in Probability and Statistics, Istanbul, Turkey (2012).

Chairman of the scientific programme committee for the 29th European Meeting of Statisticians, Budapest, Hungary (2013).

Member of the Advisory Committee of the 8th International Conference on Aeolian Research (ICAR VIII), China (2014).

Invited lectures:

I have given invited lectures at the following international conferences and workshops:

18th European Meeting of Statisticians, Berlin, Germany, 1988.

48th Session of the International Statistical Institute, Cairo, Egypt, 1991.

19th European Meeting of Statisticians, Barcelona, Spain, 1991.

4th Meeting of the International Environmetrics Society, Helsinki, Finland, 1992.

1st Workshop on Stochastic Numerics, Gosen, Germany, 1992.

1st Ukrainian-Scandinavian Conference on Stochastic Dynamical Systems, Uzhgorod, Ukraine, 1995.

Symposium on Estimating Functions, Athens, Georgia, USA, 1996.

Quantitative Methods in Finance, Canberra, Australia, 1997.

Münchener Stochastik Tage, Germany, 1998.

Workshop on the Interplay between Finance, Insurance and Statistics, Cortona, Italy, 1998.

13th Brazilian Symposium of Probability and Statistics, Caxambu, Brazil, 1998.

Quantitative Methods in Finance, Sydney, Australia, 1998.

Joint Statistical Meetings, Baltimore, USA, 1999.

The Research Workshop “Measuring Risk in Complex Stochastic Systems”, Berlin, Germany, 1999.

International Workshop in Statistics and Probability to celebrate the 25 Years of Indian Statistical Institute, Delhi Centre, India, 1999.

Symposium on Inference for Stochastic Processes, Athens, Georgia, USA, 2000.

Quantitative Methods in Finance and Bernoulli Society 2000 Conference, Sydney, Australia, 2000.

8th Latin American Congress in Probability and Mathematical Statistics, Havana, Cuba, 2001.

Symposium on Stochastic Processes and Statistical Asymptotic Theory, Tokyo, Japan, 2001.

65th Annual Meeting of the Institute of Mathematical Statistics, Banff, Alberta, Canada, 2002.

4th Hakata Symposium, University of Kyushu, Japan, 2002.

International Minicourse-Workshop on The Interplay between C_0 -semigroups and PDEs: Theory and Applications, University of Bari, Italy, 2003.

Quantitative Methods in Finance, Sydney, Australia, 2003.

6th World Congress of the Bernoulli Society, Barcelona, Spain, 2004.

International Conference on Stochastic Finance, Lisbon, Portugal, 2004.

Festkolloquium on the occasion of Uwe Küchler's 60th birthday, Berlin, Germany, 2004.

Princeton-Chicago Conference on the Econometrics of High Frequency Financial Data, Bonita Springs, USA, 2005.

4th Australian National Symposium on Financial Mathematics, Daydream Island, Australia, 2005.

The 2005 Abel Symposium on Stochastic Analysis and Applications, Oslo, Norway, 2005.

The 34th Lunteren meeting, Netherlands, 2005.

Workshop on Parameter Estimation in Continuous Time Models, Edinburgh, U.K, 2005.

Conference on Stochastics in Science in honour of Ole E. Barndorff-Nielsen, CIMAT, Guanajuato, Mexico, 2006.

International Workshop on Mathematical Finance and Insurance, Lijiang, China, 2006.

Conference on Volatility and High Frequency Data, Chicago, 2007.

56th Session of the International Statistical Institute, Lisbon, Portugal, 2007.

Conference on Likelihood Methods in Finance, Princeton University, 2007.

Quantitative Methods in Finance, Sydney, Australia, 2007.

22nd Nordic Conference in Mathematical Statistics, Vilnius, Lithuania, 2008.

Workshop on Stochastic Analysis and Statistical Inference III, Tokyo, Japan, 2008.

Asymptotic Statistics of Stochastic Processes VI, Université du Maine, Le Mans, France, 2009.

Stevanovich Center – Creates Conference on Financial Econometrics and Statistics, Skagen, Denmark, 2009.

Quantitative Methods in Finance, Sydney, Australia, 2009.

International Symposium on Business and Industrial Statistics, Portorož, Slovenia, 2010.

28th European Meeting of Statisticians, Piraeus, Greece, 2010.

Workshop on Mathematical Finance and Related Issues, Kyoto, Japan, 2010.

58th World Statistics Congress, Dublin, Ireland, 2011.

I have, moreover, given invited lectures at numerous universities and research institutions all over the world, including Mathematisches Forschungsinstitut Oberwolfach, the Isaac Newton Institute and the Mittag-Leffler Institute.

Concentrated courses:

I have given concentrated courses at the following institutions and events:

- Humboldt University of Berlin (1989)
- Instituto de Matematica Pura e Aplicada, Rio de Janeiro (1990)
- Berliner Graduiertenkolleg “Stochastische Prozesse und Probabilistische Analysis” (1997)
- Centre for Analytical Finance, University of Aarhus (1997)
- Centre de Recerca Matemàtica, Barcelona (1997)
- Centro de Investigación en Matemáticas, Guanajuato, Mexico (1999)
- Finnish Graduate School of Stochastics (2001)
- Tenth Meeting of the Ph.D. Students in Stochastics in the Netherlands (2002).
- Séminaire Européen de Statistique, La Manga del Mar Menor, Spain (2007)
- Bio-Math Summer School 2008, Middelfart, Denmark (2008).
- Center for the Study of Finance and Insurance, University of Osaka, Japan (2008)
- Oberwolfach Seminar on Statistics for Stochastic Differential Equations (2011)

Non-technical review lectures:

- “Statistical Methods for Continuous Time Financial Models” organized by the The Portuguese Derivatives Exchange (Bolsa de Derivados do Porto)(1999)
- “Statistical Methods for Financial Models Given by Stochastic Differential Equations” at a practitioners workshop on “Statistical and Filtering Methods with Applications to Risk management”, Sydney, Australia (2000).

Ph.D. students:

Steen Christensen (1994): Hydraulic Conductivity and Transmissivity Estimation for Groundwater Models at Various Scales. Now associate professor at the University of Aarhus.

Bo Martin Bibby (1995): Inference for Diffusion Processes with Particular Emphasis on Compartmental Diffusion Processes. Now associate professor at the University of Aarhus.

Asger Roer Pedersen (1995): Parametric Statistical Inference for Discretely Observed Diffusion Processes. Now senior researcher at the University of Aarhus.

Bo Markussen (2002): Inference for Stochastic Partial Differential Equations and Chaos

Decomposition of the Negative Binomial Process. Now associate professor at the University of Copenhagen.

Niels Richard Hansen (2004): Markov Controlled Excursions, Local Alignment and Structure - from Markov additive processes to biological sequence analysis. Now associate professor at the University of Copenhagen.

Susanne Ditlevsen (2005): Modelling of physiological processes by stochastic differential equations. Now professor at the University of Copenhagen.

Julie Lyng Forman (2007): Statistical inference from diffusion driven models. Now assistant professor at the University of Copenhagen.

Lisbeth Carstensen (2010): Hawkes processes and combinatorial transcriptional regulation. Now researcher at Statens Serum Institut, Copenhagen.

Master students:

Incomplete list: Esben Ejsing (1985), Karen Drejer (1987), Niels Bruun (1989), Henrik Loft Jacobsen (1989), Niels Jørgen Andersen (1992), Marianne Giørtz Pedersen (1995), Thomas Munk Laursen (1997), Leslie Foldager (1998), Kristian Stegenborg Larsen (1999), Frederik J. Jensen (1999), Christian Ritz (2000), Susanne Ditlevsen (2000), Jacob Krabbe Pedersen (2001), Maria Düring (2002), Julie Lyng Forman (2003), Michael Toma Gregersen (2006), Therese Graversen (2010), Jacob Michelsen Kolind (2010), Frederik Flachs (2011).

Membership of professional societies:

Fellow of the Royal Statistical Society, London.

Member of the Danish Society for Theoretical Statistics.

Member of the Bernoulli Society.

Member of the International Statistical Institute.

Fellow of the Institute of Mathematical Statistics.

Member of the Danish Mathematical Society

Member of the European Mathematical Society.

Member of the Bachelier Finance Society.

Universities and research institutions where I have lectured:

Albert-Ludwigs-Universität of Freiburg, Arizona State University, Australian National University, Centro de Investigación en Matemáticas (CIMAT), Mexico, Chalmers University of Technology, Gothenburg, Charles University, Prague, Dresden University of Technology, Federal University of Rio de Janeiro, Free University of Amsterdam, Helsinki University of Technology, Heriot-Watt University, Edinburgh, Humboldt-University of Berlin, Imperial College, London, Indian Statistical Institute, Delhi, Institut Mittag-Leffler, Stockholm, Instituto Nacional de Matemática Pura e Aplicada (IMPA), Rio de Janeiro, Isaac Newton Institute, Johannes Gutenberg University of Mainz, Kyushu University, Michigan State University, Moscow State University, Mathematisches Forschungsinstitut Oberwolfach, National University of Singapore, Nicolaus Copernicus University of Torun, Osaka University, Philipps-Universität Marburg, Princeton University, Steklov Institute for Mathematics, Moscow, Swiss Federal Institute of Technology (ETH), Zurich,

Technical University of Cartagena, Technical University of Istanbul, Technical University of Munich, Technical University of Zwickau, Texas Tech University, Lubbock, Tilburg University, Universidad Nacional Autónoma de México, Universidade Federal do Rio de Janeiro, Universidade Nova de Lisboa, Universidade Técnica de Lisboa, Universitat Autònoma de Barcelona, Universität der Bundeswehr München, Université de Nouakchott, Mauritania, Université du Maine, Université Paris-est Marne-la-vallée, Université Pierre-et-Marie-Curie, Paris 6, University of Aalborg, University of Aarhus, University of Aberdeen, University of Amsterdam, University of Barcelona, University of Bari, University of Bath, University of Bonn, University of Cambridge, University of Georgia, University of Chicago, University of Edinburgh, University of Elche, University of Guelph, University of Havana, University of Helsinki, University of Oslo, University of Oxford, University of Leuven, University of Linköping, University of Lund, University of Magdeburg, University of Paderborn, University of Padua, University of Piraeus, University of Rennes 1, University of Rostock, University of Southern Denmark, University of São Paulo, University of Technology, Sydney, University of Thessaloniki, University of Tokyo, University of Uppsala, University of Uzhgorod, Weierstrass Institute, Berlin.