
Curriculum vitae – Michel Mandjes

Personal information

Name Mandjes, Michael Robertus Hendrikus (Michel)
Address Grevelingenstraat 4 II r, 1078 KN Amsterdam, The Netherlands
Birth February 14, 1970, in Zaandam, The Netherlands
Civil status Married, father of a daughter

Education:

1982-1988 Gymnasium β ,
Triniteitslyceum, Haarlem, The Netherlands.
1988-1993 M.Sc. degree in Econometrics (cum laude),
Vrije Universiteit, Amsterdam, The Netherlands.
1989-1993 M.Sc. degree in Mathematics (cum laude),
Vrije Universiteit, Amsterdam, The Netherlands.
1993-1996 Ph. D. degree in Operations Research,
Vrije Universiteit, Amsterdam, The Netherlands.

Working experience:

1990-1992 Vrije Universiteit, Amsterdam, The Netherlands,
Department of Econometrics:
Student assistant.
1993-1996 Vrije Universiteit, Amsterdam, The Netherlands,
Department of Econometrics:
Research assistant;
taught courses in Statistics, Calculus, and Stochastic modelling.
1996-1998 KPN Research, Leidschendam, The Netherlands,
Department of Planning, Performance, and Reliability:
Member of technical staff.
1999-2001 Bell Laboratories/Lucent Technologies, Murray Hill NJ, United States,
Mathematical Sciences Research Center:
Member of technical staff.
2000-2004 University of Twente, The Netherlands,
Faculty of Mathematical Sciences:
Full professor of Stochastic Operations Research.
2000-2006 Center for Mathematics and Computer Science, Amsterdam, The Netherlands,
Department of Probability, Networks, and Algorithms:
Senior researcher; department head (theme leader) PNA2.
2004-.... University of Amsterdam, The Netherlands,
Korteweg-de Vries Institute for mathematics:
Full professor of Applied Probability (as of 2006 full-time).

Address

E-mail `michel@cwi.nl`; `m.r.h.mandjes@uva.nl`
http: `http://www.cwi.nl/~michel`
Address University of Amsterdam (UvA),
 Korteweg-de Vries Institute for Mathematics,
 Science Park 904,
 1098 XH Amsterdam,
 The Netherlands.
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Fax +31 20 525 7820.

Research interests

- *Stochastic processes and queues.* Gaussian processes - Lévy processes - asymptotic techniques - large deviations, large-buffer asymptotics, many-sources asymptotics - fluid queues.
- *Queueing models for communication networks.* Models for wireline networks, IP - Feedback queues, TCP - Markov fluid models - long-range dependence, heavy tails, fractional Brownian motion, Gaussian traffic - fast simulation, rare events, importance sampling, exponential change of measure - loss networks - wireless networks, GSM, UMTS, ad hoc networks - queues under various scheduling disciplines - diffusion approximations.
- *Traffic management.* Quality of Service - service differentiation, generalized processor sharing, diffserv - traffic management, resource allocation, admission control.
- *Traffic analysis.* Traffic measurements - Gaussian modeling, fractional Brownian motion - model selection - anomaly detection - bandwidth provisioning, dimensioning - measurement-based algorithms.
- *Network economics.* Charging and pricing in communication networks - bandwidth brokering - cost allocation models, resource allocation - congestion cost - Paris metro pricing.
- *Financial models.* Insurance models - risk analysis - ruin probabilities - credit risk - Lévy-based models.
- *Service systems.* Performance and optimization of service systems - health care applications - appointment scheduling.

Scientific activities

Michel Mandjes has currently collaborations with, among others,

- Lars Norvang Andersen (*Aarhus University*, reflected Lévy processes),
- Nick Bambos (*Stanford University*, rate-based control algorithms),
- Hans van den Berg (*TNO ICT and University of Twente*, traffic management, admission control),
- Jose Blanchet (*Columbia University*, rare-event simulation, queueing asymptotics),
- Sem Borst (*Eindhoven University of Technology and Bell Labs*, queues with heavy-tailed input, generalized processor sharing),
- Onno Boxma (*Eindhoven University of Technology*, queues with Lévy-input),
- Krzysztof Dębicki (*University of Wrocław*, Gaussian processes),
- Peter Glynn (*Stanford University*, correlation structure reflected fBm, advanced simulation techniques),
- Boudewijn Haverkort (*University of Twente*, TCP modeling, Petri nets),
- Sandeep Juneja (*Tata Institute for Fundamental Research*, birthday problems, importance sampling),

- Offer Kella (*Hebrew University, Jerusalem*, Lévy processes),
- Jeong Han Kim (*Microsoft Research*, large deviations techniques),
- Krishnan Kumaran (*Exxon-Mobil Research*, traffic management, admission control, QoS differentiation),
- Petteri Mannersalo (*VTT*, sample-path large deviations, Gaussian processes),
- Debasis Mitra (*Bell Labs*, Markov fluid models, network economics, bandwidth brokering),
- Yoni Nazarathy (*University of Queensland*, critically loaded queues, fluid and diffusion approximations),
- Ilkka Norros (*VTT*, sample-path large deviations, Gaussian processes),
- Zbigniew Palmowski (*University of Wrocław*, Lévy processes),
- Rudesindo Núñez-Queija (*University of Amsterdam*, network economics, resource allocation),
- Teun Ott (*Rutgers*, correlation structure reflected Lévy),
- Aiko Pras (*University of Twente*, network measurements),
- Ad Ridder (*Vrije Universiteit Amsterdam*, large deviations techniques, fast simulation),
- Tomasz Rolski (*University of Wrocław*, Lévy processes),
- Iraj Saniee (*Bell Labs*, traffic management, network economics),
- Werner Scheinhardt (*University of Twente*, Markov fluid models, feedback),
- Peter Spreij (*University of Amsterdam*, stochastic processes, financial mathematics),
- Aleksandr Stolyar (*Bell Labs*, traffic management, queueing),
- Judith Timmer (*University of Twente*, network economics),
- Alan Weiss (*MathWorks*, large deviations techniques),
- Ward Whitt (*Columbia University*, critically loaded queues),
- Bert Zwart (*CWI*, heavy tails, processor sharing).

A list of miscellaneous international scientific activities:

- Author of book ‘Large deviations for Gaussian Queues’ (Wiley, 2007).
- Preparing the book ‘Lévy-driven Queues and Fluctuation Theory’, with K. Dębicki.
- Associate editor of the journals *Stochastic Models*, *Queueing Systems*, *Stochastic Systems*, and the *Applied Probability Trust* journals (i.e., *Journal of Applied Probability* and *Advances in Applied Probability*).
- Program Committee Chair (with O.J. Boxma) of the INFORMS Applied Probability conference (Eindhoven, the Netherlands, 2007).
Program Committee Chair (with S.C. Borst and M. Squillante) of the ITC 22 conference (Amsterdam, the Netherlands, 2010).
Program Committee Chair (with O.J. Boxma and A.P. Zwart) of Stochastic Networks 2014 (Amsterdam, the Netherlands, 2014).
- Member of the International Technical Programme Committee of the International Teletraffic Congress 17 (Salvador de Bahia, Brazil, 2001), 18 (Berlin, Germany, 2003), 19 (Beijing, China, 2005), 20 (Ottawa, Canada, 2007), 21 (Paris, France, 2009), and 23 (San Francisco, United States, 2011).

Organizer of a session on Gaussian queues at INFORMS Applied Probability (Ottawa, Canada, 2005), and a session on Lévy-driven queues at INFORMS Applied Probability (Stockholm, Sweden, 2011).

Member of the Technical Programme Committee of ACM Sigmetrics/Performance (St. Malo, France, 2006), ACM Sigmetrics 2010 (New York, USA, 2010), Performance (Namur, Belgium, 2010, and Amsterdam, the Netherlands, 2011).

Member of the Technical Programme Committee of Value Tools (Pisa, Italy, 2006).

Member of the Technical Programme Committee of the European Meeting of Statisticians (EMS; Oslo, Norway, 2005); organizer of a special session on Applied Probability and Queues.

Member of the Technical Programme Committee of ITCOM, Conference on Internet Performance and Control (Orlando, FL, USA, 2001-2004).

Member of the Technical Programme Committee of ITC Specialist Seminars (Antwerp, Belgium, 2004; Berlin, Germany, 2008).

Member of the Technical Programme Committee of the 1st EURO-NGI Conference (Rome, Italy, 2005), the 2nd EURO-NGI Conference (Valencia, Spain, 2006), and the 3rd EURO-NGI Conference (Trondheim, Norway, 2007).

Member of the Technical Programme Committee of NET-COOP 2007 (Avignon, France, 2007), NET-COOP 2009 (Eindhoven, the Netherlands, 2009), NET-COOP 2010 (Ghent, Belgium, 2010), and NET-GCOOP 2011 (Paris, France, 2011).

Member of the Technical Programme Committee of RESIM 2008 (Rennes, France, 2008).

Member of the Technical Programme Committee of International Workshop on Computational Stochastics, part of the International Conference on Computational Science (Amsterdam, the Netherlands, 2010).

Member of the Technical Programme Committee of ACM Sigmetrics Workshop on MAtheMatical performance Modeling and Analysis (MAMA 2007, 2008, 2009, 2010, 2011, 2012).

Member of Programme Committee Stochastic Networks 2012 (Boston, MA, United States, 2012).

- Ph.D. thesis supervisor of
 - N.K. Boots (Vrije Universiteit Amsterdam, with A.A.N. Ridder and H.C. Tijms; February 5, 2002),
 - N.D. van Foreest (University of Twente, with W.R.W. Scheinhardt; December 17, 2004),
 - A.B. Dieker (CWI Amsterdam; March 9, 2006; *with honors*),
 - R. van de Meent (University of Twente, with A. Pras and L.J.M. Nieuwenhuis; March 24, 2006),
 - P.M.D. Lieshout (CWI Amsterdam, with S.C. Borst; September 5, 2008),
 - R. Malhotra (University of Twente and Alcatel-Lucent, with J.L. van den Berg; October 31, 2008),
 - F. Roijers (University of Amsterdam and TNO Telecom, with J.L. van den Berg; February 11, 2009),
 - D.I. Miretskiy (University of Twente, with W.R.W. Scheinhardt; November 12, 2009),
 - A. Es-Saghouani (University of Amsterdam; November 17, 2009),
 - V.J.G. Leijdekker (University of Amsterdam and ABN-AMRO, with P.J.C. Spreij; May 25, 2010),
 - P.W. Żuraniecki (University of Amsterdam; March 11, 2011),
 - J.D. Ivanovs (University of Amsterdam and EURANDOM, with O.J. Boxma; September 6, 2011),
 - B.P.H. Kemper (University of Amsterdam and IBIS UvA BV, with J. de Mast; November 17, 2011),
 - K.M. Kosiński (University of Amsterdam and EURANDOM, with O.J. Boxma),

- H. Thorsdottir (CWI Amsterdam, with J.G. Blom),
 - P.A.G.J.M. Gruntjes (University of Amsterdam),
 - N.M. Asghari (University of Amsterdam),
 - G. Huang (University of Amsterdam, with P.J.C. Spreij),
 - M.R. Koot (University of Amsterdam, with C.T.A.M. de Laat and G.J. van 't Noordende),
 - W. Ellens (University of Amsterdam, with J.L. van den Berg),
 - V.R. Harmsen (University of Amsterdam, with R.G. de Vilder and M.R. Pistorius).
- M.Sc. thesis supervisor of
 - P. van der Stoel (1997 – KPN Research/Vrije Universiteit Amsterdam);
 - M. van Uitert (1999 – KPN Research/University of Tilburg);
 - T. Dieker (2002 – CWI/Vrije Universiteit Amsterdam);
 - J. Slegers (2002 – Worldcom/University of Twente);
 - R. de Jonge (2007 – University of Amsterdam);
 - S. Greeuw (2009 – Technical University of Denmark/University of Amsterdam);
 - E. Boezeman (2009 – Shell/University of Amsterdam);
 - B. Groot (2011 – University of Amsterdam);
 - M. Boersma (2011 – University of Amsterdam).
 - D. van Waarden (2012 – MIcompany/University of Amsterdam);
 - Ph.D. thesis committee member of
 - P.-T. de Boer (University of Twente; supervisors: I. Niemegeers and V.F. Nicola),
 - Q. Deng (Eindhoven University of Technology; supervisor: O.J. Boxma),
 - P. Lassila (Helsinki University of Technology; supervisor: J. Virtamo),
 - R. Litjens, M.Sc. (University of Twente; supervisors: W.H.M. Zijm and R.J. Boucherie),
 - M.F.M. Nuijens (Universiteit van Amsterdam; supervisors: M.S. Keane and A.A. Balkema),
 - H. Gautama (Technical University Delft; supervisors: A. van Gemund and H. Sips),
 - R. Groenevelt (Université de Nice/Sophia Antipolis; supervisor: P. Nain),
 - T.J.J. Denteneer (Eindhoven University of Technology; supervisor: O.J. Boxma),
 - R. Bekker (Eindhoven University of Technology; supervisors: O.J. Boxma and S.C. Borst),
 - L. Leskelä (Helsinki University of Technology; supervisors: I. Norros and E. Valkeila),
 - M.B. Vermaat (University of Amsterdam; supervisor: R.J.M.M. Does),
 - P. Mokveld (University of Amsterdam; supervisor: C. Klaassen),
 - H. de Koning (University of Amsterdam; supervisor: R.J.M.M. Does),
 - P. Zaręba (Vrije Universiteit Amsterdam; supervisors: A.W. van der Vaart, K.O. Dzharidze, and J.H. van Zanten),
 - T. Zaburnenko (University of Twente; supervisors: B.R.H.M. Haverkort and P.-T. de Boer),
 - S. Gugushvili (University of Amsterdam; supervisors: C.A.J. Klaassen, P.J.C. Spreij, and A.J. van Es),
 - M. Riaz (University of Amsterdam; supervisor: R.J.M.M. Does),
 - R. Haijema (University of Amsterdam; supervisors: N.M. van Dijk and J. van der Wal),
 - R. Egorova (Eindhoven University of Technology; supervisors: A.P. Zwart and S.C. Borst),
 - W. van der Weij (Vrije Universiteit Amsterdam; supervisor: R.D. van der Mei),

- N.S. Walton (University of Cambridge; supervisor F.P. Kelly),
 - K. Avrachenkov (*habilitation*; Université de Nice/Sophia Antipolis; supervisor: P. Nain),
 - A. Sperotto (University of Twente; supervisors: B.R.H.M. Haverkort and A. Pras),
 - M. Dobrzynski (University of Amsterdam; supervisors: J. Verwer and H. Westerhof),
 - B. Kauffmann (ENS Paris; supervisor: F. Baccelli),
 - A. Marynych (University of Utrecht; supervisor: A. Gnedin),
 - E. Veerman (University of Amsterdam; supervisors: C.A.J. Klaassen and P.J.C. Spreij),
 - B. Kaynar (Vrije Universiteit Amsterdam; supervisors: A.A.N Ridder and H.C. Tijms),
 - P. den Iseger (Erasmus Universiteit Rotterdam; supervisor: R. Dekker),
 - D. Baillie (University of Amsterdam; supervisor: C.A.J. Klaassen).
- Leader of Work Package 5.2 (jointly with O.J. Boxma) Network of Excellence EURO-NGI: 2003–2006.
Leader of Work Package 5 Network of Excellence EURO-NGI: 2005–2006.
 - Organizer of the workshop ‘Rare events in communication networks’ (jointly with O.J. Boxma), within the framework of EURO-NGI. Eindhoven, the Netherlands, 2005.
 - Organizer of the 2nd Korean-Dutch workshop on queueing and its applications in telecommunications (jointly with H.C. Tijms). Amsterdam, the Netherlands, 2006.
 - Organizer of the workshop ‘Stochastic performance models for resource allocation in communication systems’ (jointly with R.D. van der Mei and R. Núñez-Queija), within the framework of EURO-NGI. Amsterdam, the Netherlands, 2006.
 - Organizer of a workshop at Oberwolfach on Stochastic Networks (jointly with S. Foss, G. Last, and B. Prabhakar). Oberwolfach, Germany, 2010.
 - Advisor EURANDOM, Eindhoven, the Netherlands; theme Queueing and Performance Evaluation; 2004–present.
 - Coordinator of theme ‘Stochastic Networks’, NWO Mathematics cluster STAR.
 - Guest Researcher CWI (PNA2); 2006–present.
 - Referee for ACM Transactions on Modeling and Computer Simulation, Advances in Applied Probability, Annals of Applied Probability, Annals of Operations Research, Computer Networks, IEEE Infocom, IEEE/ACM Transactions on Networking, IEEE Communications Letters, Journal of Applied Probability, Mathematical Methods in Operations Research, Mathematics of Operations Research, Operations Research, Methodology and Computing in Applied Probability, Performance Evaluation, Probability in the Engineering and Informational Sciences, Queueing Systems, Stochastic Models, Stochastic Systems, Telecommunication Systems.

A list of miscellaneous national scientific activities:

- Member project steering committee EQUANET (funded by Dutch Ministry of Economic Affairs through its agency SENTER/Novem; partners: CWI, Lucent Technologies, TNO Telecom, TU/e, UT; 2002–2005).
- Member Evaluation Committee VIDI awards, Netherlands Organization for Scientific Research NWO (2005, 2006, 2007).
- Member Evaluation Committee VICI awards, Netherlands Organization for Scientific Research NWO (2011).
- Member board Stieltjes Institute (representing CWI), and project leader Stieltjes programme 4.2 *Stochastic Operations Research* (jointly with G.M. Koole): 2004–2006.

- Member advisory group *Voorverkenning ICT*, Royal Dutch Academy of Sciences KNAW (2004).
- ‘Commissaris’ (member of the supervisory board) of IBIS UvA BV: 2007-2009.
- Member ‘Commissie Onderzoek’, Platform Wiskunde Nederland (as of 2010).

Grants, projects, and awards:

- 1994: Master thesis *Large deviations: theoretical results and queueing applications*, written under supervision of H.C. Tijms, A.A.N. Ridder, and P.J. Holeyijn, was awarded the Dutch Operations Research Prize (NGB – Netherlands Operations Research Association), and runner up in the VVS competition (VVS – Dutch Association for Statistics);
- 1999: Marcel F. Neuts award for the paper ‘Rare event analysis of the state frequencies of a large number of Markov chains’, for the best paper in the journal *Stochastic Models* in 1999.
- 2001: Burgen Scholarship of Academia Europaea.
- 2002: nomination for best-paper award Infocom 2002 for the paper ‘Generalized Processor Sharing queues with heterogeneous traffic classes’, coauthored by S. Borst and M. van Uitert.
- NWO (Netherlands Organization for Scientific Research):
 - 2001: EQUIP (CWI; two PhD students, with V.F. Nicola); rare-event simulation.
 - 2005: LOGICA (UvA; one PhD student, with P.J.C. Spreij); Gaussian queues.
 - 2006: QNIS (CWI; one post-doc, with R.J. Boucherie, O.J. Boxma, R.D. van der Mei); Queueing Networks of Interacting Servers.
 - 2008: SQALP (UvA/EURANDOM; one PhD student, with O.J. Boxma); Lévy-driven queues.
 - 2010: STAR (CWI/TUE/UvA/UL/VU; two-year funding for two assistant professors at UvA).
- SENTER/Novem (Dutch Ministry of Economic Affairs), Agentschap NL:
 - 2003: EQUANET (CWI; with Lucent Technologies, TNO ICT, University of Twente, Eindhoven University of Technology); end-to-end QoS in IP networks.
 - 2011–2012: CAD (UvA; with TNO and UT); anomaly detection.
- ICES-KIS:
 - 2004: BRICKS (CWI; with several partners from industry and academia); resource allocation, processor sharing, fluid queues.
- Telematica Instituut:
 - 2002: M2C-QoS (CWI; with R. van de Meent and A. Pras); traffic measurements, provisioning.
- Industry:
 - 2001: consultancy project at UUNET/WorldCom (CWI; provisioning IP links).
 - 2005–2010: Ph.D. project V.J.G. Leijdekker at ABN AMRO (UvA; with P.J.C. Spreij).
 - 2005–2008: Ph.D. project R. Malhotra at Lucent Technologies (UT; with J.L. van den Berg — supported by an NWO-Casimir grant).
 - 2006: consultancy project at EMC (UvA; with P.M.D. Lieshout).
 - 2007–2009: Ph.D. project F. Roijers at TNO ICT (UvA; with J.L. van den Berg).
 - 2010–2012: consultancy project at SURFnet (UvA; with P. Żurawski).

- Europe:
 - 2008–2011: COST TMA. Short-Term Scientific Mission P. Żuraniewski (2009). Short-Term Scientific Mission F. Mata (2010).

(Long-term) visits:

- 2002: INRIA-Rocquencourt (Ph. Robert);
- 2002: Microsoft Research, Cambridge (P. Key, L. Massoulié);
- 2002: VTT, Espoo, Finland (I. Norros, P. Mannersalo);
- 2003, 2007, 2009: the University of Wrocław (K. Dębicki, T. Rolski);
- 2004: invited guest at the special program on Applied Probability and Performance Evaluation at the Mittag-Leffler institute (I. Kaj);
- 2006: University of Melbourne (P. Taylor);
- 2007: Universiteit van Stellenbosch (A.E. Krzesinski);
- 2008: sabbatical at Stanford University (P. Glynn, B. Prabhakar);
- 2009: Stanford University (P. Glynn, N. Bambos);
- 2010: invited guest at the special program on Stochastic Networks at the Newton Institute, University of Cambridge (S. Foss *et al.*);
- 2011: Tata Institute for Fundamental Research, Mumbai, India (S. Juneja);
- 2011: Columbia University (J. Blanchet);
- 2012: Hebrew University, Jerusalem (O. Kella).

Invited talks:

- 1997: Invited talk Workshop on Stochastic Networks, Cambridge, UK (“Optimal trajectory to overflow in a queue fed by a large number of sources”; organizers: R. Gibbens and F. Kelly)
- 1998: Invited talk INRIA Queueing Seminar (projet MISTRAL), Sophia-Antipolis, France (“Optimal trajectory to overflow in a queue fed by a large number of sources”; organizer: Ph. Nain)
- 1998: Invited lecture Nederlands Wiskundig Congres, Enschede, the Netherlands (“Connection Admission Control for integrated real-time and non-real-time traffic in ATM networks”)
- 1999: Plenary talk ITC (International Teletraffic Congress) 16, Edinburgh, UK (“Aspects of pricing in an integrated services network”)
- 1999: Invited talk Workshop on Internet Quality Economics, MIT, Cambridge, MA, USA (“Pricing of Variable Bit Rate Services Based on Trace-Based Leaky Bucket Parameter Estimation”; organizer: J. Bailey)
- 2000: Invited talk Workshop on Stochastic Networks, Cambridge, UK (“An analysis of the phase transition phenomenon in packet networks”; organizers: R.J. Gibbens and F.P. Kelly)
- 2001: Invited talk on Stochastic Networks at the Conference on Stochastic Processes and their Applications (Bernoulli Society), 27, Cambridge, UK (“An analysis of the phase transition phenomenon in packet networks”; organizers: J. Norris, F.P. Kelly *et al.*)
- 2002: Invited talk Microsoft Research, seminar on networking, Cambridge, UK (“Models for TCP performance analysis”; organizer: P. Key)

- 2002: Invited talk INRIA Queueing Seminar (projet RAP), Rocquencourt, France (“Feedback fluid queues”; organizer: Ph. Robert)
- 2002: Invited talk LMS/ICMS meeting on Modern Problems in Applied Probability, Edinburgh, UK (“Traffic with an FBM limit: convergence of the workload process”; organizers: S. Foss and S. Zachary)
- 2003: Invited talk Benelux workshop on Performance Analysis of Communication Systems, Eindhoven, the Netherlands (“Queues with Gaussian inputs: modeling of traffic correlations, quality of service, and network design”; organizers: C. Blondia, S. Borst, and O. Boxma)
- 2003: Invited talk Meeting on Applied Probability and Advanced Communication Networks, Bedlewo, Poland (“Sample-path large deviations for tandem and priority queues with many Gaussian inputs”; organizers: T. Rolski and R. Szekli)
- 2004: Invited talk Workshop on Quantitative Models for Production and Communication Networks, Eindhoven, the Netherlands (“Large Deviations of Sojourn Times in PS Queues”; organizers: T. de Kok and O. Boxma)
- 2004: Invited talk Workshop “A Mathematical Perspective on Queueing and Teletraffic Modeling”, Institut Mittag-Leffler, the Royal Swedish Academy of Sciences, Djursholm, Sweden (“Processor sharing queues with light-tailed input”; organizer: I. Kaj)
- 2005: Invited talk Conference European Meeting of Statisticians (EMS 2005), Oslo, Norway (“Large deviations of infinite intersections”; organizers: A. van der Vaart *et al.*)
- 2006: Invited talk Postgraduate Workshop on Stochastic Processes, Melbourne, Australia (“Large deviations of Gaussian queues”; organizers: A. Motyer *et al.*)
- 2006: Invited talk Workshop “New Directions in Applied Probability: Stochastic Networks and beyond”, Edinburgh, UK (“A fluid system with coupled input and output, and its application to bottlenecks in ad hoc networks”; organizers: S. Foss, T. Konstantopoulos, and S. Zachary)
- 2007: Invited talk Workshop on Rare Event Simulation, Nice, France (“Reflected fractional Brownian motion: Fast simulation, convergence to stationarity, and correlation structure”; organizers: B. Tuffin and G. Rubino)
- 2007: Invited talk Meeting on Stochastic Networks, Bedlewo, Poland (“Reflected fractional Brownian motion: convergence to stationarity and correlation structure”; organizers: T. Rolski, Z. Palmowski, K. Dębicki, and R. Szekli)
- 2007: Key note London Mathematical Society; Workshop on Mathematical Foundations for the Internet, London, UK (“Gaussian models for the Internet”; organizers: R. Gibbens and P. Key)
- 2008: Invited talk ICME seminar, Stanford, US (“Convergence to stationarity of reflected fractional Brownian motion”; organizer: P. Glynn)
- 2008: Invited talk OR seminar, Stanford, US (“Convergence to stationarity of reflected fractional Brownian motion”; organizer: R. Johari)
- 2008: Invited talk Stochastic Networks '08, Paris, France (“Convergence to stationarity of reflected fractional Brownian motion”; organizers: F. Baccelli and J. Mairesse)
- 2008: Invited talk OR seminar, Stanford, US (“Transient analysis of reflected Lévy processes”; organizer: R. Johari)
- 2008: Invited talk networking/communications/signal processing seminar, Berkeley, US (“Research dimensioning through buffer sampling”; organizer: V. Anantharam)
- 2008: Invited talk workshop on Stochastic Networks, University of Wrocław (“Transient analysis of reflected Lévy processes”; organizers: K. Dębicki, Z. Palmowski, R. Szekli, T. Rolski)
- 2008: Key note workshop Young European Queueing Theorists, Eindhoven, the Netherlands (“Transient analysis of reflected Lévy processes”; organizers: M. Jonkheere, M. Lelarge, and S. Shneer)

- 2009: Invited talk Meeting on Stochastic Networks, Będlewo, Poland (“On the correlation function of reflected Lévy processes”; organizers: T. Rolski, Z. Palmowski, K. Dębicki, and R. Szekli)
- 2009: Invited talk Cisco Research, San Jose, USA (“Research dimensioning through buffer sampling”; organizer: A. Clemm)
- 2009: Invited talk mathematical seminar, University of Clausthal, Germany (“On the correlation function of reflected Lévy processes”; organizer: W. Sandmann)
- 2009: Key note TMA workshop, Aachen, Germany (“Traffic models, and their use in provisioning and traffic management”; organizers: M. Papadopouli, P. Owezarski, and A. Pras)
- 2009: Invited talk Bristol Maths department, University of Bristol, UK (“On the correlation function of reflected Lévy processes”; organizers: J. Cruise and A. Ganesh)
- 2010: Invited talk Newton Institute, Cambridge, UK (“Simulation-based computation of the correlation function of reflected Lévy processes”; organizer: S. Foss)
- 2010: Invited talk Nederlands Wiskundig Congres, Utrecht, the Netherlands (“On the correlation function of reflected Lévy processes”; organizer: A. Gnedin)
- 2010: Invited talk Israeli-Dutch workshop on queueing, Eindhoven, the Netherlands (“Appointment scheduling”; organizers: I. Adan, O. Boxma, and G.-J. van Houtum)
- 2010: Invited mini-course Fields-MITACS workshop on approximations, asymptotics and resource management for stochastic networks, Ottawa, Canada (“Lévy-driven queues”; organizers: M. Huang, and Y. Zhao)
- 2010: Invited talk workshop on rare event simulation RESIM 2010, Cambridge, UK (“Simulation-based computation of the correlation function of reflected Lévy processes”; organizers: P. Glynn *et al.*)
- 2011: Invited talk seminar Tata Institute for Fundamental Research, Mumbai, India (“Simulation-based computation of the correlation function of reflected Lévy processes”; organizer: S. Juneja)
- 2011: Invited talk seminar Indian Institute of Technology — Perwez Shahabuddin Memorial Lecture (“New trends in rare-event simulation”; organizers: S. Juneja and K. Seth)
- 2011: Invited talk Meeting on Stochastic Networks, Będlewo, Poland (“Generalized birthday problems”; organizers: T. Rolski, Z. Palmowski, K. Dębicki, and R. Szekli)
- 2011: Invited talk workshop on the occasion of F. Kelly’s honorary doctorate (“Generalized birthday problems”; organizers: S. Borst and O. Boxma)
- 2011: Invited talk Heriot-Watt University, Edinburgh, UK (“Generalized birthday problems”; organizer: S. Foss)
- 2011: Invited talk INRIA, Paris, France (“Research dimensioning through buffer sampling”; organizer: F. Baccelli)
- 2011: Invited talk INRIA, Paris, France (“Generalized birthday problems”; organizer: F. Baccelli)

Thesis

M. Mandjes (1996). *Rare event analysis of communication networks*. Vrije Universiteit Amsterdam.

Book

M. Mandjes. *Large deviations for Gaussian queues*. Wiley, Chichester, UK, 2007.

Refereed publications

1993-2000:

- (1) M. Mandjes (1993). Large Deviations and Queueing Applications. *Operations Research Proceedings DGOR/NSOR*, Amsterdam, the Netherlands, pp. 35-41.
- (2) M. Mandjes and A. Ridder (1995). Finding the conjugate of Markov fluid processes. *Probability in the Engineering and Informational Sciences*, Vol. 9, pp. 297-315.
- (3) M. Mandjes (1995). Overflow asymptotics for large communication systems with general Markov fluid sources. *Probability in the Engineering and Informational Sciences*, Vol. 10, pp. 501-518.
- (4) M. Mandjes (1996). Rare event analysis of batch-arrival queues. *Telecommunication Systems*, Vol. 6, pp. 161-180.
- (5) M. Mandjes (1997). Fast simulation of blocking probabilities in loss networks. *European Journal of Operational Research*, Vol. 101, pp. 393-405.
- (6) M. Mandjes and H. van den Berg (1997). Some new techniques for resource allocation in single- and multi-link ATM systems. *Proceedings ITC 15*, Washington DC, USA, pp. 1257-1268.
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