

Yoni Nazarathy

יוני נצרת'י

Curriculum Vitae

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Current Position

Senior Lecturer at the School of Mathematics and Physics (SMP) in the University of Queensland (UQ). Holding an ARC (Australian Research Council) DECRA (Discovery Early Career Research Award) fellowship for 3 years (2013-2015).

- Conducting research associated with the Operations Research group, the Probability and Statistics research group and ACEMS at UQ.
- Teaching at UQ (volunteering due to DECRA).
- University service, e.g. Honours coordinator, OR coordinator, industry liaison and more.
- Consulting for industry and research partners in the fields of Operations Research, Control Systems and Statistics (of various sorts).

Condensed Career History

Primary and secondary schooling in both Israel and Palo Alto, California. Three year military service in Israel in combat units. Five years undergraduate and Masters degrees in Economics and Statistics at the University of Haifa as well as software engineering in a professional college in Israel. Five years industry work as a software and algorithm developer, group leader and system engineer in advanced wireless networks. Three and a half years PhD in Applied Probability at the University of Haifa including full lecturing of classes. Two year postdoc in two top Applied Probability centers, EURANDOM and CWI, in Eindhoven and Amsterdam respectively. One and a half years as an Applied Mathematics lecturer at Swinburne University of Technology in Melbourne. Seven months after taking up the lecturing position at the University of Queensland, awarded both an ARC DECRA fellowship and an ARC Discovery grant. Active in many aspects of community service: For example, an associate editor of "Stochastic Models" journal and (co)organizer of several academic events.

Main Academic Research Interests and Expertise

- Operations research.
- Applied probability: rigorous mathematical analysis of practical stochastic models.
- Queueing theory and scheduling.
- Control theory and stability analysis.
- Application areas: Wireless networks, optical switching networks, road traffic, manufacturing logistics, natural resource management and electric markets.

Education

- 2006 – 2009 University of Haifa.
PhD in Applied Probability, Department of Statistics.
Dissertation: *On the Control of Queueing Networks and the Asymptotic Variance Rate of Outputs*.
Advisor: Prof. Gideon Weiss.
- 1999 – 2001 University of Haifa.
M.A. in Applied Probability (summa cum laude), Department of Statistics.
Thesis: *Evaluation of On-Line Scheduling Rules for High Volume Job Shop Problems, a Simulation Study*.
Advisor: Prof. Gideon Weiss.
- 1999 – 2000 Minhal College, Haifa, Software Engineering and Programming Diploma.
- 1996 – 2000 University of Haifa.
B.A. in Statistics and Economics.
Complementary mathematics, computer science and electrical engineering courses at the Technion, Israel Institute of Technology.

Previous Major Academic Positions

- 2010 – 2012 Swinburne University of Technology, Faculty of Engineering,
Applied Mathematics Lecturer (on-going continuing position).
- 2009 – 2010 Eindhoven University of Technology, EURANDOM,
Post-doctoral researcher.
- 2009 Centrum Wiskunde & Informatica (CWI), Amsterdam, Stochastic Networks Group,
Funded visiting researcher.
- 2005 – 2009 The University of Haifa, The Department of Statistics,
Adjunct lecturer and course coordinator (2 per year during PhD).

Industry, Engineering, Consulting and Management Experience

- 2011 - Consulting – Industrial statistics, statistical process control.
- 2003 – 2006 “R” Industries (Communications System Division).
System Engineer and software Development Group Leader: 5 person group.
- 2001 – 2003 “R” Industries (Communications System Division).
Software Engineer. Real-Time OO programming.
- 1996 – 1999 Kulicke and Soffa (Semiconductors manufacturing equipment).
Technical Writer (part-time during BA studies).

Major Competitive Research Grants Awarded

- 2013 – 2015 ARC Discovery Early Career Research Award, DE130100291 Adaptive control of stochastic queueing networks, \$375K (AUD).
- 2013 – 2015 ARC Discovery Project, DP130100156, Congestion control of networks: a unified stochastic framework. \$300K (AUD) (Swinburne administered - \$80K passed to UQ). Partners: A/Prof. Lachlan Andrew (Swinburne/Monash), Prof. Hai Vu (Swinburne), Prof. Michel Mandjes (Amsterdam), Prof. Steven Low (Caltech).

Honors and Awards

- 2008 Abraham Mehrez prize for excellent work of a graduate student in operations research. Awarded for the paper: "*The asymptotic variance rate of the output process of finite capacity birth-death queues*".
- 2007 The Wolf foundation to promote science and art for the benefit of mankind research. Prize for outstanding PhD students.
- 2001 Award of the Dean of higher education of the University of Haifa for the outstanding M.A. thesis in the name of Yochanan Hoffman.

Journal Publications (* = Alphabetical Order of Authors)

- 2015 A dynamic view to moment matching of truncated distributions, (* with Benoit Lique), *Statistics and Probability Letters*, 104, pp. 87-93.
- 2015 The intercept term of the asymptotic variance curve for some queueing output processes, (* with Sophie Hautphenne, Yoav Kerner and Peter Taylor), *European Journal of Operational Research*, 242, pp. 455-464.
- 2015 A correction term for the covariance of renewal-reward processes with multivariate rewards, (Brendan Patch, YN and Thomas Taimre). *Statistics and Probability Letters*, 102, pp. 1-7.
- 2015 BRAVO for many-server QED systems with finite buffers, (* with Daryl Daley and Johan van Leeuwen), *Advances of Applied Probability*, 47, pp. 231-250.
- 2014 Stability of multi-class queueing networks with infinite virtual queues, (* with Yonjiang Guo, Erjen Lefebvre, Gideon Weiss, Hanqin Zhang), *Queueing Systems*, 76, pp. 309-342.
- 2014 Architecture and robustness tradeoffs in speed-scaled queues with application to energy management, (Tuan Dinh, Lachlan Andrew and YN). *International Journal of Systems Science*, 45, pp. 1728-1739.
- 2013 Linear-Quadratic Model Predictive Control for Urban Traffic Networks, (Tung Le, Hai Vu, YN, Bao Vo and Serge Hoogendoorn), *Transportation Research Part C: Emerging Technologies* 36, pp. 498-512.
- 2013 Shortest Paths in Stochastic Time-Dependent Networks with Link Travel Time Correlation, (Wei Dong, Hai Vu, YN, Bao Vo, Minyi Li and Serge Hoogendoorn), *Transportation Research Record: Journal of the Transportation Research Board*, 2338, 58-66.
- 2013 Non-Existence of Stabilizing Policies for the Critical Push-Pull Network and Generalizations, (* with Leonardo Rojas-Nandayapa and Tom Salisbury). *Operations Research Letters*, 41, pp. 265-270.
- 2011 The Asymptotic Variance of Departures in Critically Loaded Queues, (* with Ward Whitt, Michel Mandjes and Ahmand Al-Hanbali). *Advances in Applied Probability*, 43, pp 243-263.
- 2011 The Variance of Departure Processes: Puzzling Behavior and Open Problems. *Queueing Systems*, 68, pp 385-394. (Authored alone).
- 2010 A Fluid Approach to Large Volume Job Shop Scheduling, (* with Gideon Weiss). *Journal of Scheduling*, 13, pp 509-529.
- 2010 Positive Harris Recurrence and Diffusion Scale Analysis of a Push Pull Queueing Network, (* with Gideon Weiss). *Performance Evaluation*, 67, pp. 201-217.

- 2009 A Push-Pull System with Infinite Supply of Work,
(* with Anat Kopzon and Gideon Weiss). *Queueing Systems*, 62, pp. 75-111.
- 2009 Near Optimal Control of Queueing Networks Over a Finite Time Horizon,
(* with Gideon Weiss). *Annals of Operations Research*, 170, pp. 233-249.
- 2008 The Asymptotic Variance Rate of the Output Process of Finite Capacity Birth-Death
Queues, (* with Gideon Weiss). *Queueing Systems*, 59, pp. 135-156.

Publications in Refereed Conference Proceedings (* = Alphabetical Order of Authors)

- 2015 The Challenge of Stabilizing Control for Queueing Systems with Unobservable Server
States,
(YN, Thomas Taimre, Azam Asanjarani, Julia Kuhn, Brendan Patch, Aapeli Vuorinen),
Proceedings of the Australian Control Conference, AUCC, 2015.
- 2015 Performance of Faulty Loss Systems with Persistent Connections,
ACM SIGMETRICS Performance Evaluation Review 43.2, pp. 16-18,
(Brendan Patch, Thomas Taimre, YN).
- 2015 A Queueing Approximation of MMPP/PH/1,
(Azam Asanjarani, YN), *Queueing Theory and Network Applications*.
Springer International Publishing. 41-51.
- 2014 Exploration vs. Exploitation with Partially Observable Gaussian Autoregressive Arms,
(Julia Kuhn, Michel Mandjes, YN), Proceedings of the 8th International Conference on
Performance Evaluation Methodologies and Tools. ICST (Institute for Computer
Sciences, Social-Informatics and Telecommunications Engineering), Valuetools
conference.
- 2013 The Age of Information in Gossip Networks,
(Jori Selen, YN, Lachlan Andrew and Hai Vu), *Proceedings of Twentieth International
Conference on Analytical & Stochastic Modelling Techniques & Applications (ASMTA),
Ghent, Belgium*.
- 2013 Linear-Quadratic Model Predictive Control for Urban Traffic Networks,
(Tung Le, Hai Vu, YN, Bao Vo and Serge Hoogendoorn), *Proceedings of the 20th
International Symposium on Transportation and Traffic Theory (ISTTT20), Noordwijk, the
Netherlands*.
- 2013 Shortest Paths in Stochastic Time-Dependent Networks with Link Travel Time
Correlation, (Wei Dong, Hai Vu, Yoni Nazarathy, Bao Vo, Minyi Li and Serge
Hoogendoorn), *Proceedings of 92nd TRB (Transportation Research Board) Annual
Meeting*.
- 2011 Scalable optical packet switch architecture for low latency and high load computer
communication networks. (Calabretta, N., Di Lucente, S., YN., Raz, O., Dorren,
H.J.S.), *13th International Conference on Transparent Optical Networks (ICTON),
Stockholm*.
- 2011 Scaling Photonic Packet Switches to a Large Number of Ports,
(Dorren, H.J.S., Di Lucente, S., Raz, O., Calabretta, N., YN),
Information Photonics, ICO International Conference 2011, Ottawa.
- 2011 Thousand-port Optical Packet Switch Architecture with Highly Distributed Control.
(Di Lucente, S., YN., Calabretta, N., Raz, O., Dorren, H.J.S.), *Proceedings of 37th
European Conference and Exhibition on Optical Communication (ECOC)*,
- 2010 Model Predictive Control for the Acquisition Queue and Related Queueing Networks,
(* with Johan van Leeuwen, Erjen Lefeber and Jacobus Rooda).
Proceedings of QTNA 2010, Beijing.
- 2009 Optimal File Splitting for Wireless Networks with Concurrent Access,
(* with Gerard Hoekstra, Rob van der Mei and Bert Zwart).
Proceedings of NET-COOP 2009, Eindhoven.

2008 Positive Harris Recurrence and Diffusion Scale Analysis of a Push Pull Queueing Network, (* with Gideon Weiss).
Proceedings of Valuetools 2008, Athens.

Material Submitted and Currently Under Review (* = Alphabetical Order of Authors)

- Diffusion Parameters of Flows in Stable Queueing Networks, (* with Werner Scheinhardt). Arxiv: 1311.5610.
- Scheduling for a Processor Sharing System with Linear Slowdown, (with Liron Ravner). Arxiv: 1508.03136.
- Wireless Channel Selection with Reward-Observing Restless Multi-Armed Bandits, (with Julia Kuhn). (Book Chapter).

Formal Presentations (* = invited, ** = invited and sponsored)

- 2015 The Challenge of Stabilizing Control for Queueing Systems with Unobservable Server States,
UQ Control Theory Workshop.
- 2015 * Trying to make the right decision when you can't see everything,
SSAI Queensland Branch Meeting, Brisbane, Australia.
- 2015 * Some trajectories in R^n arising in statistics, scheduling and queues,
QUT Mathematics Seminar, Brisbane, Australia.
- 2015 * Diffusion Parameters of Flows in Stable Queueing Networks,
INFORMS-APS Conference, Istanbul, Turkey.
- 2014 * Diffusion Parameters of Flows in Stable Queueing Networks,
SPA (Stochastic Processes and Their Applications) Conference, Buenos Aires.
- 2014 * Non-existence of Stable Policies for Critical Queueing Networks with Infinite Supplies.
Australian Statistical Conference in conjunction with the institute of mathematical statistics (IMS) annual meeting, Sydney.
- 2014 ** Stability and Instability of Queueing Networks with Infinite Supplies.
Stochastic Networks and Risk Analysis IV Conference, Bedlewo, Poland.
- 2014 * The BRAVO Effect in Queues.
Cambridge statistical laboratory seminar, Cambridge, UK.
- 2014 * On Stabilizing Policies in Hidden Random Environments,
A workshop on matrix analytic methods, The University of Melbourne.
- 2013 Processor Sharing Scheduling with Linear Slowdown,
QANZIAM Workshop, Brisbane.
- 2013 **Two Deterministic Congestion Models and their Algorithms,
Twente Stochastic Operations Research Seminar, Enschede, The Netherlands.
- 2013 **Two Deterministic Congestion Models and their Algorithms,
EURANDOM Stochastics Seminar, Eindhoven, The Netherlands.
- 2013 ** Two Deterministic Congestion Models and their Algorithms,
CWI Stochastic Seminar, Amsterdam.
- 2013 ** BRAVO for QED Queues (and more stuff about variance of output counts)
Caltech Rigorous Systems Group Seminar.
- 2013 * BRAVO for QED,
INFORMS APS, Costa Rica.
- 2012 * Instability, Stability and Non-Stabilizability of Queueing Networks,
Jerusalem Statistics Seminar, The Hebrew University of Jerusalem.

- 2012 * Instability, Stability and Non-Stabilizability of Queueing Networks, Haifa Statistics Seminar, The University of Haifa.
- 2012 * BRAVO for QED Queues, Technion Operations Research and Statistics Seminar, Haifa.
- 2012 Stability of Queueing Networks with Infinite Supplies, QANZIAM Workshop, Nusaville, Queensland.
- 2012 * Instability, Stability and Non-Stabilizability of Queueing Networks, Mathematics Colloquium at UQ, Brisbane.
- 2012 Towards Efficient Computation of the Age of Information in Situation Awareness Gossip Networks, CTAC Conference, Brisbane.
- 2012 ** Panel session on "Perspectives in Statistics", Australian Statistical Conference, Adelaide.
- 2012 ** Parameter Estimation Problems in Queueing and Related Stochastic Models, Australian Statistical Conference, Adelaide.
- 2012 Non-Existence of Stabilizing Policies for the Critical Push-Pull Network and Generalizations, IWAP Conference, Jerusalem.
- 2012 Linear Model Predictive Control for Queueing Networks in Manufacturing and Road Traffic, ANZIAM Conference, Victoria, Australia.
- 2012 Scaling Limits Cyclically Varying Birth-Death Processes and Stationary Distributions, Australia New Zealand Applied Probability Workshop, Auckland.
- 2011 * Stability of Queueing Networks Under Full Utilization, Monash Probability Seminar, Melbourne.
- 2011 * Encounters with the BRAVO Effect in Queueing Systems, University of Queensland Seminar, Brisbane.
- 2011 * Finite Buffer Queueing/Fluid Networks with Overflows, The University of South Australia Applied Mathematics Seminar, Adelaide.
- 2011 * Balancing Reduces Asymptotic Variance of Outputs, Adelaide Operations Research Seminar, The University of Adelaide.
- 2011 * The Asymptotic Variance of Departures in Critically Loaded Queues, MASCO Seminar, The University of Melbourne.
- 2011 ** Scaling Limits Cyclically Varying Birth-Death Processes and Stationary Distributions, Sydney Statistics Seminar, The University of Sydney.
- 2011 ** Finite Buffer Queueing/Fluid Networks with Overflows, Sydney Business School Seminar, The University of Sydney.
- 2011 * The asymptotic variance of departures from critically loaded queues, Monash Probability Seminar, Melbourne.
- 2011 Departure process variability of queues and queueing networks, IFORS Conference, Melbourne.
- 2011 * A Simple Diffusion Limit for Flows in Stable Queueing Networks, Latrobe Statistics Colloquium, Melbourne. (distributed over the Access Grid).
- 2011 * Finite Buffer Fluid Networks with Overflows, Monash Discrete Mathematics Research Group, Melbourne.
- 2011 * Finite Buffer Queueing/Fluid Networks with Overflows, Swinburne Mathematics Seminar, Melbourne.
- 2011 New Stability and Diffusion Results for Multi-Class Queueing Networks, Swinburne ORGANICS Seminar, Melbourne.

- 2011 Departure process variability of queues and queueing networks, ANZIAM Conference, Adelaide.
- 2010 ** Stability using fluid limits: Illustration through an example "Push-Pull" queueing network, Universiteit Gent Stochastic Seminar, Ghent.
- 2010 * Scaling Limits Cyclically Varying Birth-Death Processes and Stationary Distributions, 2'nd Dutch Israeli Queueing Theory Workshop, Eindhoven.
- 2010 * The Asymptotic Variance of Departures in Critically Loaded Queues, Haifa Statistics Seminar, The University of Haifa.
- 2010 * A bit on Queueing Theory: M/M/1, M/G/1, GI/G/1, Swinburne Mathematics Seminar, Melbourne.
- 2010 Model Predictive Control for the Acquisition Queue and Related Queueing Networks, QTNA Conference, Beijing.
- 2010 Balancing Reduces Asymptotic Variance of Outputs, QTNA Conference, Beijing.
- 2010 * Exploring Model Predictive Control for Queueing Networks, Twente Industrial Engineering Seminar, The Netherlands.
- 2010 Scaling Limits Cyclically Varying Birth-Death Processes and Stationary Distributions, Third Madrid Conference on Queueing Theory, Toledo.
- 2010 * The variance of production counts over a long time horizon, Workshop for Stochastic Models of Manufacturing Systems, Eindhoven.
- 2009 * Balancing Reduces Asymptotic Variance of Outputs, CWI Queueing Colloquium, Amsterdam.
- 2009 Optimal File Splitting for Wireless Networks with Concurrent Access, NET-COOP Conference, Eindhoven.
- 2009 * On the Variance of Output Counts of Some Queueing Systems, Systems Engineering Seminar, Eindhoven.
- 2009 * Interactive Demonstrations with Mathematica, EURANDOM EPPS Seminar, Eindhoven.
- 2009 * On the variance curve of outputs for some queues and networks, CWI Stochastics Seminar, Amsterdam.
- 2009 ** On the variance curve of outputs for some queues and networks, EURANDOM QPA Seminar, Eindhoven.
- 2008 * On Control of Queueing Networks and The Asymptotic Variance Rate of Outputs, Haifa Statistics Seminar, The University of Haifa.
- 2008 Positive Harris Recurrence and Diffusion Scale Analysis of a Push-Pull Queueing Network, ValueTools conference, Athens.
- 2008 Positive Harris Recurrence and Diffusion Scale Analysis of a Push-Pull Queueing Network, Haifa Statistics Seminar, The University of Haifa.
- 2008 Poster: The asymptotic variance rate of the output process of birth-death queues. Stochastic Networks Conference, poster session, Paris, (G. Weiss presenting).
- 2008 The Asymptotic Variance of the Output Process of Finite Capacity Queues, Meeting of the euro working group on stochastic modeling. Koc university, Istanbul
- 2008 * The Asymptotic Variance of the Output Process of Finite Capacity Queues. ORSIS Conference, Israel.
- 2008 ** The Asymptotic Variance of the Output Process of Finite Capacity Queues. EURANDOM QPA Seminar, Eindhoven.

- 2008 * On the Variance of Queueing Output Processes,
Haifa Statistics Seminar, The University of Haifa.
- 2007 On the Asymptotic Variance Rate of the Output Process of Finite Capacity Queues,
Queueing Analysis, Control and Games Workshop, The Technion, Israel.
- 2007 The Asymptotic Variance Rate of the Departure Process of the M/M/1/K Queue,
The XXVI International Seminar on Stability Problems for Stochastic Models, Israel.
- 2007 * Transient fluid solutions and queueing networks with infinite virtual queues.
Applied Probability Society Conference, Eindhoven.
- 2007 Transient fluid solutions and queueing networks with infinite virtual queues.
ORSIS Conference, Jerusalem Mountains.
- 2007 Queueing Networks with Infinite Virtual Queues,
Students Probability Day, Weizmann Institute of Science, Israel.
- 2006 Near Optimal Control of a Multi-Class Queueing Network over a Finite Time Horizon with
Applications to Communication Networks, StoPerA Workshop, CWI Amsterdam.

In addition to the above, presented various informal talk presentations in venues such as reading groups and/or specialized research groups :
2006 (1), 2007 (2), 2008 (2), 2009 (5), 2010 (4), 2011 (9), 2012 (11), 2013 (4), 2014 (2), 2015 (4).

Annotated Bibliography

“Parameter and State Estimation in Queues and Related Stochastic Models: A Bibliography”.
With Philip Pollett. Continuously updated on-line: <http://www.maths.uq.edu.au/~pkp/papers/Qest/Qest.html> .

Developed Research and Teaching Software (Available On-line)

- 2009 *Processor Sharing Fork Join Queueing Network Simulator*. V0.1.
- 2008 *The Processing Network Simulator (PRONETSIM)*. V0.5.
- 2008 Contributor to the Wolfram Demonstration Project.
- 2001 *The Job Shop Simulation Project (JSSP)*. V1.2.

Active (non-student) Collaborators on Research Projects (as of 11/2015)

The University of Queensland: Dirk Kroese, Benoit Liquef, Ross McVinish , Philip Pollett,
Leonardo Rojas-Nandayapa, Thomas Taimre.

The University of Melbourne: Sophie Hautphenne, Daryl Daley, Peter Taylor.

Monash University: Lachlan Andrew.

Swinburne University of Technology: Hai Vu.

Eindhoven University of Technology: Ivo Adan, Johan van Leeuwen, Erjen Lefebber.

The University of Amsterdam: Michel Mandjes, Sindo Núñez Queija, Neil Walton,

Twente University of Technology : Werner Scheinhardt.

Delft University of Technology: Serge Hoogendoorn.

The University of Haifa: Gideon Weiss.

The Hebrew University of Jerusalem: Moshe Haviv.

Ben Gurion University: Yoav Kerner.

The University of Buenos Aires: Matthieu Jonckheere.

University of Wroclaw: Zbigniew Palmowski.

National University of Singapore: Hanqin Zhang.

York University: Tom Salisbury.

Arizona State University: Dieter Armbruster.

Caltech: Steven Low.

Collaborating Visits

- 2014 (1 week) The University of Buenos Aires,
Visiting Matthieu Jonckheere.
- 2014 (1 week) University of Wroclaw,
Visiting Zbigniew Palmowski.
- 2014 (1 weeks) The University of Haifa and the Hebrew University of Jerusalem, Israel,
Visiting Gideon Weiss, Liron Ravner and Moshe Haviv.
- 2014 (1 weeks) The University of Amsterdam, Eindhoven University of Technology,
Visiting Michel Mandjes, Erjen Lefeber, Johan van Leewaarden, Neil Walton and
others.
- 2014 (1 week) The University of Melbourne,
Visiting Sophie Hautphenne, Daryl Daley, Peter Taylor.
- 2013 (2 weeks) CWI Amsterdam, The University of Amsterdam, Eindhoven University of
Technology, and University of Twente.
Visiting Michel Mandjes, Ivo Adan, Werner Scheinhardt, Sindo Núñez Queija,
Erjen Lefeber, Johan van Leewaarden and others..
- 2013 (1 week) The University of Haifa, Israel.
Visiting Alex Goldenshluger, Gideon Weiss and others, as well as Avi
Mandelbaum from the Technion.
- 2013 (1 week) Swinburne University of Technology. Visiting Lachlan Andrew, Hai Vu and others.
- 2013 (4 weeks) The University of Melbourne and Swinburne University of Technology.
Visiting Peter Taylor, Daryl Daley, Lachlan Andrew, Hai Vu and others.
- 2012 (2 weeks) The University of Haifa, The Technion and The Hebrew University
of Jerusalem. Visiting Moshe Haviv and working with Masters student Jori Selen
(visitor from the Netherlands).
- 2012 (2 weeks) The University of Melbourne and Swinburne University of Technology.
Visiting Lachlan Andrew, Hai Vu, Peter Taylor, Daryl Daley and others.
- 2011 (1 week) The University of Sydney.
Visiting Moshe Haviv (adjunct lecturer at Sydney at the time).
- 2010 (1 week) The University of Haifa. Visiting Gideon Weiss.
- 2008 (1 week) Eindhoven University of Technology, EURANDOM,
Visiting Yoav Kerner and Erjen Lefeber.
- 2007 (1 week) New York University (NYU) and Columbia University.
Visiting Gideon Weiss (on sabbatical at NYU at the time).

Hosting of (non-student) Collaborating Visitors

At UQ:

2015 Zbigniew Palmowski, University of Wroclaw.

2015 Michel Mandjes, The University of Amsterdam.

- 2014 Tom Salisbury, York University.
- 2014 Werner Scheinhardt, University of Twente.
- 2013 Werner Scheinhardt, University of Twente.
- 2013 Michel Mandjes, The University of Amsterdam.
- 2013 Matthieu Jonckheere, Universidad de Buenos Aires.
- 2013 Erjen Lefeber, Eindhoven University of Technology.
- 2012 Vyacheslav (Slava) Abramov, Swinburne University of Technology.

At Swinburne:

- 2013 Zbigniew Palmowski, University of Wroclaw.
- 2011 Serge Hoogendoorn, Delft University of Technology.
- 2011 Moshe Haviv, The Hebrew University of Jerusalem.
- 2011 Gideon Weiss, The University of Haifa.

At EURANDOM:

- 2010 Yoav Kerner, The Technion (at the time).
- 2009 Gideon Weiss, The University of Haifa.

Current Research Student Supervision

- Azam Asanjarani, UQ PhD Candidate,
Subject: Estimation of stochastic systems.
Started July 2013.
- David Campbell,
UQ Honours Student, 2015-2016,
Subject: Stability of Quasi-Birth and Death Processes.
- Darcy Bermingham,
Summer Research Student, 2015.
Subject: Linear Control Theory and Structured Markov Chains.

Completed Student Supervision (incl. Across Institutions)

- Tuan Dinh, PhD, Swinburne University of Technology.,
Joint supervision with Lachlan Andrew and Philip Branch.
Subject: Energy aware control of communication and computing systems.
PhD Awarded 2015.
- Brendan Patch, Masters Student.
Joint supervision with Thomas Taimre.
Subject: The asymptotic covariance structure of multi-dimensional renewal reward processes.
Graduated 2014.
- Aapeli Vuorinen,
Summer Research Internship for undergraduate students, 2014.

Eindhoven University of Technology Based Students:

- Jori Selen, Masters student.
Joint supervision with Prof. Ivo Adan.
Graduated September 2013.

- During 2009 – 2010 :Co-supervised with Erjen Lefeber 4 bachelor final projects in the Systems Engineering Group: R. Heuijerjans, S. Fleuren, D. Banning, J. Selen.

Other student supervision activities:

In 2013 – 2015, initiated and setup joint PhD agreements between UQ and the University of Amsterdam for PhD students Julia Kuhn and Brendan Patch.

Visiting Students and Internships to UQ

2013 (10 weeks)	Liron Ravner (The Hebrew University of Technology), Visiting PhD student through the “The Australia-Israel Scientific Exchange Foundation”. Worked on strategic decisions in queues and scheduling.
2013 (10 weeks)	Kay Peeters (Eindhoven University of Technology), Visiting Master’s internship student. Worked on “Control Theory and Structured Markov Chains” book preparation (numerical examples and illustrations).
2012 (10 weeks)	Jori Selen (Eindhoven University of Technology), Visiting Master’s internship student. Worked on Modeling of wireless networks.
2012 (1 week)	Olga Huibregtse (Delft University of Technology), Visiting PhD student. Worked on traffic engineering and intelligent transport systems.

Further Affiliations and Memberships

Since 2014	Active in setting up the AustMS Applied Probability Special Interest Group, serving as interim secretary.
Since 2012	Adjunct member of the Centre for Advanced Internet Architectures (CAIA), Swinburne University of Technology.
Since 2011	Member of the Australian Mathematical Society (AustMS).

Further (Minor) Grants Received

2013	SMP Teaching and Research Grant, \$5K (AUD).
2013	STAR visitor grant to the Netherlands, 2K Euro.
2012	UQ competitive startup grant \$12K (AUD).
2012	UQ startup support from SMP \$10K (AUD).
2011	Swinburne distinguished visitor grant, full funding for visit of Prof. Serge Hoogendoorn,. \$7K (AUD).
2011	Swinburne startup grant. \$10K (AUD).
2009 – 2011	EURANDOM, Postdoc travel funding. 4K Euro.
2008	University of Haifa Grant for outstanding PhD graduates towards post-doc, \$5K (US).

Courses Taught

- 2016 The Australian Mathematical Sciences Institute (AMSI), Summer School, RMIT University, Melbourne, January 2016: Lecturer and coordinator of Linear Control Theory and Structured Markov Chains. 28 hour course.
- 2012 - 2014 *Lecturer*, The University of Queensland:
- Lecturer, Control Theory. An advanced applied mathematics course (volunteering for this lecturing). Semester 2, 2014.
 - Lecturer, Advanced Stochastic Processes II. A specialized advanced applied probability course (volunteering for this lecturing). Semester 1, 2013
 - Lecturer, Analysis of Scientific Data. A service (650 students) statistics course for science students. Semester 2, 2012.
 - Lecturer and coordinator, Control Theory. An advanced applied mathematics course. (Prepared 50 pages of lecture notes). Semester 2, 2012.
- 2013 The Australian Mathematical Sciences Institute (AMSI), Summer School, The University of Melbourne, January 2013:
- Lecturer and coordinator of Structured Markov models and control theory. A unified approach via linear algebra. A 28 hour course co-taught with Dr. Sophie Hautphenne (Melbourne), Dr. Erjen Lefeber (Eindhoven) and Prof Peter Taylor (Melbourne).
- 2011 *Lecturer*, Swinburne:
- Tutor, probability and statistics for civil engineers.
 - Lecturer and convener, probability and statistics for final year mechanical engineering and mechatronics students (2 groups).
 - Lecturer and convener, stochastic models (random signals), elective for engineering and math co-major students.
- 2009 – 2010 *Instructor*, Eindhoven University of Technology:
- Instructor, calculus. Fall 2010.
 - Assembly line for lawn-mowers, study project. Spring 2010.
- 2005 – 2008 *Lecturer*, Department of Statistics, University of Haifa:
- Interactive demonstrations of stochastic and statistical models, Fall 2008.
 - Stochastic processes and their applications (logistics M.A.). Spring 2008.
 - Introduction to stochastic processes (B.A.). Spring 2006, Spring 2007, Fall 2007.
 - Statistical models B (B.A.). Spring 2007.
- 1999 – 2001 *Teaching assistant*, University of Haifa in the Department of Statistics, Department of Computer Science and Graduate Business School:
- Statistics, probability, scheduling and control, differential equations, stochastic processes and SAS programming.
- 1999 – 2001 *Teaching assistant and lecturer*, Minhal College, Haifa:
- JAVA programming, UNIX for users, C programming.

Original Lecture Notes and Materials

- 2013 *Structured Markov models and control theory. A unified approach via linear algebra.* Lecture booklet, 150 pages. Co-authored with Sophie Hautphenne (Melbourne), Erjen Lefeber (Eindhoven) and Prof Peter Taylor (Melbourne). AMSI Summer school.
- 2012 *Control Theory.* Approx. 100 pages of lectures notes and supplementary materials. UQ.

- 2011 *A Quick Tour of Probability and Statistics for Final Year Engineering Students*. Approx. 100 pages of original notes, exercises and solutions. Swinburne.
- 2006 *Introduction to Stochastic Processes (in Hebrew)*. Printed and sold by the Department of Statistics, 180 pages. The University of Haifa.

Major Workshop and Conference Organization

- 2019 Local Chair of the INFORMS-APS bi-annual conference to be held in Brisbane Australia
- 2013 Co-organizer of the Australia and New Zealand Applied Probability Workshop, The University of Queensland.
- 2012 Organizer of an international workshop on optimization, scheduling and queues in honor of Gideon Weiss, the University of Haifa.
- 2009 Co-organizer of the Young European Queueing Theorists workshop (YEQT III), EURANDOM, Eindhoven University of Technology.

Seminar Series Organization

- Since 2013 Co-organizer of the Statistics, Modeling and Operations Research seminar series (SMOR) at UQ.
- 2012 Co-organizer of the Swinburne, ORGANICS (operations research, games, algorithms, networking, information, control and statistics) seminar series.
- 2009 – 2010 Co-organizer of the EURANDOM – QPA (queueing and performance analysis) open problem session.
- 2007 – 2008 Co-organizer of the University of Haifa, probability and statistics PhD forum.

Organization of Other One-Off Events

- 2015 Co-organizer of the UQ Control Theory Workshop 2015.
- 2014 Organizer of a contributed session at SPA, Buenos Aires, “Stability and Instability in Queueing Systems”.
Speakers: Matthieu Jonckheere, Takis Konstantopoulos, and Tom Salisbury.
- 2013 Organizer of session at INFORMS APS, San Jose, Costa Rica. “Parameter Estimation of Queueing Systems”.
Speakers: Mor Armony, John Hassenbein and Michael Wiper.
- 2012 Organizer of session at IWAP, Jerusalem. “Queueing Networks with Finite Queues, Blocking, Losses and Overflows”.
Speakers: Ivo Adan, Erjen Lefebber and Peter Taylor.
- 2011 Organizer of Melbourne discussion day on Incentives, decisions and games in networks and queues joint with staff from Swinburne, The University of Melbourne, The University of Sydney and Monash University researchers.

Program Committee Member of Conferences and Workshops

- 2015 IFIP WG 7.3 Performance 2015
- 2015 Fourth Australia and New Zealand Applied Probability Workshop (Adelaide).
- 2014 First European Conference on Queueing Theory.
- 2013 INFORMS APS (Applied Probability Society).

2012 - 2014	ASMTA (Conference on Analytical and Stochastic Modeling Techniques and Applications).
2012 - 2015	QTNA (Conference on Queueing Theory and Network Applications).
2012	MMRP (Workshop on Models and Methods for Reliability and Performance of computer networks)

Editorship and Referee

- Associate editor of “Stochastic Models”.
- Regular referee for the following journals: Bernoulli, Operations Research, Applied Probability Trust, IEEE/ACM Transactions on Networking, Queueing Systems, Stochastic Models, Annals of Operations Research, Operations Research Letters, Methodology and Computing in Applied Probability, Performance Analysis, Journal of Scheduling, Journal of Applied Mathematics and Stochastic Analysis, Applied Mathematics and Computation, International Journal of Systems Science, Journal of Industrial and Management Optimization, Journal of Combinatorial Optimization.
- Referee for the Israel Science Foundation (ISF) grant proposal system.
- Referee for the Australian Research Council (ARC).

Further University Service

At The University of Queensland:

- Mathematics Honors Coordinator (since 2014).
- (2014) Member of the Internationalization and Engagement committee at SMP.
- Point of contact and organizer of the Operations Research group.
- Industry liaison.
- Coordinator of School of Mathematics and Physics, Industry Summer Experience.
- Member of task force for setting up a Masters of Data Science Program.

At Swinburne University of Technology:

- Contribution to development of the Applied Mathematics program.
- Mentoring of tutors.

At The University of Haifa:

- Contribution to statistics course development.

Family, Sports, Fun, Community Service and Other

- Single father of Emily (9), Kayley (7), Yarden (5).
- Competitive cycling: 2007: 2nd place in time trial and road race, Israel amateur cycling champs. 2007, age category 30-40. 1991:Furnace Creek 508 (miles), Ultra Marathon Bicycle Race, California official course record holder to date: 38h:17m:28s. Age category 10-20.
- Three year military service (1993 –1996) + approximately half year of cumulative reserve service (1996-2008).
- Since 2013, volunteer at the Mathematicians in Schools program run by CSIRO in Australia.
- Active in Mathematics High School Education programs in Brisbane Australia.
- Volunteering for computer programming and mathematics teaching skills for students and high school kids coming from hard socio-economic backgrounds (1996 – 2005).