CURRICULUM VITAE

Mats Gyllenberg

Professor emeritus, Doctor of Technology
Permanent Secretary, Finnish Society of Sciences and Letters

Place of birth: Helsinki, Finland
Date of birth: 15.12.1955
Citizenship: Finnish
Married, 4 children (born 1975, 1977, 1980, 1984)

Research interests

Infinite dimensional dynamical systems; mathematical biology, in particular structured population dynamics with applications to ecology and evolution; adaptive dynamics; physiological models; mathematical taxonomy.

I have published more than 235 papers and three books. According to Clarivate Analytics Web of Science they have been cited 6099 times and my h-index is 40. The corresponding figures given by Google Scholar are10072 citations and an h-index equal to 50 (as of 10 January 2025).

Education

College Matriculation Examination	28.05.1974
Diploma Engineer, Helsinki University of Technology	13.05.1980
Doctor of Technology (grade: *laudatur*), Helsinki University of Technology	22.09.1987

Evaluated teaching skills

Helsinki University of Technology, *laudatur* (3/3)	24.11.1987
University of Helsinki, *laudatur* (3/3)	29.03.1989
University of Turku, *laudatur* (3/3)	12.05.1992

Documented Language skills

Swedish, Mother tongue	
Finnish, Complete (Finnish Government)	03.06.1987
English, Excellent (Language Centre, Helsinki University of Technology)	01.09.1983
French, four years at high school; *approbatur*, College Matriculation Examination	28.05.1974

Decorations

Knight, First Class, of the Order of the White Rose of Finland	06.12.2003
Chevalier dans l'Ordre des Palmes académiques, République Français	05.01.2023

Membership in learned societies

Swedish Academy of Engineering Sciences in Finland	1996
Academia Scientiarum Fennica (Finnish Academy of Science and Letters)	2008
Societas Scientiarum Fennica (The Finnish Society of Sciences and Letters)	2009
European Academy of Sciences	2010
Austrian Academy of Sciences, member abroad	2018
The Royal Society of Arts and Sciences in Gothenburg, member abroad	2021

Other Honours

IIASA Honorary Scholar, International Institute for Applied Systems Analysis	2015

Professional positions

Research assistant, University of Helsinki, Institute of Microbiology	31.05.1976–31.07.1976
Teaching assistant in Mechanics and Mathematics, Helsinki University of Technology	14.09.1976–13.11.1978
Assistant of Mechanics, Helsinki University of Technology	14.11.1978–31.12.1978
Teaching assistant in Mechanics and Mathematics, Helsinki University of Technology	01.01.1979–16.05.1980
Assistant of Mechanics, Helsinki University of Technology	01.07.1980–11.11.1981
Lecturer of Mathematics, Helsinki University of Technology	01.09.1981–31.05.1982
Acting Associate Professor of Mechanics, Helsinki University of Technology	12.11.1981–11.12.1981
Assistant of Mechanics, Helsinki University of Technology	12.12.1981–07.09.1982
Acting Associate Professor of Mechanics, Helsinki University of Technology	08.09.1982–04.09.1983
Research fellow (alternative military service), Finnish Meteorological Institute, Department of Geomagnetism	05.09.1983–31.07.1984
Assistant of Mechanics, Helsinki University of Technology	01.08.1984–30.09.1984
Research fellow, Academy of Finland	01.10.1984–31.12.1986
Acting Associate Professor of Mechanics, Helsinki University of Technology	01.01.1987–30.06.1987
Assistant of Mechanics, Helsinki University of Technology	01.07.1987–31.07.1987
Acting Lecturer of Mathematics, Helsinki University of Technology	01.08.1987–31.12.1987
Docent of Mathematical Analysis, Helsinki University of Technology	14.12.1987–
Research fellow, Academy of Finland	01.01.1988–31.12.1989
Professor of Applied Mathematics, University of Luleå	04.10.1989–31.08.1993
Professor of Applied Mathematics, University of Turku	01.10.1992–31.07.2004
Professor of Applied Mathematics, University of Helsinki	01.08.2004–31.12.2023
Docent of Applied Mathematics, University of Turku	18.08.2004–
Permanent Secretary, Finnish Society of Sciences and Letters	01.05.2018–

Visiting Positions

Visiting Researcher, Mathematisch Centrum, Amsterdam, The Netherlands	11.09.1984–13.07.1985
Visiting Assistant Professor of Mathematics, Vanderbilt University, Nashville, Tennessee	01.09.1985–31.08.1986
Visiting Professor, National Center for Ecological Analysis and Synthesis, Santa Barbara, California	09.02.1996–04.03.1996
Visiting Professor, University of Utrecht, The Netherlands	27.01.1997–22.02.1997
Visiting Professor, Chalmers University of Technology, Gothenburg, Sweden	01.04.1998–31.05.1998
F.C. Donders Visiting Chair of Mathematics, University of Utrecht, The Netherlands	01.01.2006–31.03.2006
Visiting Professor, University of Utrecht, The Netherlands	01.04.2007–30.04.2007
Visiting Professor, University of Heidelberg, Germany	01.01.2017–31.01.2017
Visiting Professor, CRM Program in Mathematical Biology, Barcelona, Spain,	16.04.2018–06.05.2018
Main organiser of the program on Mathematical Biology, Institut Mittag-Leffler, The Royal Swedish Academy of Sciences, Djursholm, Sweden	03.09.2018–14.12.2018

Further professional experience

Invited lecture, Moscow Power Engineering Institute, Moscow, Soviet Union	28.02.1983–07.03.1983
Invited to Budapest University of Technology, Budapest, Hungary	06.06.1983–12.06.1983
Invited lecture, Mathematisch Centrum, Amsterdam, the Netherlands	11.07.1983–13.07.1983
Invited to the Department of Mathematics, University of Rome, Rome, Italy	13.07.1983–17.07.1983
Invited lecture, University of Leiden, Leiden, the Netherlands	–25.01.1985
Invited to University of Arizona, Tucson, Arizona, USA	30.04.1986–04.05.1986
Invited to University of California, Davis, California, USA	05.05.1986–07.05.1986
Invited to Harvey Mudd College and Pomona College, Claremont, California, USA	08.05.1986–10.05.1986
Invited to Mathematisch Centrum, Amsterdam, the Netherlands	16.06.1986–18.06.1986
Invited to Mathematisch Centrum, Amsterdam, the Netherlands	06.09.1986–10.09.1986
Invited lecture, Delft University of Technology, Delft, the Netherlands	–09.09.1986
Invited to Chalmers University of Technology and University of Gothenburg, Gothenburg, Sweden. Delivered two lectures.	25.02.1987–28.02.1987
Invited to University of Heidelberg, Sonderforschungsbereich 123. Delivered lecture.	22.03.1987–27.03.1987
Invited lecture, University of Helsinki, Institute of Microbiology	–03.02.1988
Invited to the Department of Industrial Organization, Chalmers University of Technology, Gothenburg, Sweden	16.05.1988–20.05.1988
Invited lecture, Department of Mathematics, Chalmers University of Technology, Gothenburg, Sweden	–18.05.1988
Exchange visitor, Budapest University of Technology, Budapest, Hungary. Delivered lecture.	06.06.1988–13.06.1988
Invited to Mathematisch Centrum, Amsterdam, the Netherlands. Delivered lecture.	31.10.1988–12.11.1988
Invited lecture, University of Helsinki, Department of Zoology	–30.11.1988
Invited to Vanderbilt University, Nashville, Tennessee	11.05.1989–17.05.1989
Invited to the International Institute of Applied Systems Analysis (= IIASA), Laxenburg, Austria	25.06.1989–30.06.1989
Exchange visitor, Czech Academy of Science, Prague. Delivered lecture.	04.11.1989–12.11.1989
Invited lecture, Charles University, Prague, Czechoslovakia	–10.11.1989
Invited to Vanderbilt University, Nashville, Tennessee. Delivered lecture.	02.01.1990–06.01.1990
Invited to Arizona State University, Tempe, Arizona. Delivered lecture.	07.01.1990–09.01.1990
Invited lecture, Royal Institute of Technology, Stockholm	–12.02.1990
Invited to University of Heidelberg, Sonderforschungsbereich 123	25.06.1990–06.07.1990
Invited lecture, Deutsche Krebsforschungs Zentrum, Heidelberg, Federative Republic of Germany	–04.07.1990

Invited lecture, Umeå University, Department of Ecological Zoology	–05.12.1990
Invited to Umeå University, Department of Mathematics, Delivered lecture.	12.02.1991–13.02.1991
Invited to Chalmers University of Technology, Department of Mathematics. Delivered lecture.	19.02.1991–22.02.1991
Invited to University of Tübingen, Department of Mathematics. Delivered two lectures.	02.06.1991–06.06.1991
Invited to the University of Pau, Department of Mathematics. Delivered lecture.	16.09.1991–18.09.1991
Invited lecture, University of Umeå, Department of Ecological Botany	–11.10.1991
Invited lecture, University of Linköping, Department of Biology	–24.03.1992
Invited lecture, Department of Mathematics, Åbo Akademi University, Turku, Finland	–12.05.1992
Invited to Vanderbilt University, Department of Mathematics, Nashville, Tennessee. Delivered lecture.	26.08.1992–30.08.1992
Invited to Arizona State University, Department of Mathematics, Tempe, Arizona	08.10.1992–14.10.1992
Invited to Mathematisch Centrum, Amsterdam, The Netherlands	16.12.1992–17.12.1992
Invited to Mathematisch Centrum, Amsterdam, The Netherlands, Delivered lecture.	18.07.1993–23.07.1993
Invited to Mathematisch Centrum, Amsterdam, The Netherlands	07.03.1994–11.03.1994
Invited to University of Stockholm, Department of Mathematics, Delivered lecture.	–30.03.1994
Invited to University of Helsinki, Department of Zoology	02.05.1994–07.05.1994
Invited to Arizona State University, Department of Mathematics, Delivered lecture.	25.05.1994–31.05.1994
Invited to University of Umeå, Department of Animal Ecology	24.08.1994–26.08.1994
Invited to the Czech Academy of Sciences and Charles University, Prague, Delivered lecture.	24.10.1995–27.10.1995
Invited lecture, University of Helsinki, Department of Mathematics	–06.05.1996
Invited to Department of Mathematics, University of Queensland, Brisbane, Australia, Delivered lecture.	08.12.1996–21.12.1996
Invited lecture on “Chaos in Biology”, Heureka, The Finnish Science Centre, Vantaa, Finland	–24.02.1997
Invited to the Steklov Mathematical Institute of Russian Academy of Sciences, Moscow. Delivered lecture.	27.04.1997–30.04.1997
Invited lecture, University of Helsinki, Department of Ecology and Systematics	–22.10.1997
Invited lecture at the Annual meeting of The Finnish Mathematical Society	–09.03.1998
Invited to University of California at San Diego, Department of Mathematics, Delivered lecture.	10.03.1998–14.03.1998
Invited to University of Utrecht, The Netherlands	06.01.1999–10.01.1999
Invited to University of Delaware, USA	12.01.1999–15.01.1999

Invited to Microsoft Research, Redmond, Washington, USA. Delivered lecture.	02.05.1999–06.05.1999
Invited to the Institute for Mathematics and its Applications (IMA), Minneapolis, Minnesota	15.05.1999–21.05.1999
Invited to the Lorentz Center, Leiden, the Netherlands	05.07.1999–10.07.1999
Invited lecture, Chalmers University of Technology, Department of Mathematics	09.12.1999–10.12.1999
Invited lecture at the Annual meeting of the Turku Society for Zoology and Botany	–07.02.2000
Invited to Ecole Normale Supérieure, Paris	28.02.2000–03.03.2000
Invited to Humboldt-Universität zu Berlin, delivered lecture	29.04.2000–03.05.2000
Invited to Chalmers University of Technology, Department of Mathematics	15.05.2000–17.05.2000
Invited lecture on Chaos at the Jyväskylä Festivals	–14.07.2000
Invited lecture "Adaptive suicide – can evolution drive a species to extinction?", Turku Annual Book Fair	–14.10.2000
Invited lecture at the Seminar on Functional Analysis, University of Helsinki, Department of Mathematics	–23.11.2000
Invited to The Institute of Advanced Study, Collegium Budapest, Hungary	07.03.2001–09.03.2001
Invited to IIASA, Laxenburg, Austria	17.04.2001–25.04.2001
Invited to the Mathematisches Forschungsinstitut Oberwolfach Research in Pairs programme	30.09.2001–13.10.2001
Invited to the Department of Mathematics, University of Utrecht, delivered lecture	29.10.2001–04.11.2001
Invited to the Department of Mathematics, University of Vienna, Delivered lecture.	14.05.2002–15.05.2002
Invited to Department of Mathematics, Technical University of Lisbon. Delivered lecture	17.10.2002–22.10.2002
Invited to Eötvös University, Department of Biological Physics	29.10.2002–01.11.2002
Invited to the University of Leiden, Department of Biology	26.01.2003–28.01.2003
Invited to the Mathematisches Forschungsinstitut Oberwolfach Research in Pairs programme	05.10.2003–18.10.2003
Invited to the Department of Mathematics, Arizona State University, Tempe, Arizona. Delivered lecture.	05.01.2004–13.01.2004
Invited to the Department of Mathematics, University of Tokyo. Delivered lecture.	10.03.2004–13.03.2004
Invited lecture "Studia Naturalia", University of Joensuu	–08.02.2005
Invited to the University of Leiden, Department of Biology	16.02.2005–18.02.2005
Invited to the University of Stockholm, Department of Mathematics, delivered lecture	–13.04.2005
Invited to the University of Linköping, Department of Mathematics	26.05.2005–27.05.2005
Invited to Mälardalen University, Department of Mathematics	09.10.2005–10.09.2005
Invited lecture, University of Amsterdam, Department of Mathematics	–22.03.2006

Invited to the University of Science and Technology of China (Hefei, Anhui, People's Republic of China), Department of Mathematics, delivered lecture	04.06.2006 –09.06.2006
Invited to Beijing Normal University (Peking, People's Republic of China), Department of Mathematics	09.06.2006 –11.06.2006
Invited to Meiji University (Kawasaki, Japan), Department of Mathematics	11.03.2007 –13.03.2007
Invited to Science Research Center, Research Academy of Science and Technology, Harbin Institute of Technology, (Harbin, Heilongjiang Province, People's Republic of China), delivered lecture	26.05.2007 –28.05.2007
Invited to the University of Utrecht, department of Mathematics	02.09.2007 –07.09.2007
Invited to Arizona State University, Department of Mathematics. Delivered Arizona State University Distinguished Lecture	01.10.2007 –08.10.2007
Invited to the University of Utrecht, department of Mathematics	25.10.2007 –26.10.2007
Invited to the Norwegian Centre of Excellence in Ecological and Evolutionary Synthesis, University of Oslo. Delivered lecture	24.01.2008 –25.01.2008
Invited to Fraunhofer Institut Techno- und Wirtschaftsmathematik, Kaiserslautern, Germany. Delivered lecture	10.06.2008 –11.06.2008
Invited to the Department of Mathematics, University of Uppsala, Sweden. Delivered lecture	–17.03.2009
Invited to the Mathematisches Forschungsinstitut Oberwolfach Research in Pairs programme	19.04.2009 –03.05.2009
Invited to the Department of Mathematics, University of Utrecht, Utrecht, The Netherlands	29.10.2009 –06.11.2009
Invited to the Department of Mathematics, University of Utrecht, Utrecht, The Netherlands	19.02.2011 –27.02.2011
Invited to the Department of Mathematics,Yangzhou University, Yangzhou, People's republic of China,	06.06.2011 –08.06.2011
Invited to BCAM, the Basque Center for Applied Mathematics, Bilbao, Basque Country. Gave 10h course "Structured populations: Modelling and analysis"	06.05.2012 –11.05.2012
Research visit to Uppsala University, Delivered lecture at Complex Systems Seminar	16.02.2013 –23.02.2013
Research visit to the Department of Mathematics, University of Utrecht, the Netherlands,	04.11.2013 –08.11.2013
Invited to Princeton University, New Jersey, USA. Delivered lecture	03.10.2014 –07.10.2014
Invited to Department of Biostatistics, Colombia University, New York, New York, USA	08.10.20145–10.10.2014
Research visit to the Department of Mathematics, University of Utrecht, the Netherlands,	04.01.2015 –08.04.2015
Invited to the National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville, USA. Delivered lecture.	19.04.2015 –22.04.2015
Invited to the Department of Mathematics, Vanderbilt University, Nashville, Tennessee, USA. Delivered lecture.	22.04.2015 –25.04.2015

Invited to the Department of Mathematics, University of Utrecht, the Netherlands.	04.10.2015–09.10.2015
Invited to the University of Primorska, Slovenia. Delivered lecture.	25.10.2015–28.10.2015
Invited to the Department of Mathematics, University of Utrecht, the Netherlands.	12.05.2016–19.05.2016
Invited to the Centre for Ecological and Evolutionary Synthesis, University of Oslo, Norway. Delivered lecture.	–03.04.2017
Invited to the Department of Mathematics, University of Utrecht, the Netherlands.	29.05.2017–02.06.2017
Invited to The College of Mathematics and Computer Science, Fuzhou University, P.R. China. Delivered two public lectures.	25.09.2017–27.09.2017
Invited to the Banach Center, Warsaw, Poland.	11.02.2018–16.02.2018
Invited to the Department of Mathematics, Chalmers University of Technology, Gothenburg, Sweden. Delivered lecture.	23.01.2019–25.01.2019
Invited to the Department of Mathematics, Chalmers University of Technology, Gothenburg, Sweden. Delivered lecture.	15.10.2019–16.10.2019
Invited to the Department of Chemistry and Chemical Engineering, Chalmers University of Technology, Gothenburg, Sweden.	15.10.2019–16.10.2019
Invited to the Department of Mathematics, University of Utrecht, the Netherlands.	28.12.2024–01.12.2024

Professional editing, refereeing and reviewing

Journals

Editor-in-Chief, *Journal of Mathematical Biology*	01.01.2009–31.12.2021
Editor-in-Chief, *Differential Equations and Applications*	01.07.2008–31.12.2016
Editor, *Journal of Mathematical Biology*	01.01.2000–31.12.2008
Member of the Editorial Board, *Journal of Biological Dynamics*	01.05.2006–
Member of the Editorial Board, *International Journal of Biomathematics*	01.07.2007–
Member of the Editorial Board, *Communications in Applied and Industrial Mathematics*	01.11.2009–
Member of the Editorial Board, *Archives of Control Sciences*	01.02.2011–
Reviewer, *Mathematical Reviews*	01.01.1987–31.12.1992
Coordinator, *Biomathematics Newsletter*	01.01.1987–31.12.1999

Academic Dissertations

Member of Evaluation committee, Dissertation of Uno Wennergren, Univerity of Linköping	15.01.1993
Opponent, Dissertation of Matti Laaksonen, University of Vaasa	21.11.1997
Opponent, Dissertation of S.A.H. Geritz, University of Leiden	06.01.1998
Referee, Dissertation of NourEddine ElHoussif, University of Marrakech	17.05.2001
Opponent, Dissertation of Erling Englund, University of Umeå	16.10.2001
Opponent, Dissertation of Fabiano Thompson, University of Gent	27.05.2003
Member of the reading committee, Dissertation of Tim Lant, Arizona State University	2004
Referee, Dissertation of Teemu Leppänen, Helsinki University of Technology	2004
Member of the reading committee, Dissertation of Peter Dawyndt, University of Gent	03.12.2004
Opponent, Dissertation of Peter Dawyndt, University of Gent	03.12.2004
Member of the reading committee, Dissertation of Philipp Getto, University of Utrecht	24.01.2005
Opponent, Dissertation of Philipp Getto, University of Utrecht	24.01.2005
Opponent, Dissertation of Mohamed Louihi, University of Marrakech	19.06.2006
Opponent, Dissertation of Barbara Boldin, University of Utrecht	05.09.2007
Referee, Dissertation of David John Sirl, The University of Queensland,	2007
Opponent, Dissertation of Michel Durinx, University of Leiden	15.10.2008
Opponent, Dissertation of Yang Ni, Mälardalen University	28.10.2011
Opponent, Dissertation of Alexander Sadykov, Oslo University	01.11.2011
Referee, Dissertation of Andrew Smith, The University of Queensland,	2014
Referee, Dissertation of Julia Sánchez Sanz, University of the Basque Country	2016
Opponent, Dissertation of Ka Yin Leung, University of Utrecht	27.06.2016

Research proposals

Turku University Foundation	1996 – 2003
University of Sena	1996
Swiss National Science Foundation	1996 – 1998
National Science Foundation, USA	1998 – 2002
Chilean Research Council	1998
Deutscher Akademischer Austauschdienst	1998 – 2000
Austrian Science Fund (FWF)	2002 – 2003
Swedish Foundation for Strategic Research	2000
European Science Foundation	2000 – 2003
The Dutch Science Foundation	2002 – 2003
The Swedish Research Council	2003 – 2016
Swedish International Development Cooperation Agency (SIDA)	2003
European Research Council (ERC)	2007 –2012
Estonian Research Council	2007 – 2015
Finnish Cultural Foundation	2013
Fonds pour la Recherche Scientifique – FNRS, Belgium	2017
Chairman of panel evaluating research proposals for the Hungarian Research Council	2024

Academic Positions

Professor of Mathematics, Drexel University	1987
Docent of Mathematics, Chalmers University of Technology	1991
Associate Professor of Mathematics, Luleå University of Technology	1991
Associate Professor of Mathematics, Luleå University of Technology	1991
Associate Professor of Mathematics, Luleå University of Technology	1992
Associate Professor of Mathematics, Luleå University of Technology	1992
Associate Professor of Mathematics and Computer Science, Umeå University	1992
Professor of Mathematics, South Florida University	1995
Professor of Statistical Science, University of Cambridge	1996
Associate Professor of Theoretical Biology, University of Skövde, Sweden	1997
Professor and Dean of the Donald Bren School of the Environmental Science and Management, University of California at Santa Barbara	2000
Professor of Mathematics, University of British Columbia	2000
Professor of Mathematics, Tampere University of Technology	2000
Associate Professor of Mathematics, University of Umeå	2000
Associate Professor of Bioinformatics, Chalmers University of Technology, Gothenburg, Sweden	2001
Professor of Mathematics, University of Jyväskylä	2002
Associate Professor of Applied Mathematics, University of Umeå	2003
Professor of Applied Mathematics, University of Umeå	2003
Professor of Mathematics, Sultan Qaboos University, Al-Khodh, Oman	2013
Docent of Mathematical Biology, Chalmers University of Technology	2014
Professor of Mathematics, Chalmers University of Technology	2014

University degree programmes, State and Quality of Scientific Research

Evaluation of the MSc and PhD programmes at the Faculty of Mathematics and Natural Sciences at the Åbo Akademi University, Turku, Finland	2004
Chairman of Committee evaluating the State and Quality of Scientific Research in Latvia	2013
Chairman of Committee evaluating the State and Quality of Scientific Research in Latvia	2020

Positions of Trust

Member of Faculty Board, Faculty of General Sciences, Helsinki University of Technology	01.01.1982–04.09.1983
Member of the Department Board, Department of Mathematics and Systems analysis, Helsinki University of Technology	01.01.1987–30.06.1987
Member of the Faculty Board, Faculty of Information Technology, Helsinki University of Technology	01.01.1987–31.12.1989
Head of Department of Applied Mathematics, University of Luleå	01.01.1990–31.07.1993
Member of Department Board, Department of Systems Engineering and Mathematics	01.09.1990–31.08.1993
Deputy member of Faculty Board, Faculty of Technology, University of Luleå	01.07.1990–30.06.1993
Deputy member of Appointments' Board, Faculty of Technology, University of Luleå	01.07.1990–30.06.1993
Elector, Swedish National Research Council for Technology	– 1990
Member of Nominating Committee, Swedish National Research Council for Technology	– 1990
Member of the Swedish National Committee for Mathematics	01.01.1991–31.12.1993
Elector, Swedish Natural Science Research Council	– 1992
Deputy member of the Department Board, Department of Mathematical Sciences, University of Turku	01.08.1993–31.07.1996
Member of the Department Board, Department of Mathematical Sciences, University of Turku	01.08.1996–31.12.2001
Member of the Department Board, Department of Mathematics, University of Turku	01.01.2002–31.07.2004
Member of Faculty Council, Faculty of Mathematics and Natural Sciences, University of Turku	01.02.1996–31.07.2001
Deputy Member of Faculty Council, Faculty of Mathematics and Natural Sciences, University of Turku	01.08.2001–31.07.2004
Vice Dean, Faculty of Mathematics and Natural Sciences, University of Turku	01.02.1996–31.07.1998
Member of the University Senate, University of Turku	01.02.1996–31.07.1998
Member of the Advisory Board, Medical Informatics Research Centre in Turku (MIRCIT)	10.04.1997–31.07.2004
Member of the Steering Group, Graduate School in Computational Biology, Bioinformatics, and Biometry (ComBi)	01.10.1997–
Member of The Research Council for Natural Sciences and Engineering of The Academy of Finland	01.01.1998–31.12.2003
Member of the Steering Group for the European Science Foundation Scientific Programme "Theoretical biology of adaptation"	01.01.1998–31.12.2001
Member of the Steering Group, Finnish Biodiversity Research Programme (FIBRE), Academy of Finland	01.01.1998–31.12.2003
Vice-chairman of the subcommittee for the Finnish Biodiversity Research Programme (FIBRE), Academy of Finland	01.01.1998–31.12.2003
Member of the Nordic Publishing Board in Science	01.01.1998–31.12.2000

Chairman of the Steering group, Finnish Research Program in Mathematical Modelling (MaDaMe), Academy of Finland	01.06.1999– 31.12.2003
Chairman of Committee Evaluating Finnish Mathematics, Academy of Finland	01.06.1999– 31.12.2000
Member of the Board of European Society for Mathematical and Theoretical Biology	15.11.1999– 31.12.2005
Member of the Advisory Board of the project "Stochastic modelling of insurance and financial processes and systems", The Foundation for Knowledge and Competence Development, Sweden	01.01.1999– 31.12.2005
Vice President of the European Society for Mathematical and Theoretical Biology	01.01.2000– 31.12.2002
President of the European Society for Mathematical and Theoretical Biology	01.01.2003– 31.12.2005
Member of the International Council for Industrial and Applied Mathematics (ICIAM)	01.01.2000– 31.12.2005
Member of the Council of the European Mathematical Society	01.01.2000– 31.12.2022
Vice-chairman of the Steering Group, Finnish Biodiversity Research Programme (FIBRE), Academy of Finland	01.01.2001– 31.12.2003
Vice-chairman of the Steering Group, Finnish Research Programme on Sustainable Use of Natural Resources (SUNARE), Academy of Finland	01.01.2001– 31.12.2003
Vice-chairman of the subcommittee for the Finnish Research Programme on Sustainable Use of Natural Resources (SUNARE), Academy of Finland	01.01.2001– 31.12.2003
Member of the European Science Foundation (ESF) Standing Committee for Physical and Engineering Sciences (PESC)	01.01.2001– 31.12.2003
PESC-representative in the European Science Foundation (ESF) Standing Committee for Life and Environmental Sciences (LESC)	01.04.2001– 31.12.2003
Member of the Advisory Board of the Centre of Excellence (Tampere University of Technology) "Signal Processing Algorithmic Group"	01.01.2000– 31.12.2001
Member of the Advisory Board of the Centre of Excellence (Helsinki University of Technology) "Neural Networks Research Centre and Laboratory of Computer and Information Science"	01.01.2000– 31.12.2001
Member of the Advisory Board of the Centre of Excellence (Helsinki University of Technology) "Research Centre of Computational Science and Engineering"	01.01.2000– 31.12.2001
Member of the Advisory Board of the Centre of Excellence (University of Jyväskylä) "Geometric Analysis and Mathematical Physics"	01.01.2002– 31.12.2003
Member of the prize jury for the Science Competition VIKSU	01.01.2001–31.12. 2003
Member of the Management Committee for the European Science Foundation Collaborative Research Programme (EUROCORES) on Self-Organised Nano-structures (SONS)	01.01.2002– 31.12.2003
Member of the Steering Group, Research Programme on Systems Biology and Bioinformatics, 2004-2007 (SYSBIO), Academy of Finland	01.01.2002– 31.12.2007

Member of the Finnish Advisory Board for the Sixth Framework Programme New and emerging science and technology (NEST)	01.12.2002–31.12.2007
Member of the Steering Group for the European Science Foundation Scientific Programme "Stochastic Systems: Fundamentals and Applications (STOCHDYN)"	01.01.2003–31.12.2008
Member of the Steering Group for the European Science Foundation Forward Look on Systems Biology	01.01.2004–31.12.2007
Member of the Steering Group of the OECD Global Science Forum "Mathematics in Industry",	01.09.2005–31.12.2009
Member of the Committee on Applied Mathematics of the European Mathematical Society	01.01.2006–31.12.2013
President of the Finnish Mathematical Society	13.03.2006–13.03.2011
Member of the Mathematics Evaluation Panel of the European Research Council (ERC)	01.01.2007–31.12.2012
Member of the Faculty Council, Faculty of Science, University of Helsinki	01.01.2007–31.12.2013
Vice Director, Department of Mathematics and Statistics, University of Helsinki	01.01.2007–30.09.2008
Member of the Scientific Council of the University of Helsinki	01.01.2007–31.12.2012
Member of Consultation Panel for Sonderforschungsbereich 786 "Mathematical Methods for Modelling, Simulation and Control of Biological Processes" of the German National Science Foundation	–16.02.2007
Member of the Delegation of Finnish Academies of Science and Letters	01.01.2008–31.12.2013
Inspector Nationis Aboensis	15.03.2008–31.12.2023
Member of the Steering Committee of the European Science Foundation Research Networking Programme *Frontiers of Speciation Research*	12.05.2008–11.05.2013
Member of the Nordic Committee for Applied and Industrial Mathematics (NORTIM)	01.07.2008–31.12.2015
Head of the Department of Mathematics and Statistics, University of Helsinki	01.10.2008–31.12.2018
Member of the Department Council, Department of Mathematics and Statistics, University of Helsinki	01.10.2008–31.12.2013
Chairman of the European Science Foundation (ESF) Standing Committee for Physical and Engineering Sciences (PESC)	01.01.2009–31.12.2012
Chairman of the European Science Foundation (ESF) Scientific Review Group of Physical and Engineering Sciences (SRG-PEN)	01.01.2013–31.12.2015
Member of the Steering Group of the Finnish Research Programme on Computational Science, Academy of Finland	01.01.2009–31.12.2018
Chairman of the review panel for the ESF-EMS-ERCOM (European Science Foundation, European Mathematical Society, European Research Centres on Mathematics) Research Conferences	01.01.2009–31.12.2015
Chairman of the review panel for the ESF-LFUI (European Science Foundation, Leopold-Franzens-Universität Innsbruck) Research Conferences	01.01.2009–31.12.2015

Vice Director of the Finnish Graduate School in Computational Sciences (FICS)	01.03.2009–31.12.2015
Member of the Scientific Advisory Board of the Heidelberg Graduate School of Mathematical and Computational Methods for the Sciences, Interdisciplinary Center for Scientific Computing, Ruprecht-Karls-Universität Heidelberg	01.01.2011–
Vice President of the Foundation of the Rolf Nevanlinna Institute	28.04.2011–17.02.2013
Chairman of the Expert Jury for the 2012 Latsis Prize in Mathematics	22.09.2011–29.11.2012
Representative of Finland in the Council of the International Institute for Applied Systems Analysis (IIASA)	12.10.2012–31.12.2014
President of the Foundation of the Rolf Nevanlinna Institute	17.02.2013–31.12.2016
Chair of the Membership Committee and Member of the Executive Committee of the International Institute for Applied Systems Analysis (IIASA)	11.11.2013–30.06.2015
Member of the Scientific Committee for Physical, Chemical and Mathematical Sciences of Science Europe	01.01.2015–31.12.2015
Treasurer and member of the Executive Committee of the European Mathematical Society	01.01.2015–31.12.2023
Member of the Board of Trustees of the European Mathematical Foundation	01.01.2015–31.12.2022
Member of the Board of the Finnish Society of Sciences and Letters (*Societas Scientiarum Fennica)*	29.04.2015–
Member of the Scientific Advisory Committee of Science Europe	01.01.2016–31.12.2020
Director of the Master's Programme Life Science Informatics (LSI) of the University of Helsinki	01.01.2016–31.12.2020
Member of the Scientific Committee for the European Year of Mathematical Biology 2018	01.01.2016–31.12.2018
Member of the Board of the Ruth and Nils-Erik Stenbäck Foundation	28.05.2019–
Member of the EASAC Council (European Academies Science Advisory Council)	01.01.2020–

Scientific committees of conferences

1. 21. Nordic Conference of Mathematicians, Luleå, 1992, Secretary of the Scientific committee, Chairman of the Organizing committee, Editor of Proceedings.
2. Sixth Finnish Conference on Industrial and Engineering Mathematics, Tampere, 1994, Member of the Scientific committee.
3. Conference on the "Future of numerical taxonomy", Helsinki, 1994, Chairman of the Scientific committee, Editor of Proceedings.
4. Biomathematics Days, Turku, Finland February 5–6, 1996, Chairman of Scientific Committee.
5. Conference on Dynamical Systems in Biology and Medicine, Veszprem, Hungary, July 17–20, 1996, Member of the Scientific committee.
6. Third European Conference on Mathematics Applied to Biology and Medicine, Heidelberg, October 6–11, 1996, Member of the Scientific committee.
7. Conference on Mathematical Models in Medical and Health Sciences, Vanderbilt University, Nashville, Tennessee, May 28–31, 1997, Member of the Scientific committee.
8. International Conference on Deterministic and stochastic modelling of biointeraction, Sofia, Bulgaria, 1997, Member of the Scientific committee, organizer of special session on metapopulation dynamics, Editor of Proceedings.
9. Programme in Population Dynamics, Gothenburg Stochastic Centre, April 1–May 31, 1998 and Workshop (May 11–15, 1998). Member of the Scientific Programme Committee.
10. ESF Workshop on Metapopulation Dynamics, April 15–18, 1999, Tvärminne zoological Station, Hanko, Finland. Chairman of the Scientific Committee.
11. Third Scandinavian–Ukrainian Conference of Mathematical Statistics, Kiev, Ukraine, June 21–25, 1999, Member of the Scientific committee.
12. International Congress on the Theory and Mathematics in Biology and Medicine, Amsterdam, June 29–July 3, 1999. Member of the Scientific committee.
13. Mathematics Days 2000, Turku, Finland, January 10–11, 2000. Chairman of the Scientific Committee.
14. International Conference on Deterministic and stochastic modelling of biointeraction (DESTOBIO 2000), Purdue University, July 2000, Member of the Scientific committee.
15. European Society for Mathematical and Theoretical Biology (ESMTB) Summer School on Spatial Structures in Biology and Ecology: Models and Methods. Martina Franca, Italy, September 4–15, 2000. Member of the Scientific committee, coordinator of course on Metapopulation dynamics.

16. European Science Foundation (ESF) Workshop on Adaptive Dynamics, Kevo Subarctic Research Institute, Utsjoki, Finland, January 7–12, 2001. Chairman of the Scientific committee.

17. Sixth International Conference on Mathematical Population Dynamics, Marrakech, Morocco, June 3–8, 2001. Member of the Scientific Programme Committee.

18. ESF Conference on Theoretical Biology of Adaptation, Hungary, September 2001, Member of the Scientific Committee. Organizer of symposium on "Co-evolution in symbiotic and exploiter-victim systems".

19. Fifth European Conference on Mathematical Modelling and Computing in Biology and Medicine, Milan, Italy, July 2–6, 2002. Vice Chairman of the Board. Organizer of symposium on Structured populations (with Odo Diekmann).

20. Shanghai International Symposium on Nonlinear Science and Applications, Shanghai, People's Republic of China, June 9–13, 2003. Member of the International Advisory Committee.

21. Seventh World Congress on Sleep apnea, Finlandia Hall, Helsinki June 30–July 3, 2003. Chairman of session on Mathematical modelling of sleep disordered breathing.

22. International Conference on Computational and Mathematical Population Dynamics, University of Trento, Italy, June 21–25, 2004, Member of the Scientific committee.

23. European Congress on Computational Methods in Applied Sciences and Engineering, Jyväskylä, Finland, July 24–28, 2004. Member of the Scientific Committee (Computational Methods in the Life Sciences).

24. Combining Classifiers for Phenotypic and Genotypic Data of Microorganisms — An international workshop, Het Pand, Gent, Belgium, December 2–3, 2004. Member of the Scientific Committee

25. Second Shanghai International Symposium on Nonlinear Science and Applications, Shanghai, People's Republic of China, June 3–7, 2005. Member of the International Advisory Committee.

26. International Conference on cellular and molecular biology, biophysics and bioengineering, Athens, Greece, July 15-17, 2005, Co-chairman of the scientific committee

27. European Science Foundation (ESF) Workshop on Adaptive Dynamics, Tvärminne zoological Station, Hanko, Finland, January 10-14, 2006. Member of the Scientific committee.

28. Marrakech World Conference on Differential Equations and Applications, Marrakech, Marocco, June 15–20, 2006. Member of the Scientific committee.

29. Fourth IEEE International Conference on Computational Cybernetics, Tallinn, Estonia, August 20–22, 2006. Member of the International Programme Committee for the Workshop on Multi-objective Cybernetics.

30. ECCOMAS Conference on Computational Fluid Dynamics, Egmond aan Zee, The Netherlands, September 5 - 8, 2006. Member of the Scientific Committee (Computational Methods in Life Sciences).

31. Fourth International Conference on Mathematical Biology, May 29-June 1, 2007, Wuyishan, Fujian Province, P. R. China. Member of the Scientific committee.

32. Third Shanghai International Symposium on Nonlinear Science and Applications, Shanghai and Hangzhou, People's Republic of China, June 6–10, 2007. Member of the International Advisory Committee.

33. Second Conference on Computational and Mathematical Population Dynamics (CMPD2), Campinas, Brazil, July 16–20, 2007. Member of the Scientific Committee

34. Mathematical Modeling and Analysis of Populations in Biological Systems, Tucson, Arizona, October 5–7, 2007. Member of the Scientific Steering Committee

35. Mathematics Days 2008, Espoo, Finland, January 3–4, 2008. Chairman of the Scientific Committee.

36. ECMI2008, June 30–July 4, 2008, London, UK. Member of the Scientific Committee.

37. Third joint Finnish-Estonian Conference on Mathematics. August 26–28, 2009, Tartu, Estonia. Member of the Scientific Committee

38. Mathematics Days 2010, Jyväskylä, Finland, January 4–5, 2010. Member of the Scientific Committee.

39. ECCOMAS CFD 2010 - Fifth European Conference on Computational Fluid Dynamics, Lisbon, Portugal, June 14 – 17, 2010. Member of the Scientific Committee.

40. Applications of membrane computing, concurrency and agent-based modelling in population biology, Jena, Germany, August 24–27, 2010. Member of the Scientific Committee.

41. First European Conference on Speciation Research, December 13-15, 2010, IIASA, Laxenburg, Austria. Member of the Scientific Committee.

42. Water: Unite and Divide. Interdisciplinary approaches for a sustainable future, Stresa, Italy August 27-30, 2012. Member of the Scientific Committee.

43. ECCOMAS (European Congress on Computational Methods in Applied Sciences and Engineering), September 10-14, 2012, Vienna, Austria. Member of the Scientific Committee.

44. Mathematics and biology: a roundtrip in the light of suns and stars, April 15-19, 2013, Lorentz Center, Leiden, The Netherlands. Member of the Scientific Committee. Member of the Organizing Committee.

45. Second European Conference on Speciation Research (SPECIATION 2013), May 27-29, 2013, Montpellier, France. Member of the Scientific Committee.

46. Fourth Conference on Computational and Mathematical Population Dynamics (CMPD4), Taiyuan, People's Republic of China, May 29-June 2, 2013. Member of the Scientific Committee. Organiser of Session on Adaptive dynamics

47. Annual meeting of the Society for Mathematical Biology, Tempe, Arizona, June 10-13, 2013. Member of the Scientific Committee.

48. 9th Conference of the European Society for Mathematical and Theoretical Biology, Gothenburg, Sweden, June 15-19, 2014. Member of the Scientific Committee.

49. 27th Nordic Congress of Mathematicians, Stockholm, Sweden, March 16 - 20, 2016. Member of the Scientific Committee.

50. The Year 2018 of Mathematical Biology. European Mathematical Society. Member of the Organising Committee.

51. Mathematics Days 2018: Joint European Mathematical Society Mathematical Weekend, Joensuu, Finland, January 4-5, 2018. Member of the Scientific Committee.

52. 11th Conference of the European Society for Mathematical and Theoretical Biology, Lisbon, Portugal, July, 23-27, 2018. Member of the Scientific Committee.

53. Research Program on Mathematical Biology, Institute Mittag-Leffler, Stockholm, Sweden, 3 September - 14 December 2018. Member of the Organising Committee.

54. First Nordic Biomathematics Days, Helsinki, Finland, 22-23 October 2019. Chairman of the Scientific Committee.

Consulting for industry

LKAB, Kiruna Sweden, On the geometry of drill-holes	1992
Partek, Pargas, Finland, Mathematical models for the solidification of concrete	1994

Professional organizations

Finnish Inverse Problem Society (Elected Member)	2000
Finnish Mathematical Society	
Finnish Society for Structural Mechanics	
Society for Mathematical Biology, Inc.	
American Mathematical Society	
Society for Industrial and Applied Mathematics (SIAM)	
Swedish Mathematical Society	
Finnish Society of Exact Sciences	
European Society for Mathematical and Theoretical Biology	

Major Research Grants (External Research Funding)

Finnish Department of Education, 18 000 NLG, Research in The Netherlands	01.10.1984– 30.6.1985
Magnus Ehrnrooth Foundation, 12 000 FIM, Research in The Netherlands	01.09.1984– 31.7.1985
Svenska tekniska vetenskapsakademien i Finland, 7 000 FIM, Research in The Netherlands	01.01.1988–31.12.1988
Academy of Finland, 20 700 FIM, Dynamics of structured populations	01.01.1989–31.12.1989
Academy of Finland, 120 242 FIM, Dynamics of structured populations with applications to cancer screening and cancer therapy	01.01.1990–31.12.1990
The Bank of Sweden Tercentenary Foundation, 984 000 SEK, Dynamics of structured populations with applications to medicine, ecology and demography	01.01.1991–31.12.1994
The Swedish Council for Forestry and Agricultural Research, 1 058 000 SEK, Mathematical modelling of size structured populations	01.01.1991–31.12.1995
The Swedish Cancer Foundation, 580 000 SEK, Optimization of breast cancer screening and radiotherapy	01.01.1991–31.12.1994
Swedish Royal Academy of Sciences, 100 000 SEK, Evolution equations and abstract integral equations	01.01.1991–31.12.1993
The Swedish Natural Science Research Council, 1 250 000 SEK, Mathematical modelling of metapopulation dynamics	01.01.1992–31.12.1997
Carl Trygger Foundation, 200 000 SEK, Dynamics of structured populations with applications to ecology	01.01.1993–31.12.1994
The Swedish Natural Science Research Council, 1 427 800 SEK, Scientific computing	01.01.1993–31.12.1993
Academy of Finland, 700 000 FIM, Population dynamics and numerical taxonomy	01.01.1995–31.12.1996
Niilo Helander Foundation, 40 000 FIM, Nonlinear dynamics	01.01.1995–31.12.1995
Academy of Finland, 104 000 FIM, Scientific computing	01.01.1996–31.12.1996
Academy of Finland, 128 820 FIM, Personal Grant	01.08.1996–31.07.1997
Academy of Finland, 600 000 FIM, Complex systems and their interdisciplinary application in science	01.10.1996–31.12.1999
Academy of Finland, 64 500 FIM, travel grant	19.02.1997–31.12.1997
Svenska tekniska vetenskapsakademien i Finland, 16 000 FIM, travel grant	01.01.1997–31.12.1997
Turun yliopistosäätiö, 19 000 FIM, population dynamics	01.01.1997–31.12.1997
Technology Development Centre (TEKES), 687 102 FIM, Bioinformational attack on superfamily modeling and drug discovery	01.01.1998–31.12.2000
Academy of Finland, 400 000 FIM, Mathematical modelling of biological systems	01.06.1998–31.12.2000
European Science Foundation, 100 000 FF Metapopulation Dynamics	01.01.1998–31.12.1998

Academy of Finland, 800 000 FIM, Bioinformatics and bacterial taxonomy	01.01.2000–31.12.2001
European Commission, 145 000 EUR, Modern life-history theory and its application to the management of natural resources	01.09.2000–31.12.2003
Academy of Finland, 1 775 400 FIM (jointly with Mark Johnson), Protein-ligand interactions: rules for molecular recognition from mathematical modeling of protein structural data	01.01.2002–31.12.2004
European Commission, 35 620 EUR, Developing a genomic toolbox for exploring and exploiting bacterial biodiversity (BACDIVERS)	01.01.2005–31.12.2005
Academy of Finland, 193 600 EUR, The mathematical theory of adaptive dynamics of structured populations	01.01.2005–31.12.2008
Academy of Finland, 211 200 EUR, Structure of the Attractor in Competitive Systems Motivated by Ecology and Evolution	01.01.2006–31.12.2009
Technology Industries in Finland Centennial Fund, 300 000 EUR (jointly with Antti Kupiainen and Lassi Päivärinta), Research and Education in Industrial Mathematics	01.01.2006–31.12.2008
Academy of Finland, 107 000 EUR, Stability and bifurcation analysis of models of structured populations,	01.08.2006–31.12.2007
Svenska tekniska vetenskapsakademien i Finland, 3 000 EUR, travel grant	01.06.2006–31.08.2006
Academy of Finland, 23 420 EUR, travel grant	23.04.2007–31.12.2007
Academy of Finland, Finnish Centre of Excellence in Analysis and Dynamics Research,	01.01.2008–31.12.2013
Academy of Finland, Finnish Centre of Excellence in Analysis and Dynamics Research,	01.01.2014–31.12.2019

Students

PhD

1.	Sven Öberg: Calculations of defect related properties of semiconductors	1992
2.	Torsten Lindström: Why do rodent populations fluctuate? Stability and bifurcation analysis of some discrete and continuous predator-prey systems	1995
3.	Luis Alvarez: Singular stochastic control and optimal stopping theory in mathematical finance, economics, and population biology	1997
4.	Kalle Parvinen: Adaptive metapopulation dynamics	2001
5.	Tero Aittokallio: Characterization and modelling of the cardiorespiratory system in sleep-disordered breathing (Awarded the Rolf Nevanlinna Prize for the best dissertation in Mathematics in Finland in 2001)	2001
6.	Tatu Lund : Mathematical models and algorithms of classification with application to microbial taxonomy	2001
7.	Nelly Noykova: Modelling and identification of microbial population dynamics in wastewater treatment	2002
8.	Ville-Veikko Rantanen: Mathematical modeling of molecular interactions	2004
9.	Ping Yan: Limit cycles for generalized Liénard-type and Lotka-Volterra systems	2005
10.	Arho Virkki: The Human Respiratory System: Modelling, Analysis and Control	2007
11.	Laura Elo: Computational strategies for dealing with incomplete information in gene expression microarray studies (Prize for the best PhD thesis in bioinformatics in Finland in 2007 awarded by the Finnish Society for Bioinformatics)	2007
12.	Antti Tanskanen: Mathematical models on the impact of noise and dyadic molecular structures on the properties of a cardiac myocyte	2008
13.	Hanna Eskola: Mechanistic population models in biology: Model derivation and application in evolutionary studies	2009
14.	Margarete Utz: Individuals On The Move - Body Condition Dependent Dispersal And Quasi-local Competition In Metapopulations	2010
15.	Tadeas Priklopil: Mate Choice and Speciation: Perspectives from Adaptive Dynamics and Population Genetics	2012
16.	Robert Service: Random steps in evolution and point processes	2012
17.	Chun Fang: Dimension of scrambled sets and the dynamics of tridiagonal competitive-cooperative system	2013
18.	Tuomas Nurmi: Adaptive Dynamics of Resource Specialization	2015
19.	Elina Numminen: Statistical studies on bacterial transmission and community dynamics	2015
20.	Johan Stén: A Comet of the Enlightenment. Anders Johan Lexell's Life and Discoveries	2015
21.	Helene Weigang: Coevolution of dispersal-related traits: modelling and analysis	2017
22.	Jaakko Toivonen: Patterns of Evolution over Different Timescales: An Adaptive Dynamics Approach	2017

23. Xiaoli Liu: Analysis of some dynamical systems inspired by ecological interactions 2017
24. Francesca Scarabel: Capture the past to portray the future: Numerical bifurcation analysis of delay equations, with focus on population dynamics 2018
25. Eugenia Franco: Integral and integro-differential equations with measure-valued solutions describing the evolution of structured populations 2022

Licentiate of Technology

Torsten Lindström: Predator-prey systems and application 1991
Stefan Ericsson: Analysis of two structured metapopulation models 1994

Licentiate of Philosophy

Hannu Lyyjynen: Optimization of screening for breast cancer 1996
Tuija Nopola: Simulation of particle motion in colloidal suspensions 2003

List of Publications

A. Peer-reviewed scientific articles

1. Gyllenberg, M.: A note on continuous dependence of solutions of Volterra integral equations, *Proc. Amer. Math. Soc.,* 81 (1981) 546–548.

2. Gyllenberg, M. and Salonen, E-M.: Three paradoxes in mechanics (in Finnish, English summary), Rakenteiden Mekaniikka (Journal of Structural Mechanics), 14 (1981), No. 3, 36–43.

3. Gyllenberg, M.: Nonlinear age-dependent population dynamics in continuously propagated bacterial cultures, *Math. Biosci.,* 62 (1982) 45–74.

4. Gyllenberg, M.: Stability of a nonlinear age-dependent population model containing a control variable, *SIAM J. Appl. Math.,* 43 (1983) 1418–1438.

5. Gyllenberg, M.: An age-dependent population model with applications to microbial growth processes. In *Modelling of patterns in space and time*, W. Jäger and J.D. Murray (Eds.), Springer Lecture Notes in Biomathematics, 55 (1984) 87–102.

6. Gyllenberg, M., Isomäki, H. and Salonen, E-M.: On the law of the parallelogram of forces, *Int. J. Mech. Eng. Educ.,* 12 (1984) 115–118.

7. Gyllenberg, M.: The age structure of populations of cells reproducing by asymmetric division. In *Mathematics in biology and medicine*, V. Capasso, E. Grosso and S.L. Paveri-Fontana (Eds.), Springer Lecture Notes in Biomathematics, 57 (1985) 320–327.

8. Gyllenberg, M.: The size and scar distributions of the yeast *Saccharomyces cervisiae*, *J. Math. Biol.,* 24 (1986) 81–101.

9. Gyllenberg, M. and Heijmans, H.J.A.M.: An abstract delay-differential equation modelling size dependent cell growth and division, *SIAM J. Math. Anal.,* 18 (1987) 74–88.

10. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme,H.R.: Perturbation theory for dual semigroups. I. The sun-reflexive case., *Math. Ann.,* 277 (1987) 709–725.

11. Gyllenberg, M. and Webb, G.F.: Age-size structure in populations with quiescence, *Math. Biosci.,* 86 (1987) 67–95.

12. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme, H.R.: Perturbation theory for dual semigroups. II. Time-dependent perturbations in the sun-reflexive case., *Proc. Royal Soc. Edinburgh,* 109A (1988) 145–172.

13. Gyllenberg, M.: Mathematical modelling of screening for breast cancer, in *Mastology* 88, L. Ionnidou-Mouzaka, M. Philippakis, P. Angelikis (Eds.), Elsevier, Amsterdam (1988) 79–84.

14. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme, H.R.: A Hille-Yosida theorem for a class of weakly* continuous semigroups, *Semigroup Forum,* 38 (1989) 157–178.

15. Gyllenberg, M. and Webb, G.F.: Quiescence as an explanation of Gompertzian tumor growth, *Growth, Development and Aging,* 53 (1989) 25–33.

16. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme, H.R.: Perturbation theory for dual semigroups III. Nonlinear Lipschitz continuous perturbations in the sun reflexive case. In *Volterra integro-differential equations in Banach spaces and applications*, Trento 1987, G. Da Prato and M. Iannelli (Eds.), Pitman research Notes in Mathematics Series, 190 (1989) 67–89.

17. Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M.: When are two C_0-semigroups related by a bounded perturbation? In *Trends in semigroup theory and applications*, Ph. Clément, S. Invernizzi, E. Mitidieri, I.I. Vrabie (Eds.), Marcel Dekker, (1989) 153–162.

18. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme, H.R.: Perturbation theory for dual semigroups IV. The intertwining formula and the canonical pairing., in *Trends in semigroup theory and applications*, Ph. Clément, S. Invernizzi, E. Mitidieri, I.I. Vrabie (Eds.), Marcel Dekker, (1989) 95–116.

19. Gyllenberg, M.: Screening for breast cancer – a structured population approach, In IMACS Transactions on Scientific Computation 1988, Vol 5. Biomedical systems modelling and simulation, J. Eisenfeld and D.L. Levine (Eds.), Balzer, Basel, (1989) 35–42.

20. Gyllenberg, M. and Webb, G.F.: A nonlinear structured cell population model of tumor growth with quiescence, *J. Math. Biol.,* 28 (1990) 671–694.

21. Gyllenberg, M. and Webb, G.F.: Quiescence in structured population dynamics: Applications to tumor growth, in *Mathematical Population Dynamics*, O. Arino, D. Axelrod, M. Kimmel (Eds.), Marcel Dekker, (1991) 45–62.

22. Diekmann, O., Gyllenberg, M., Thieme, H.R.: Perturbation theory for dual semigroups. V. Variation of constants formulas., in *Semigroup Theory and Evolution Equations*, Ph. Clément, E. Mitidieri, and B. de Pagter (Eds.), Marcel Dekker, (1991) 107–123.

23. Diekmann, O., Gyllenberg, M., Thieme, H.R.: Semigroups and renewal equations on dual Banach spaces with applications to population dynamics, in *Delay differential equations and dynamical systems*, S. Busenberg and M. Martelli (Eds.), Springer Lecture Notes in Mathematics, 1475 (1991) 116–129.

24. Gyllenberg, M. and Webb, G.F.: Asynchronous exponential growth of semigroups of nonlinear operators, *J. Math. Anal. Appl.,* 167 (1992) 443–467.

25. Gyllenberg, M. and Hanski, I.: Single-Species Metapopulation Dynamics: A structured model, *Theor. Pop. Biol.,* 42 (1992) 35–62.

26. Oksanen, T., Oksanen, L. and Gyllenberg, M.: Exploitation ecosystems in heterogeneous habitat complexes II: Impact of small-scale heterogeneity on predator prey dynamics, *Evolutionary Ecology,* 6 (1992) 383–398.

27. Hanski, I. and Gyllenberg, M.: Two general metapopulation models and the core-satellite species hypothesis, *Am. Naturalist,* 142 (1993) 17–41.

28. Diekmann, O., Gyllenberg, M. and Thieme, H.R.: Perturbing semigroups by solving Stieltjes renewal equations, *Differential and Integral Equations,* 6 (1993) 155–181.

29. Gyllenberg, M.: Does time lag of nutrient utilization justify Monod's model of bacterial growth?, *Bull. Math. Biol.,* 55 (1993) 487–489.

30. Gyllenberg, M., Söderbacka, G., and Ericsson, S.: Does migration stabilize local population dynamics? Analysis of a discrete metapopulation model, *Math. Biosci.,* 118 (1993) 25–49.

31. Gyllenberg, M., Gyllenberg, H.G., Koski, T., and Schindler, J.: Nonuniqueness of numerical taxonomic structures, *Binary Computing in Microbiology,* 5 (1993) 138–144.

32. Diekmann, O., Gyllenberg, M., Metz, J.A.J. and Thieme, H.R.: The "cumulative" formulation of (physiologically) structured population models, In *Evolution Equations, Control Theory and Biomathematics*, Ph. Clément and G. Lumer (Eds.), Marcel Dekker, New York, (1993) 145–154.

33. Gyllenberg, M., Högnäs, G., and Koski, T.: Population models with environmental stochasticity, *J. Math. Biol.,* 32 (1994) 93–108.

34. Gyllenberg, M., Koski, T., Reilink, E., and Verlaan, M.: Nonuniqueness in probabilistic numerical identification of bacteria, *J. Appl. Probability,* 31 (1994) 542–548.

35. Gyllenberg, M. and Silvestrov, D.S.: Quasi-stationary distributions of a stochastic metapopulation model, *J. Math. Biol.,* 33 (1994) 35–70.

36. Gyllenberg, M., Högnäs, G., and Koski, T.: Null recurrence in a stochastic Ricker model, In *Analysis, Algebra and Computers in Mathematical research*, Gyllenberg, M. and Persson, L.E. (Editors), Marcel Dekker, New York-Basel-Hong Kong, (1994) 147–166.

37. Diekmann, O. Gyllenberg, M., and Thieme, H.R.: Perturbing evolutionary systems by cumulative outputs and step responses, *Differential and Integral Equations,* 8 (1995) 1205–1244.

38. Gyllenberg, M. and Koski, T.: A taxonomic associative memory based on neural computation, *Binary Computing in Microbiology,* 7 (1995) 61–66.

39. Hanski, I., Moilanen, A. and Gyllenberg M.: Minimum viable metapopulation size, *Am. Naturalist,* 147 (1996) 527–541.

40. Gyllenberg, M., Osipov, A.V. and Söderbacka, G.: Bifurcation analysis of a metapopulation model with sources and sinks, *J. Nonlinear Science,* 6 (1996) 329–366.

41. Gyllenberg, M. and Koski, T.: Numerical Taxonomy and the Principle of Maximum Entropy, *Journal of Classification,* 13 (1996) 213–229.

42. Gyllenberg, M., Hanski, I. and Lindström T.: A predator-prey model with optimal suppression of reproduction in the prey, *Math. Biosci.,* 134 (1996) 119–152.

43. Gyllenberg, M., Koski, T., Reilink E. and Verlaan, M.: Probabilistic aspects of numerical identification in microbiology, In *Frontiers in Pure and Applied Probability*, Shiryaev, A.N, Melnikov, A.V., Niemi, H. and Valkeila, E. (Eds.), Moscow: TVP Science Publishers, (1996) 67–78.

44. Gyllenberg, M., Hanski, I. and Lindström T.: Continuous versus discrete single species population models, *Bull. Math. Biol.,* 59 (1997) 679–705.

45. Gyllenberg, M., Koski, T. and Verlaan, M.: Classification of binary vectors by stochastic complexity, *Journal of Multivariate Analysis,* 63 (1997) 47–72.

46. Hanski, I. and Gyllenberg, M.: Uniting two general patterns in the distribution of species, *Science,* 275 (1997) 397–400.

47. Gyllenberg, H.G., Gyllenberg, M., Koski, T., Lund, T., Schindler, J., and Verlaan, M.: Classification of *Enterobacteriaceae* by minimization of stochastic complexity, Microbiology, 143 (1997) 721–732.

48. Gyllenberg M. and Hanski, I.: Habitat deterioration, habitat destruction and metapopulation persistence in a heterogeneous landscape, *Theor. Pop. Biol.,* 52 (1997) 198–215.

49. Gyllenberg, M., Hanski, I. and Hastings, A.: Structured metapopulation models, In *Metapopulation dynamics: Ecology, genetics and evolution* (I. Hanski and M. Gilpin, eds.), Academic Press, London, (1997) 93–122.

50. Diekmann, O., Gyllenberg, M., Metz, J.A.J. and Thieme, H.R.: On the formulation and analysis of general deterministic structured population models. I. Linear theory, *J. Math. Biol,* 36 (1998) 349–388.

51. Gyllenberg, M., Osipov A.V., and Söderbacka, G.: —ffekt sohraneniq attraktora pri dwumernom wozmu]enii, Differencialxnye Urawneniq, 33 (1997) 859–860. English Translation in *Differential Equations.*

52. Persson, L., Leonardsson, K., de Roos, A., Gyllenberg, M. and Christensen, B.: Ontogenetic Scaling of Foraging Rates and the Dynamics of a Size-Structured Consumer-Resource Model, *Theoretical Population Biology,* 54 (1998) 270–293.

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B. Non-refereed scientific articles

199. Gyllenberg, M.: Age dependent population dynamics in continuously propagated bacterial cultures, Helsinki Univ. Tech. Inst. Mech. Report 8 (1981).

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201. Gyllenberg, M.: On the determination of transfer functions of geomagnetic induction, Helsinki Univ. Tech. Inst. Mech. Report 17 (1984).

202. Gyllenberg, M.: A functional partial differential equation of hyperbolic type modelling cell growth and division, *Proceedings of the 11th IMACS world congress on system simulation and scientific computation.* Oslo (1985), Vol 1, 91–94.

203. Clément, Ph., Diekmann, O., Gyllenberg, M., Heijmans, H.J.A.M., Thieme, H.R.: Semigroupes d'operateurs sur le dual d'un espace de Banach , Delft University of Technology (1987).

204. Gyllenberg, M.: A mathematical model for the age-size-structure of firms, CIM-WP 1988–01, Chalmers University of Technology (1988).

205. Gyllenberg, M. and Gästrin, G.: A patient-age, tumour-size structured model for detection and mortality of female breast cancer, *Proceedings of the 12th IMACS world congress on scientific computation*, Paris (1988), Vol 4, 109–112.

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209. Gyllenberg, M. and Koski, T.: A taxonomic associative memory of most typical organisms based on neural computation, University of Turku, Institute of Applied Mathematics, Research Reports A4, ISSN 1237–2862, (1994).

210. Gyllenberg, M., Koski, T. and Verlaan, M: Clustering and Quantization of Binary Vectors Using Stochastic Complexity, In *Proceedings of the IEEE International Symposium on Information Theory,* (1994), p. 390.

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213. Gyllenberg, M. and Silvestrov, D.S.: Exponential asymptotics for perturbed renewal equations and pseudo-stationary phenomena for stochastic systems, Umeå University, Department of Mathematical Statistics, Research Report 3 (1997), ISSN 1401–730X.

214. Gyllenberg, M. and Koski, T.: Posterior predictive distributions for classification of multivariate binary data, University of Turku, Institute of Applied Mathematics, Research Reports A21, ISSN 1237–2862, (1998).

215. Gyllenberg, M. and Silvestrov, D.S.: Quasi-stationary phenomena in semi-Markov models, *Proceedings of the Second International Symposium on Semi-Markov Models: Theory and Applications,* J. Janssen and N. Limnios (Eds.), Université de Technologie de Compiègne (1998), pp. 87–93.

216. Alvarez, L.H.R., Gyllenberg, M., and Shepp, L.A.: Optimal harvesting in the presence of density dependent extinction probabilities, TUCS Technical Report 431 (2001) 1-25.

217. Gyllenberg, M. and Koski, T.: Tree augmented classification of binary data minimizing stochastic complexity, University of Linköping, LiTH-MAT-R-2002–04, (2002).

218. Kisdi, E. and Gyllenberg, M.: On some misconceptions about adaptive dynamics, Turku Centre for Computer Science, TUCS Technical Report 264 (2004).

219. Gyllenberg, M.: Stability and bifurcation analysis of models of physiologically structured populations, *Mathematisches Forschungsinstitut Oberwolfach Reports* 3 (2006) 1450–1452.

220. Fagerholm, H. Gyllenberg, M. and Högnäs, G.: Competition and invasion in stochastic population models, Åbo Akademi, Reports on Computer Science & Mathematics, Ser. A, No 191 (2007).

221. Gyllenberg, M.: Equations with infinite delay, *Mathematisches Forschungsinstitut Oberwolfach Reports* 6 (2009) 1350–1352.

C. Scientific books

222. Gyllenberg, M. and Persson, L.E. (Editors), *Analysis, Algebra and Computers in Mathematical Research*, Marcel Dekker, New York-Basel-Hong Kong, 1994, 408 pages.

223. Gyllenberg, M. and Koski, T. (Editors): *The Future of Numerical Taxonomy,* Special Issue of Binary, Binary 7, (1995), 29–76.

224. Agur, S., Cushing, J., Diekmann, O., Gyllenberg, M., Heesterbeek, H., Jagers, P., Kimmel, M., Kostova, T. and Milner, F. (Editors): *Epidemiology, Cellular Automata, and Evolution.* Special issue of *Mathematical Biosciences,* 156 (1999), No. 1–2, pp. i–viii, 1–342.

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226. Gyllenberg, M. and Silvestrov, D.S.: *Quasi-Stationary Phenomena in Nonlinearly Perturbed Stochastic Systems,* Expositions in Mathematics, de Gruyter, Berlin–New York, 2008. 579 + ix pages.

227. Gyllenberg, M., Langlais, M., Milner, F.: Special issue: Mathematics in Biointeractions, *Journal of Theoretical Biology,* 258 (2009) 337–488.

228. Aminoff, E.-I. and Gyllenberg, M.: A life in science and society - A bibliography of Helge Gyllenberg 1945-2013, Unigrafia Oy, Helsinki, 2013. 81 pages. ISBN 978-952-10-9678-5 (paperback), ISBN 978-952-10-9679-2 (PDF).

E. Publications intended for the general public, linked to my research

229. Gyllenberg, M.: Pure and applied mathematics at technical universities, Inaugural lecture, Luleå University of Technology (in Swedish, English Summary), ISSN 1101–6582, (1991).

230. Gyllenberg, M.: Mathematics as the language of science, Inaugural lecture, University of Turku (in Finnish, English Summary), Arkhimedes, No. 3, (1994), 230–238.

231. Gyllenberg, M.: About citing and being cited (in Swedish: Om att citera och bli citerad), Arkhimedes, No 2. (2005), 35.

232. Gyllenberg, M.: To publish or not to publish (in Swedish: Att publicera eller inte publicera), Arkhimedes, No 4. (2005), 31.

233. Gyllenberg, M.: Sudoku (in Swedish), Arkhimedes, No 6. (2005), 31.

234. Gyllenberg, M.: The leaning tower of PISA (in Swedish: Det lutande tornet i PISA), Arkhimedes, No 2. (2006), 27.

235. Gyllenberg, M.: Stupid design (in Swedish: Korkad formgivning), Arkhimedes, No 4. (2006), 31.

236. Gyllenberg, M.: The tragedy of the commons (in Swedish: Allmänningens tragedi), Arkhimedes, No 6. (2006), 27.

237. Gyllenberg, M.: The most mathematical language in the world (in Swedish: Världens matematiskasta språk), Arkhimedes, No 2. (2007), 35.

238. Gyllenberg, M:: Success stories in biomathematics (in Finnish: Biomatematiikan menestystarinoita), Arkhimedes, No 3. (2007), 26-28.

239. Gyllenberg, M.: Where do we put the limit? (In Swedish: Var skall man dra gränsen?), Arkhimedes, No 4. (2007), 31.

240. Gyllenberg, M.: Free access - for everyone (in Swedish: Fri tillgång — för alla), Yliopisto, No 3. (2008), 57.

241. Gyllenberg, M.: Names, too, can be translated (in Swedish: Också namn kan översättas), Arkhimedes, No 2. (2008), 35.

242. Gyllenberg, M.: Rolls and biographies (in Swedish: Matriklar och biografier), Arkhimedes, No 4. (2008), 35.

243. Gyllenberg, M.: A letter means so much... (in Swedish: Ett brev betyder så mycket...), Arkhimedes, No 6. (2008), 35.

244. Gyllenberg, M.: Everyday mathematics (in Swedish: Vardagsmatematik), Yliopisto, No 2. (2009), 37.

245. Gyllenberg, M.: The blackboard – and the smartboard (in Swedish: Svarta tavlan – och den smarta), Yliopisto, No 9. (2009), 54.

246. Gyllenberg, M.: The herbarium contains much more than plants (in Swedish: Herbariet rymmer inte bara växter), Arkhimedes, No 4. (2009), 31.

247. Gyllenberg, M.: Helge Gyllenberg — Minnestal hållet vid Finska Vetenskaps-Societetens sammanträde den 20 februari 2017, pp. 128-133 in J. Janhunen (ed.): SPHINX Yearbook 2016 - 2017, *Societas Scientiarum Fennica*, Helsinki 2017.

248. Gyllenberg,M: Olli Lehto — Muistopuhe Suomen Tiedeseuran kokouksessa 16. toukokuuta 2022, pp. 154-158 in J. Janhunen (ed.): SPHINX Yearbook 2022 - 2023, *Societas Scientiarum Fennica*, Helsinki 2023.

249. Gyllenberg,M: Pirjo Sevón — Muistopuhe Suomen Tiedeseuran kokouksessa 15. tammikuuta 2023, pp. 130-1132 in J. Janhunen (ed.): SPHINX Yearbook 2023 - 2024, *Societas Scientiarum Fennica*, Helsinki 2024.

250. Bengmark, S., Gyllenberg, M., Klefbäck, I., Nordén, B.: När lärare premieras måste fokus vara på undervisningsförmåga, Göteborgs-Posten, 20 november 2024.

G. Thesis

251. Gyllenberg, M.: *Dynamics of Structured Populations,* Thesis for the degree of Doctor of Technology. Helsinki University of Technology, Institute of Mechanics, Report 23, Espoo, Finland (1987), ISBN 951-754-127-9.

I. Audiovisual material and ICT software

252. Radio lecture on "Chaos in Population Biology", 25 minutes, Radio Aurora (7.4.1997).

253. Gyllenberg, M., Koski, T., and Lund, T.: BinClass: A Software Package for Classifying Binary Vectors. User's Guide. TUCS Technical Report 411, (2001).

K. Conference abstracts

254. Workshop on modelling of patterns in space and time, Heidelberg, Federative Republic of Germany, July 4–8, 1983.
Contributed talk: An age-dependent population model with applications to microbial growth processes.

255. Mathematics in biology and medicine, an international conference, Bari, Italy, July 18–22, 1983.
Contributed talk: The age structure of populations of cells reproducing by asymmetric division.

256. Mathematical models in biology, Oberwolfach, Federative Republic of Germany, December 2–8, 1984.
Invited talk: A size structured model for the growth, budding and scar class distribution of the yeast *Saccharomyces cerevisiae.*

257. 11th IMACS world congress on system simulation and scientific computation, Oslo, Norway, August 5–9, 1985.
Invited talk: A functional partial differential equation of hyperbolic type modelling cell growth and division.

258. International conference on differential equations and mathematical physics, Birmingham, Alabama, USA, March 2–8, 1986.
Invited talk: Perturbation of dual semigroups and semilinear evolution equations.

259. Texel workshop on models for physiologically structured populations, Den Burg, The Netherlands, September 1–5, 1986.
Invited talk: An age-size structured model for populations with quiescence.
Discussion outline: Open problems in population models with several variables.

260. Conference on Volterra integro-differential equations in Banach spaces and applications, Trento, Italy, February 2–7, 1987.
Invited talk: Time-dependent perturbations of dual semigroups.

261. Mathematical models in biology, Oberwolfach, Federative Republic of Germany, March 15–21, 1987.
Invited talk: Age-size structure in populations with quiescence.

262. Trends in semigroup theory and applications, Trieste, Italy, September 28–October 2, 1987.
Contributed talk: When are two C_0-semigroups related by a bounded perturbation?

263. First European Congress on Senology, Athens, Greece, March 27–30, 1988.
Participated in Round Table Discussion "Mass screening" with the talk "Mathematical modelling of screening for breast cancer".

264. Geoffrey J. Butler Memorial Conference on differential equations and population dynamics, Edmonton, Alberta, June 20–25, 1988.
Contributed talk: Optimal screening for breast cancer.

265. 12th IMACS world congress on system simulation and scientific computation, Paris, France, July 18–22, 1988.
Invited talk: A patient-age, tumour-size structured model for detection and mortality of female breast cancer.

266. ESF Workshop on Theoretical Ecology. Tackling variability, Helsinki, Finland, September 17–21, 1988.
Invited

267. Annual meeting of the American Mathematical Society, Phoenix, Arizona, USA, January 1989.
Contributed talk: A structured cell population model of tumor growth with quiescence. Preliminary report. (with G.F. Webb)

268. Conference on Mathematical models for Infectious diseases, Oberwolfach, Federal Republic of Germany, February, 5–11, 1989.
Invited.

269. Second International Conference on Mathematical Population Biology, Rutgers University, New Brunswick, New Jersey, May 17-20, 1989.
Contributed talk: Quiescence as an explanation of Gompertzian tumor growth.

270. International Conference on Differential Equations and Applications, Retzhof, Austria, June 18–24, 1989.
Invited talk: A nonlinear structured population model with quiescence.

271. SIAM Nordic Section Meeting, Helsinki, Finland, August 27–30, 1989.
Contributed talk: A structured cell population model for tumor growth.

272. Second international conference on Trends in semigroup theory and applications, Delft, the Netherlands, September 25–29, 1989.
Contributed talk: A nonlinear semigroup arising in a model of tumor growth.

273. International Conference on Differential Equations and Applications to Biology and Population Dynamics, Claremont, California, January 10–13, 1990.
Invited talk: Semigroups and renewal equations on dual Banach spaces with applications to population dynamics.

274. Eighth Nordic Conference on Teaching of Mathematics at Universities of Technology, Luleå, Sweden, June 18–20, 1990.
Invited talk: Mathematical modelling of biological systems – an example of how current research can be presented in undergraduate courses

275. Third Autumn Course on Mathematical Ecology, International Centre for Theoretical Physics (UNESCO), Trieste, Italy, October 29–November 16, 1990.
Invited lecture: A structured metapopulation model.

276. Workshop on Functional Analytic Methods for Structured Population Models, Woudschoten, The Netherlands, November 19 - 23, 1990.
Invited lecture: Integral equations and evolutionary systems on dual Banach spaces with applications to population dynamics.

277. First European Conference on Mathematics Applied to Biology and Medicine, Grenoble, France, January 7–11, 1991.
Contributed talk: A nonlinear structured metapopulation model.

278. Conference on Differential Equations in Banach Spaces, Bologna, Italy, July 1–5, 1991.
Contributed talk: Perturbing semigroups by solving abstract Stieltjes renewal equations.

279. International Conference on Differential Equations, Marrakech, Morocco, September 11–14, 1991.
Invited talk: Dual semigroups, Stieltjes renewal equations, and population dynamics.

280. Third International Conference on Evolution Equations, Control Theory and Biomathematics, Han-sur-Lesse, Belgium, October 20–26, 1991.
Invited Lecture: Cumulative output, step response and perturbation of semigroups.

281. Mathematical Problems in environmental protection and ecology, Trento, Italy, December 9–3, 1991.
Invited Lecture: Mathematical problems in the dynamics of metapopulations.

282. 21st Nordic Congress of Mathematicians, Luleå, Sweden, June, 8–12, 1992.
Secretary General of the Congress.
Contributed talk: Null recurrence in a stochastic Ricker model.

283. First European Congress of Mathematicians, Paris, France, July, 6–10, 1992.

284. First World Congress of Nonlinear Analysts, Tampa, Florida, August, 19–26, 1992.
Invited talk: The cumulative formulation of nonlinear structured population dynamics.

285. Symposium on Nonlinear Analysis and Biological Modeling, University of Arizona, Tempe, October 13–4, 1992.
Invited talk: Structured metapopulation dynamics.

286. SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, October 15–19, 1992.

287. Second Autumn Workshop on Mathematical Ecology, International Centre for Physics (UNESCO), Trieste, Italy, November 2–20, 1992.
Invited lecture: The cumulative formulation of structured population models.

288. Nordic Colloquium on Ecology (NCE) course on Chaos and Population Dynamics, Tvärminne Zoological Station, Finland, November 30–December 5, 1992.
Invited lecture 1: Chaos in simple models.

Invited lecture 2: Migration among chaotic local populations.

289. CNRS conference on dynamics of metapopulations, Pau, France, December 14–15, 1992.
Invited lecture: The metapopulation concept: from facts to dynamic models.

290. LSU Conference on Evolution Equations, Baton Rouge, Louisiana, January 7–11, 1993.
Invited talk: Abstract Stieltjes renewal equations of nonconvolution type and evolutionary systems.

291. Symposium on "dispersal of individuals and population dynamics in patchy environments", University of Uppsala, Sweden, March 17–18, 1993.
Contributed talk: Does migration stabilize and synchronize local population dynamics?

292. 22nd Conference on Stochastic Processes and their Applications, Vrije Universiteit, Amsterdam, The Netherlands, June 21–25, 1993.
Contributed talk: Stochastic Ricker Models.

293. Second European Conference on Mathematics Applied to Biology and Medicine, Lyon, France, December 15–17, 1993.
Invited lecture: Quasi-stationary distributions of a stochastic metapopulation model.

294. First Nordic Nonlinear Days, Helsinki, Finland, January 12–14, 1994.
Contributed talk: Synchronization and Stabilization in Coupled Logistic Equations.

295. Structured population models and their applications. Lecture, seminar and discussion meeting, Vrije Universitet, Amsterdam, The Netherlands, March 11, 1994.
Invited lecture: Effects of Ontogenetic Scaling on the Dynamics of a Size-Structured Consumer-Resource Model.

296. International Conference on differential equations and applications to biology and industry, Claremont, California, June 1–4, 1994.
Invited lecture: The cumulative formulation of nonlinear structured population dynamics.

297. International Conference on Evolution Equations, University of Strathclyde, Glasgow, Scotland, July 25–29, 1994.
Invited lecture: Modelling structured populations with abstract integral equations.

298. European Science Foundation Workshop on Ecology and genetics in spatially structured populations, Tvärminne Zoological Station, Tvärminne, Finland, September, 3–7, 1994.
Invited lecture: Habitat destruction and metapopulation persistence in a heterogeneous landscape.

299. Workshop on the Future of Numerical Taxonomy, University of Helsinki, Institute of Biotechnology, Helsinki, Finland, September 23–25, 1994.
Chairman of the Scientific committee.
Lecture: On the mathematical foundations of numerical taxonomy.

300. Conference on Mathematical models for Infectious diseases, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, November 27–December 3, 1994.

Invited talk: Minimum viable size of a metapopulation subject to an infectious disease.

301. Winter School on Integral Equations, Paseky, Czech Republic, December 4–10, 1994
Invited lecturer. Series of three lectures on "Abstract integral equations and population dynamics".

302. Annual meeting of the Finnish Mathematical Society, Vaasa, Finland, January 9–10, 1995.
Invited plenary lecture: Why and how to avoid abstract differential equations.

303. The fourth Nordic Meeting on Metapopulations and Spatially Structured Populations, Swedish University of Agricultural Sciences, Uppsala, Sweden, March 16–17, 1995.
Invited talk: Minimum viable metapopulation size.

304. Workshop on Epidemic Spread and Population Dynamics, Mittag-Leffler Institute, Stockholm, Sweden, May 2–5, 1995.
Invited talk: Climbing the last few meters of the mountain where Peter Jagers happened to be born.

305. Fourth International Conference on Mathematical Population Dynamics, Rice University, Houston, Texas, May 23–27, 1995.
Invited talk: Adjustable reproductive strategies and predation.

306. Sixth International Colloquium on Differential Equations, Plovdiv, Bulgaria, August 18–23, 1995.
Invited address: Modelling structured populations.

307. Workshop on Population Dynamics, Leiden, The Netherlands, November 4, 1995.
Invited talk: Why do animals live in barren habitats? Analysis of a discrete metapopulation model.

308. Nordic MATLAB Conference'95, Stockholm, Sweden, October 31– November 1, 1995.
Contributed talk: Associative memories for clusters of binary vectors using MATLAB^{TM} Neural Network Toolbox.

309. Biomatematiikan päivät (Finnish Biomathematics Days), Turku, Finland, February 5–6, 1996.
Chairman of Scientific Committee.
Talk 1: Classification of *Enterobacteriaceae* by minimization of Stochastic complexity.
Talk 2: Modelling structured populations.

310. Conference on spatio-temporal dynamics in ecological systems, National Center for Ecological Analysis and Synthesis, Santa Barbara, California, February 28–March 1, 1996.
Invited talk: Structured metapopulation models.

311. Symposium on mathematical biology, University of Linköping, Sweden, April 18–19, 1996.
Invited lecture: Mathematics and biology in cross-fertilization.

312. Euroconference in Mathematics on Crete: Different approaches to population dynamics, Anogia, Greece, June 30–July 6, 1996.
Series of invited lectures: Structured metapopulation dynamics.

313. Conference on Dynamical Systems in Biology and Medicine, Veszprem, Hungary, July 17–20, 1996.
Member of the Scientific Committee.
Invited address: Dynamics of metapopulations.

314. Conference on adaptive dynamics, Matrahaza, Hungary, August 25–31, 1996.
Invited lecture: Predator-prey interaction with suppression of reproduction in the prey.

315. Third European Conference on Mathematics Applied to Biology and Medicine, Heidelberg, Germany, October 6–10, 1996.
Member of the Scientific Committee.

316. European Science Foundation Conference on Theoretical Biology, Backagården, Sweden, October 17–19, 1996.
Invited lecture: Types of nonlinearity to which mathematicians should pay attention.

317. Mathematische Modelle in der Biologie, Oberwolfach, Germany, October 20–26, 1996.
Invited talk: Structured metapopulation models.

318. Annual meeting of the Dutch Society of Theoretical Biology, Texel, The Netherlands, February 20–21, 1997.
Invited lecture: On the distribution of species.

319. Meeting of The Swedish Mathematical Society, Växjö, Sweden, March 14–15, 1997.
Invited lecture: Modelling in Natural Sciences – A challenge for mathematicians.

320. Workshop in Medical Statistics, Gothenburg, April 7–11, 1997.
Invited plenary lecture: Classification of bacteria by stochastic complexity.

321. Mathematical Models in Medical and Health Sciences, Vanderbilt University, Nashville, Tennessee, May 28–31, 1997.
Member of the Scientific Committee.

322. Mathematics inspired by biology, CIME Summer School, Martina Franca, Italy, June 12–21, 1997.
Invited talk: The mathematical theory of bacterial taxonomy.

323. International Conference on Deterministic and Stochastic Modelling of Biointeraction, Sofia, Bulgaria, August 28–31, 1997
Member of the Scientific Committee.
Organizer of special session on metapopulation dynamics.
Invited plenary lecture: On the mathematical theory of structured populations.

324. Conference on Mathematical and Statistical Problems in Biology, October 21, 1997, University of Umeå, Sweden.
Invited lecture: Structured metapopulation models and current issues in ecology.

325. Workshop on adaptive dynamics, University of Leiden, January 6, 1998.
Invited lecture: Adjustable reproductive strategies under predation.

326. Winter School on Population Dynamics, Woudschoten, The Netherlands, January 7–11, 1998.
A series of five invited lectures on metapopulation dynamics.

327. Programme in Population Dynamics, Gothenburg Stochastic Centre, April 1–May 31, 1998 and Workshop (May 11–15, 1998).
Invited lecture 1: On the mathematical formulation of structured population dynamics.
Invited lecture 2: Metapopulation dynamics and current issues in ecology.
Member of the Scientific Programme Committee.

328. Fifth International Conference on Mathematical Population Dynamics, Zakopane, Poland, June 21–26, 1998.
Invited plenary address: Continuous versus discrete population models.

329. SIAM Annual Meeting, University of Toronto, Canada, July 13–17, 1998.

330. Biodiversity and Decision Making: Biological and Socio-Economic Perspectives University of Turku, Finland, August, 24–26, 1998.
Contributed talk: Habitat destruction and metapopulation persistence in a heterogeneous landscape – The role of mathematics in decision making.
Member of the Steering Committee.

331. Sixth International Conference on Evolution Equations and Their Applications in Physical and Life Sciences, Bad Herrenalb, Germany, September 14–19, 1998.
Invited plenary lecture: The mathematical foundations of nonlinear structured population dynamics.

332. Workshop on Evolution of Dispersal, Tvärminne Zoological Station, Finland, October 15–19, 1998.
Invited talk: Adaptive metapopulation dynamics and the evolution of dispersal.

333. ESF workshop on Evolutionary Conservation Biology: Adaptive Responses to Environmental Threats – From Individuals to Ecosystems. IIASA, Laxenburg, Austria, December 13–15, 1998.
Invited talk: Metapopulation viability analysis.

334. Winter school on Mathematical Modelling in Biology, Ecole Normale Supérieure, Paris, January 25–February 4, 1999.
A series of 4 invited lectures on structured metapopulation dynamics.

335. Workshop on Adaptive Dynamics of Pathogens and Immune Responses, Ecole Normale Supérieure, Paris, January 29–30, 1999.
Invited Lecture: On the definition of fitness in a metapopulation.

336. ESF Workshop on Metapopulation Dynamics, Tvärminne Zoological Station, Finland, April 15–18, 1999.
Chairman of Scientific Committee.
Invited talk: Structured metapopulation dynamics: Mathematical challenges.

337. IMA workshop on Mathematical Approaches for Emerging and Re-emerging Infectious Diseases, Institute for Mathematics and its Applications, Minneapolis, Minnesota, May 17–21, 1999.
Invited Plenary Lecture: On fitness in structured metapopulation models with an application to epidemics.

338. Third Scandinavian - Ukrainian Conference of Mathematical Statistics, Kiev, Ukraine, June 7–12, 1999.
Invited plenary address: Bayesian predictive identification and cumulative classification.
Member of the Scientific committee.

339. Second International School on Actuarial and Financial Mathematics, Kiev, Ukraine, June 7–12, 1999.
A series of two invited lectures on Cramér-Lundberg approximation for nonlinearly perturbed risk processes.

340. International Congress on the Theory and Mathematics in Biology and Medicine, Amsterdam, June 29–July 3, 1999.
Member of the Scientific committee.
Invited talk: Cumulative classification of bacteria.

341. The 52nd Session of the International Statistical Institute, Helsinki, Finland, August 10–18, 1999.
Contributed talk: Cramér-Lundberg and diffusion approximations for nonlinearly perturbed risk processes.

342. Spatial Ecology Conference on Habitat Loss: Ecological, Evolutionary and Genetic Consequences, Helsinki, Finland, September 7–12, 1999.
Invited talk: The consequences of habitat loss in structured metapopulations .

343. Opening seminar of the Jyväskylä Center for Mathematical and Computational Modeling, Jyväskylä, Finland, September 27, 1999.
Invited talk: Mathematics as the language of biology (in Finnish).

344. Mathematische Biologie, Mathematisches Forschungsinstitut Oberwolfach, Oberwolfach, Germany, October 24–30, 1999.
Invited talk: Lack of uniqueness in structured population models.

345. Winter school on Mathematical Modelling in Biology, Ecole Normale Supérieure, Paris, January 24–February 3, 2000.
A series of 6 invited lectures on structured population dynamics.

346. Symposium on Recent Advances in Mathematical Ecology and Evolutionary Theory, Ecole Normale Supérieure, Paris, France January 28, 2000.
Invited lecture: Probabilistic classification and identification of bacteria.

347. Fourth Annual International Conference on Computational Molecular Biology (RECOMB 2000), Tokyo, Japan, April 8 - 11, 2000.

348. Workshop in Bioinformatics and Statistical Genetics, Gothenburg, Sweden, May 9–13, 2000.
Invited talk (T. Koski and M. Gyllenberg): A model for predictive mixtures and for classification of sequences.

349. Nordic Symposium on Computational Biology 2000, 18–23 June 2000, Agora for Biosystems, Sigtuna, Sweden.
Invited Plenary address: Probabilistic models of bacterial taxonomy.

350. Third World Congress of Nonlinear Analysts, Catania, Italy, July 19–26, 2000.
Invited lecture: Formulation and analysis of nonlinear structured population models.

351. International Conference on Deterministic and Stochastic Modelling of Biointeraction (DESTOBIO 2000), Purdue University, August 23–26, 2000.
Member of the Scientific Programme Committee.
Invited Plenary address: Probabilistic models for bacterial taxonomy.

352. STeP 2000, Seventh Finnish Conference on Artificial Intelligence, Helsinki University of Technology, August 28, 2000.
Invited lecture: Structured population dynamics: Individual behaviour, population behaviour and feedback through the environment.

353. European Society for Mathematical and Theoretical Biology (ESMTB) Summer School on Spatial Structures in Biology and Ecology: Models and Methods, Martina Franca, Italy, September 4–15, 2000.
Member of the Scientific committee, coordinator of course on Metapopulation dynamics. I gave a series of 10 invited lectures on metapopulation dynamics.

354. Trends in Nonlinear Analysis: Theory, Modelling and Computation, University of Heidelberg, October 8–12, 2000.
Invited lecture: On Fitness in Structured Metapopulations.

355. Evolution Equations 2000: Seventh International Conference on Evolution Equations and Their Applications to Physics, Industry, Life Sciences and Economics, Trento, Italy, October 30–November 4, 2000.
Invited lecture: The inverse problem of linear age-structured population dynamics.

356. The Sixth Finnish Inverse Days, Savukoski, Finland, December 14–15, 2000.
Contributed talk: The inverse problem of linear age-structured population dynamics.

357. European Science Foundation Workshop on Adaptive Dynamics, Kevo Subarctic Research Institute, Utsjoki, Finland, January 7–12, 2001.
Invited talk: On the definition, calculation and interpretation of the basic reproduction ratio and the invasion fitness in structured populations.
Chairman of the Scientific committee.

358. International School on Mathematical and Statistical Applications in Economics, Mälardalen University, Västerås, January 15–19, 2001.
Invited plenary address: Approximating ruin probabilities of insurance companies. The perturbed renewal equation approach.

359. Symposium on Mathematical Population Dynamics, Institut Non-Linéare de Nice, Sophia-Antipolis, France, January 26, 2001.
Invited lecture: On the inverse problem of structured population dynamics.

360. Winter school on Mathematical Modelling in Biology, Institut Non-Linéare de Nice, Sophia-Antipolis, France, January 21–February 2, 2001.
A series of 4 invited lectures on structured population dynamics.

361. Fourth International School on Statistical and Mathematical Applications in Economics, Finance and Insurance, Gurzuf, Ukraine, 23 June–1 July, 2001.
Two invited lectures.

362. Sixth International Conference on Mathematical Population Dynamics, Marrakech, Morocco, June 3–8, 2001.
Member of the Scientific Programme Committee.
Organiser of session on Mathematical methods of population dynamics.
Invited plenary address: Structured metapopulations. Dynamics and evolution.

363. Mixtures 2001: Recent Developments in Mixture Modelling, Hamburg, Germany, July 23–28, 2001.
Contributed talk 1: Gaussian Mixture Based Atom Interaction Library Geared to Ligand Docking (with Rantanen, Denessiouk, Koski and Johnson).
Contributed talk 2: A Mode Mixtures of Predictive Dirichlet Distributions (with T. Koski).

364. 23rd European Meeting of Statisticians, Funchal, Portugal, August 13–18, 2001.
Invited lecture: Probabilistic methods in taxonomy.

365. European Science Foundation Conference on Theoretical Biology of Adaptation, Tihany, Hungary, September 5–9, 2001.
Member of the Scientific Committee.
Organiser of session on "Co-evolution in symbiotic and exploiter-victim systems".
Invited lecture: Necessary and sufficient conditions for evolutionary suicide.

366. Second International Conference on Semigroup of Operators, Theory and Applications, Rio de Janeiro, Brazil, September 10–14, 2001.
Contributed talk: Nonlinear structured population models: Formulation and analysis.

367. Conference on Quantitative Biology, Ecole Normale Supérieure, Paris, December 3–5, 2001.
Invited talk: Predicting favourable protein-ligand interactions.

368. Workshop on life history models of reproductive effort traits, University of Leiden, January 8–9, 2002.
Contributed talk: Adjustable reproductive strategies in a changing environment.

369. Workshop on Adaptive Dynamics, Veszprem, Hungary, March 18–23, 2002.
Invited lecture: Adaptive dynamics of structured populations.

370. 150th Meeting of the Society of General Microbiology, University of Warwick, U.K., April 8–12, 2002.
Invited address: Modern methods of data analyses.

371. ESF Exploratory Workshop on Mathematical modelling as a tool for bridging the gap between biological observations and clinical applications in oncology, Turin, Italy, May 9–11, 2002.
Invited Opening Lecture.

372. Recent Developments in Mathematics in Finland and Estonia, Tallinn, Estonia, May 27–29, 2002.
Invited lecture: The inverse problem of age-structured population dynamics.

373. Topics in Biomathematics and Related Computational Problems at the Beginning of the Third Millennium. An International Conference, Vietri Sul Mare, Italy, June 3–9, 2002.

Invited Lecture: Adaptive Dynamics of Structured Populations.

374. Conference on Mathematical Modelling of Population Dynamics, Stefan Banach International Mathematical Centre, Bedlowo, Poland, June 24–28, 2002.
Invited lecture: The inverse problem of age-structured population dynamics.

375. Mathematical Modelling and Computing in Biology and Medicine, The Fifth Congress of ESMTB, Milan, Italy, July 2–6, 2002.
Vice President of the Board of ESMTB.
Organizer of symposium on Structured populations (with Odo Diekmann).

376. International Conference on Nonlinear Dynamical Systems with Applications, St.John's, Canada, July 15–18, 2002.
Invited Lecture: On the formulation and analysis of nonlinear structured population models.

377. ESF Exploratory Workshop on Stochastic Systems: from Randomness to Complexity, Erice, Italy, July 27–August 1, 2002.
Invited Opening Lecture.

378. The Third International Conference on Mathematical Biology: A satellite meeting of ICM-2002, Guilin, People's Republic of China, August 15–18, 2002.
Invited Lecture: Metapopulation dynamics: Ecology and evolution.

379. Metapopulation Biology – Achievements and Challenges. An international conference, Helsinki, Finland, February 14–15, 2003.
Invited Lecture: Structured metapopulation dynamics: How mathematics can give insight into ecology and evolution.

380. Relatedness, Social Structure, and Dispersal. An International Conference, Paris, France, April 2–5, 2003.
Invited Lecture: Dispersal and Relatedness in the Light of Structured Metapopulation Models.

381. A watershed in the history of biology — 50 years since the discovery of the structure of the DNA molecule. A symposium organized by the Turku Society of Zoology and Botany, Turku, Finland , April 25, 2003.
Invited lecture: On the concept of genetic information.

382. Conference on Mathematical Biology, Mathematisches Forschungsinstitut Oberwolfach, Germany, May 4–10, 2003.
Invited lecture: Adaptive dynamics of structured populations.

383. Conference on Astrobiology, University of Turku, Finland, May 19–20, 2003.
Invited lecture: Adaptive dynamics

384. ESF Exploratory Workshop on Arithmetic, Geometry and Coding Theory, Marseille, France, May, 19–24, 2003.
Invited Opening Lecture.

385. Shanghai International Symposium on Nonlinear Science and Applications, Shanghai, People's Republic of China, June 9–13, 2003.
Member of the International Advisory Committee.

386. Seventh World Congress on Sleep apnea, Finlandia Hall, Helsinki, June 30–July 3, 2003.
Chairman of session on Mathematical modelling of sleep disordered breathing.
Invited lecture: How mathematics can contribute to the understanding of sleep disordered breathing.

387. PDE and Materials, Mathematisches Forschungsinstitut, Oberwolfach, Germany, September, 7–13, 2003.
Invited Lecture: Nonlinear hyperbolic PDEs with nonlocal boundary conditions

388. Conference on differential equations in biology and medicine, Bedlewo, Poland, September 29 – October 3, 2003.
Invited lecture: On the Concept of Attractor for Structured Community-Dynamical Processes with Noise

389. Workshop on the Mathematical Aspects of Systems Biology, University of Gothenburg, Sweden, November 13 – 15, 2003.
Invited closing lecture: The need for new mathematics in systems biology.

390. 110th Annual meeting of the American Mathematical Society, Phoenix, January 7 – 10, 2004
Invited lecture: On the impossibility of coexistence of infinitely many strategies.

391. International Symposium "Dynamical Systems Theory and its Applications to Biology and Environmental Sciences", Shizuoka University, Hamamatsu, Japan, March 14 – 17, 2004.
Invited lecture: On the dynamics of periodic competitive-cooperative ecosystems
Contributed lecture (with N. Noykova): Theoretical and practical identifiability in a nitrification-denitrification model of aerobic wastewater treatment.
Contributed lecture (with Ping Yan and S. Geritz): Plant growth and the optimal sharing of photosynthetic products with a mycorrhizal symbiont.

392. International Workshop in Applied Probability (IWAP2004), University of Piraeus, Greece, March, 22 – 25, 2004.
Invited lecture: On the concept of attractor in community-dynamical processes with stochasticity

393. International workshop on mathematical modelling of criminality in urban environment, Florence,Italy, June, 6–9, 2004.
Invited talk: A structured population model of criminality

394. International Workshop on Adaptive Dynamics, Collegium Budapest, Hungary, June 14–19, 2004.
Invited lecture: Competitive exclusion and limiting similarity

395. International Conference on Computational and Mathematical Population Dynamics, University of Trento, Italy, June 21–25, 2004.
Member of the Scientific committee.
Invited lecture: Vertically Transmitted Symbionts in Structured Host Metapopulations

396. The International Conference on Nonlinear Dynamics and Evolution Equations, Memorial University of Newfoundland, St. John's, Canada, July 6-10, 2004.
Invited lecture: On the concept of attractor in community-dynamical processes

397. European Congress on Computational Methods in Applied Sciences and Engineering, Jyväskylä, Finland, July 24–28, 2004.
Member of the Scientific Committee (Computational Methods in the Life Sciences).

398. Combining Classifiers for Phenotypic and Genotypic Data of Microorganisms — An international workshop, Het Pand, Gent, Belgium, December 2–3, 2004.
Member of the Scientific Committee
Invited lecture: Bayesian classification of molecular marker data

399. "Leiden as a centre for theoretical biology in the Netherlands and beyond: a tribute to Hans Metz", University of Leiden, The Netherlands, December 9–10, 2004.
Invited address: Mathematical aspects of physiologically structured populations: The contributions of J.A.J. Metz.

400. Dynamics of Physiologically Structured Populations, an international workshop, Utrecht University, The Netherlands, January 24–25, 2005.
Invited lecture: Physiologically structured population models: A general framework and stability analysis.

401. International Workshop on Continuous Diversity, Complex Mixtures and Applications, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, May 5-6, 2005
Invited lecture: On the formulation and analysis of structured population models

402. Second Shanghai International Symposium on Nonlinear Science and Applications, Shanghai, People's Republic of China, June 3–7, 2005.
Member of the International Advisory Committee.

403. International Workshop on differential equations in mathematical biology, University of Le Havre, Le Havre, France, July 11-13, 2005
Invited talk: On the notion of invasion and the definition of invasion fitness

404. International Conference on cellular and molecular biology, biophysics and bioengineering, Athens, Greece, July 15-17, 2005.
Co-chairman of the scientific committee.

405. Sixth European Conference on Mathematical and Theoretical Biology, University of Dresden, Germany, July 18–22, 2005
President of the Steering committee.
Invited talk: Adaptive dynamics and the definition of invasion and invasion fitness

406. Math Everywhere: Deterministic and Stochastic Modelling in Biomedicine, Economics and Industry, Milan, Italy, September 4–6, 2005
Invited address: The Dynamics of Structured Populations: Past, Present and Future

407. International Congress on the Applications of Mathematics, Universidad de Chile, Santiago de Chile, March 13-17, 2006.
Member of panel of Ecology and Epidemiology

Invited lecture: Competitive exclusion and limiting silmilarity. A unified mathematical framework.

408. Conference on Mathematical Biology, Oberwolfach, Germany, May 14–20, 2006.
Invited lecture: Stability and bifurcation analysis of models of physiologically structured populations

409. Marrakech World Conference on Differential Equations and Applications, Marrakech, Marocco, June 15–20, 2006.
Member of the Scientific committee.
Invited Plenary Lecture: Nonlinear structured population dynamics, delay equations and adjoint semigroups

410. American Institute of Mathematical Sciences Sixth International Conference on Dynamical Systems, Differential Equations and Applications, Poitiers, France, June 25–28, 2006.
Invited lecture: Stability and bifurcation analysis for a structured metapopulation model with an application to evolution of mutualism

411. Evolution Equations 2006: In memory of G. Lumer, August 28 – September 1, 2006, Mons, Belgium and Valenciennes, France.
Invited lecture: Physiologically structured populations, delay equations and nonlinear semigroups

412. ECCOMAS Conference on Computational Fluid Dynamics (ECCOMAS CFD 2006), Egmond aan Zee, The Netherlands, September 5 - 8, 2006
Member of the Scientific Committee (Computational Methods in Life Sciences Committee)

413. The Second International Symposium on Dynamical Systems Theory and Its Applications to Biology and Environmental Sciences, Shizuoka University, Hamamatsu, Japan, March 14 - 17, 2007.
Invited plenary lecture: Volterra functional equations and structured population models

414. Forth International Conference on Mathematical Biology, May 29-June 1, 2007, Wuyishan, Fujian Province, P. R. China.
Member of the Scientific committee
Invited lecture: Ecology and evolution of symbiosis in structured host metapopulations

415. Third Shanghai International Symposium on Nonlinear Science and Applications, Shanghai and Hangzhou, People's Republic of China, June 6–10, 2007.
Member of the International Advisory Committee.

416. Eighth Colloquium on the Qualitative Theory of Differential Equations, Szeged, Hungary, June 25-28, 2007,
Invited plenary lecture: Stability and bifurcation analysis of Volterra functional equations

417. Second Conference on Computational and Mathematical Population Dynamics (CMPD2), Campinas, Brazil, July 16-20, 2007.

Member of the Scientific Committee

418. Workshop on Biomedical Modeling and Cardiovascular-Respiratory Control: Theory and Practice, Schloß Seggau, Leibnitz, Austria, August 2-4, 2007.
Invited lecture: Parameter estimation of a gas exchange model from non-invasive carbon dioxide measurements during sleep.

419. Mathematical Modeling and Analysis of Populations in Biological Systems, Tucson, Arizona, October 5 - 7, 2007
Member of the Scientific Steering Committee
Invited lecture: Structured population models and delay equations

420. What are the theoretical tools most useful for understanding biological systems?, Institut des hautes études scientifiques, Bures-sur-Yvette, France, November 12-15, 2007
Invited lecture: Mathematical modelling in biology : What it is and what it is not

421. Mathematics Days 2008, Espoo, Finland, January 3–4, 2008.
Member of the Scientific Committee.

422. Marrakesh International Conference and Workshop on Mathematical Biology, Marrakesh, January, 3-8, 2008.
Invited plenary lecture: Evolution of condition-dependent dispersal under kin competition

423. International conference on stochastic population growth, genealogy, and extinction, Gothenburg, Sweden, March 27-28, 2008
Invited plenary lecture: The Sermon on the Mount versus the Sermon on the Plain: Stochastic versus deterministic population models

424. Dynamics of Structured Populations, Banff International Research Station for Mathematical Innovation and Discovery, Banff, Alberta, Canada, April 20-25, 2008.
Invited lecture: Ecology and evolution of symbiosis in structured metapopulations

425. Workshop on Population Dynamics and Mathematical Biology, CIRM, Luminy, France, June 16-20, 2008.
Invited lecture: Evolution of condition-dependent dispersal under kin competition

426. International Conference on Differential Equations and Applications to Mathematical Biology, le Havre, France, June 23-27, 2008.
Invited lecture: Structured population models as delay equations

427. Seventh European Conference on Mathematical and Theoretical Biology, Edinburgh, 29th June – 4th July, 2008
Invited plenary lecture: 250 years of structured population dynamics
Chairman of minisymposium on the dynamics of structured populations
Co-organiser of minisymposium on modeling and parameter estimation for the cardio-respiratory system

428. ECMI2008, June 30–July 4, 2008, London, UK.
Member of the Scientific Committee

429. European Science Foundation Exploratory Workshop on "Computational Disease Modeling", Barcelona, Spain, September 24-26, 2008.

Invited plenary lecture: Evolutionary aspects of human diseases

430. Conference on Mathematical Biology, Purdue University, December 8–10, 2008
Invited plenary lecture: Delay equations, semigroups and population dynamics

431. Inaugural conference of the African Society for Biomathematics, Cape Town, South Africa, January, 27–30, 2009.
Invited keynote address: Mathematical Challenges in Biology

432. Conference on Mathematical Biology: Modeling and Differential Equations, Barcelona, Spain, February 9 – 13, 2009
Invited plenary lecture: Delay equations as models for physiologically structured populations

433. Conference on Mathematical Biology, Oberwolfach, Germany, May 3–9, 2009.
Invited lecture: Equations with infinite delay

434. Mathematics for Biomedical engineering, Warwick, England, U.K. July 20-24, 2009
Invited lecture: Parameter estimation in respiratory modelling

435. The Mathematics of Darwin's Legacy, November 23–24, 2009, Lisbon, Portugal
Invited lecture: Optimisation principles in evolution

436. Computational and Mathematical Population Dynamics 3, May 31 – June 4, 2010, Bordeaux, France
Invited lecture: Equations with infinite delay as models for physiologically structured populations

437. Applications of Membrane computing, Concurrency and Agent-based Modelling in Population Biology, 25 August 2010, Jena, Germany
Member of the Scientific Programme Committee
Invited address: Structured population dynamics: Modelling and analysis

438. Mathematical Science for Biological Systems, The Royal Swedish Academy of Sciences, April 13 - 16, 2011, Stockholm, Sweden.
Invited lecture: Mathematical modelling in biology: Why and how.

439. The Fifth International Congress on Mathematical Biology, June 3-5, 2011 Nanjing, People's Republic of China.
Member of the Academic Committee
Invited plenary address: Modelling physiologically structured populations as delay equations

440. Symposium on modelling dynamics of vectors and vector-borne diseases, June 5, 2011, Nanjing Normal University, Nanjing, People's Republic of China.
Invited lecture: Why did Malaria vanish from Finland?

441. 5th International Conference on High Performance Scientific Computing: Modeling, Simulation and Optimization of Complex Processes, March 5-9, 2012, Hanoi, Vietnam
Invited plenary address: Dynamics of Structured Populations: Modelling and Analysis

442. Mathematical Modeling and Computational Topics in Biosciences (BIOCOMP2012), Vietri sul Mare, Italy, June 4-8, 2012.

Invited lecture: Group defence and functional response

443. Water: Unite and Divide. Interdisciplinary approaches for a sustainable future, August 27-30, 2012, Stresa, Italy.
Invited plenary address: Mathematical Modelling in Science and Society

444. ESF Mathematics Conference on Applied Partial Differential Equations in Physics, Biology and Social Sciences: Classical and Modern Perspectives, September, 2-7, 2012, Centre de Recerca Matematica, Bellaterra, Spain.
Invited lecture: Invasion of a rare mutant into a diffusing population with a sedentary and reproducing compartment

445. Global Centre of Excellence Workshop "Biomathematics of Structured Populations", Tokyo, Japan, October 30 – November 2, 2012.
Two invited lectures: Sun-star-calculus for analysing structured population models

446. Mathematics and biology: a roundtrip in the light of suns and stars, April 15-19, 2013, Lorentz Center, Leiden, The Netherlands.
Invited Key-note lecture: Mathematics of structured populations: past, present and future

447. Fourth Conference on Computational and Mathematical Population Dynamics (CMPD4), Taiyuan, People's Republic of China, May 29-June 2, 2013.
Invited talk: Adaptive dynamics of a population with a diffusing and a non-diffusive but reproducing compartment

448. Thirteenth International Conference on Models in Population Dynamics and Ecology University of Osnabrück, Germany, August, 26-29, 2013.
Invited plenary lecture: Functional responses and how they evolve by natural selection

449. The Seventh International Conference on the Progress in Difference Equations, İzmir University of Economics, İzmir, Turkey, May 21-24, 2014
Invited plenary lecture: Difference equations and delay equation in modelling the dynamics of physiologically structured populations

450. The 9th SICC International Workshop "Topics in Nonlinear Dynamics": Modelling and Analysis of Innovation and Competition Processes, Politecnico di Milano, May 26-30, 2014.
Invited plenary lecture: Evolution of functional responses

451. The 9th European Conference on Mathematical and Theoretical Biology, Gothenburg, Sweden, June,15-19, 2014.
Member of the Scientific Committee

452. The 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain, July 7 –11, 2014
Invited lecture: Delay equations as models of physiologically structured populations

453. Distinguished Lectures on Inverse Problems. An International Conference, Helsinki, August 4-8, 2014.
Invited Plenary Lecture: Inverse problems of Lotka-Volterra models with diffusion

454. Exploratory Workshop: Maths meets Myths, Coventry, UK, September 10 - 13, 2014
Invited lecture: Mats meets Maths and Myths

455. Symposium on Mathematical Modelling in Biology, Department of Mathematics, University of Vienna, Austria, February, 20, 2015
Invited lecture: Linear Chain Trickery, or when are structured population models representable by ordinary differential equations

456. Short Thematic Program on Delay Differential Equations: Theme on Structured delay systems, The Fields Institute for Research in Mathematical Sciences, Toronto, May 11-22, 2015.
Invited lecture: On linear chain trickery

457. Summer School on Mathematical Biology, University, Guangzhou, P.R. China, July 27 - 31, 2015
A series of four lectures on physiologically structured population dynamics.

458. International Conference on Mathematical Biology, Zhangjiajie, P.R. China, August 1 - 4, 2015
Invited lecture: Evolution of functional responses by natural selection

459. Mathematical and Computational Epidemiology of Infectious diseases – the interplay between models and public health policies, "Ettore Majorana" Centre for Scientific Culture Erice, Italy, August 30 – September 5, 2016
Invited lecture: When is a structured epidemic model representable by a system of ordinary differential equations?

460. Mathdays 2016, University of Turku, Finland, January 7-8, 2016.
Invited Plenary Lecture: Rock, scissors, paper – what a children's game can tell us about evolution

461. The 4th Toulouse Economics and Biology Workshop – Evolution: Transmission Mechanisms & Population Structure, Toulouse, France, May 30 - 31, 2016
Invited lecture: Optimisation in evolution and utility in economics

462. Symposium "Infectious Mathematics", University of Utrecht, The Netherlands, June 28, 2016
Invited lecture: Finite dimensional state representation of structured epidemic models

463. The 2016 Summer School on Mathematical Biology, Guangzhou University, Guangzhou, P.R. China, August 1 - 6, 2016
A series of eight lectures on physiologically structured population dynamics.

464. Symposium on Differential-Difference Equations and Mathematical Biology, Xiangnan University, Chenzhou, Hunan, P.R.China, August 8, 2016.
Invited lecture: Optimisation in evolution.

465. Dynamics of Delay Equations, Theory and Applications, October 12 - 14, 2016, Berlin.
Contributed lecture: Finite dimensional state representation of linear and nonlinear delay systems

466. Eighth Workshop Dynamical Systems Applied to Biology and Natural Sciences, Colégio do Espírito Santo, Universidade de Évora, Portugal, January 31 - February 3, 2017.
Invited Plenary Lecture: Finite dimensional state representation of structured population models

467. Lisbon Workshop on Biomathematics, University of Lisbon, Portugal, March 31, 2017
Invited lecture: Invasion into dimorphic populations under Atkinson-Allen dynamics

468. Probability: From East to West, Monash University Prato Centre, Prato, Italy, July 17-20, 2017
Invited Lecture: The renewal equation of structured population dynamics

469. 23rd International Conference on Difference Equations and Applications, Timisoara, Romania, July 24 - 28, 2017.
Invited Lecture: Dynamics of the three-dimensional Ricker model

470. Summer School on Mathematical Biology, University, Guangzhou, P.R. China, August 3 - 8, 2017
A series of ten lectures on physiologically structured population dynamics.

471. International Conference on Mathematical Biology, Zhangjiajie, P.R. China, August 9 - 11, 2017
Invited lecture: Rock, scissors, paper — what a children's game can tell us about evolution

472. 11th Congress of the International Society for Analysis, its Applications and Computation, Linnæus University, Växjö, Sweden, August , 14-18, 2017,
Invited Plenary Lecture: Modelling and Analysis of Structured Populations: From Euler to Adjoint Semigroups

473. Seventeenth International Conference on Models in Population Dynamics and Ecology: Global Change in Ecology. University of Cape Town, South Africa, September 4-8, 2017.
Invited Plenary Lecture: Evolution and optimisation

474. International Conference "Stochastic Processes and Algebraic Structures" – From Theory Towards Applications, Västerås and Stockholm, Sweden, October 4-6, 2017.
Invited Plenary Lecture: The Renewal Equation of Population Dynamics

475. Finnish Mathematical Days: Joint EMS-FMS-ESMTB Mathematical Weekend, Joensuu, Finland, 4-5 January 2018
Invited Lecture: A universal classification for discrete-time competitive systems via the carrying simplex

476. Ninth Workshop Dynamical Systems Applied to Biology and Natural Sciences, Turin, Italy, February 7-9, 2018.
Invited Plenary Lecture: A Universal Classification and Adaptive Dynamics for Discrete-Time Competitive Systems via the Carrying Simplex

477. Models in Population Dynamics, Ecology, and Evolution, Leicester, UK, 9-13 April 2018.
Invited Plenary Lecture: Finite dimensional state representation of physiologically structured populations.

478. Conference on New Trends in Mathematical Biology, CRM, Barcelona, 4-8 June 2018.
Invited lecture: When can a structured population model be represented by a system of ordinary differential equations?

479. 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan, 5-9 July 2018.
Invited Lecture: ODE-reducibility of structured population models

480. Second Erice International Conference on Mathematical and Computational Epidemiology, Erice, Italy, 28 August - 5 September 2018.
Invited Lecture: ODE reducibility of epidemic and structured population models

481. 10th International Conference on Dynamical Systems Applied to Biology and Natural Sciences, Naples, Italy, 3-6 February 2019.
Plenary Lecture: On models of physiologically structured populations and their reduction to ODEs.

482. 11th Colloquium on the Qualitative Theory of Differential Equations, Szeged, Hungary, 17-21 June 2019
Plenary Lecture: On models of physiologically structured populations and their reduction to ordinary differential equations

483. 25th International Conference on Difference Equations and Applications, University College London, London, U.K., 24-28 June 2019.
Plenary Lecture: Difference Equations in Population Dynamics: History and Modelling

484. Differential Equations arising from Organising Principles in Biology, Oberwolfach, Germany, September 23-29, 2018.
Invited Lecture:

485. Workshop to honour Timo Koski's 67th birthday. Royal Institute of Technology, Stockholm, Sweden, 6 September 2019.
Invited Lecture: History of mathematical population biology: From Leonardo da Pisa to Volterra and beyond.

486. Mathematical Biology on the Mediterranean – An international Workshop. Samos, Greece, 7-14 November 2019.
Plenary Lecture: Difference and Differential Equations in Population Dynamics: History and Modelling

487. International Conference on Dynamics, Equations and Applications, Krakow, Poland, 16-20 September 2019.
Invited Keynote Lecture: Finite dimensional state representation of structured population models

488. Second Nordic Biomathematics Days, Roskilde, Denmark, 9-10 May 2022.
Invited Keynote Lecture: Difference and differential equations in population biology: History and modelling

489. 12th Colloquium on the Qualitative Theory of Differential Equations, Bolyai Institute, University of Szeged, Hungary, June 19?23, 2023.
Invited lecture: One-dimensional reduction of abstract renewal equations describing population dynamics

490. The 4th International Conference on Dynamics of Differential Equations, The Fields Institute for Research in Mathematical Sciences, Toronto, Canada, 14-17 August 2023.

Invited lecture: One-dimensional reduction of abstract renewal equations describing population dynamics

491. Nineth European Congress of Mathematics, Sevilla, Spain, 15-19 July 2024.
Contributed lecture: Can high school teachers learn from research mathematicians?