

CURRICULUM VITAE – Jonas Olsson

Personal data and current employment

Born: 19 February 1964 in Gudmuntorp, Sweden
Citizenship: Swedish
Languages: Swedish and English (fluent);
Japanese, French and German (fair)

Senior Researcher at: Research & Development (hydrology)
Swedish Meteorological and Hydrological Institute
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Main fields of research

Work tasks

- » Rainfall-runoff modelling and forecasting
- » Climate change impacts on hydrology
- » Rainfall disaggregation and downscaling
- » Uncertainty in hydrological modelling
- » Nonlinear and scaling approaches in hydrology
- » Adjunct professor at Lund University
- » Leader and member of research projects
- » Author and reviewer of applications, papers, etc.
- » Supervisor of young researchers
- » Scientific paper manager

Academic degrees

Employment etc.

- » **2010** Awarded the title of Reader (Docent) in Water Resources Engineering at the Faculty of Engineering, Lund University, Sweden
- » **1996** Ph.D. in Water Resources Engineering (hydrology) at the Faculty of Engineering, Lund University, Sweden
- » **1989** M.Sc. in Civil Engineering at the Faculty of Engineering, Lund University, Sweden
- » **2021-present** Adjunct professor at Lund University, Sweden (20%)
- » **2010-2011** Associate research professor at Tokyo Metropolitan University (6 months)
- » **2005, 2007, 2014** Parental leave (3×6 months)
- » **2001** Research associate at Lund University, Sweden
- » **1997-2000** Post-Doc at Kyushu University, Fukuoka, Japan (EU S&T Fellowship)
- » **1989-1996** Doctoral candidate and Research assistant at Lund University, Sweden

Supervision and teaching

- » **2023-present** Co-supervision of Ph.D. thesis by Louise Petersson Wårdh, Lund University: *Hydro-meteorological monitoring*
- » **2023-2024** Co-supervision of Ph.D. thesis by Dong An, Lund University: *Impact of climate change on extreme events: Insights from Asia and Scandinavia*
- » **2015-present** Lecturer in M.Sc. course *Water, society and climate change* at Lund University
- » **2021** Co-supervision of M.Sc. thesis by Daniel Elfström and Max Stefansson, Uppsala University: *How design storms with normally distributed intensities customized from precipitation radar data in Sweden affect the modeled hydraulic response to extreme rainfalls*
- » **2021** Co-supervision of M.Sc. thesis by Louis Rulewski Stenberg, Uppsala University: *High frequency rainfall data disaggregation with a random cascade model*
- » **2020** Co-supervision of M.Sc. thesis by Sofia Litsmark, Uppsala University: *Investigating the relationship between circulation patterns and cloudburst character in a changing climate*
- » **2018** Co-supervision of M.Sc. thesis by Samuel Hermelin, Royal Institute of Technology: *Differences in consequences between peak arrivals and movement directions of an extreme rainfall in flood modeling*

- » **2015-2016** Co-supervision of M.Sc. thesis by Cajsa-Lisa Ivarsson, Lund University: *High-resolution ensemble flood forecasting in Hölje Å*
- » **2010-2019** Co-supervision of Ph.D. thesis by Kean Foster, Lund University: *Seasonal hydrological forecasting in Sweden*
- » **2009-2011** Co-supervision of M.Sc. thesis by Hiromi Boda, Tokyo Metropolitan University: *Spatio-temporal characteristics of 15-min precipitation in Sweden*
- » **2002-2009** Co-supervision of Ph.D. thesis by Sihem Testouri, Lund University: *Water erosion modelling using fractal rainfall disaggregation*
- » **2002-2003** Co-supervision of M.Sc. thesis by Jörgen Rosberg, Uppsala University: *Modeling phosphorus transport and retention in river networks*
- » **2001-2005** Co-supervision of Ph.D. thesis by Pernilla Öhrström, Lund University: *Unsaturated solute transport in a semiarid catchment*
- » **2000-2001** Co-supervision of M.Sc. thesis by Izumi Ishikawa, Kyushu University: *Rainfall estimation model in the Chikugo River Basin by statistical atmospheric downscaling using artificial neural networks*
- » **1997-1998** Co-supervision of Ph.D. thesis by Tarek Merabtene, Kyushu University: *Decision Support System for water resources management*
- » **1990-2001** Frequent course assistant in hydraulics and hydrological modelling for M.Sc. students

International work

- » **2007, 2010, 2013** Tokyo Metropolitan University, Tokyo, Japan (1+1+2 months; funded by Scandinavia-Japan Sasakawa Foundation and Royal Academy of Sciences/JSPS)
- » **1992, 2002, 2004** Kyushu University, Fukuoka, Japan (1+1+2 months; funded by Royal Academy of Sciences/JSPS, Scandinavia-Japan Sasakawa Foundation and J. G. Richerts Memorial Foundation)
- » **1993/1994** Université Pierre & Marie Curie, Paris, France (4 months; funded by Åke and Greta Lissheds Foundation)
- » **1991** Politecnico di Milano, Milan, Italy (2 months; funded by Axel and Margaret Ax:son Johnsons Foundation)
- » **Since 1996** Short (>1 month) visits to Institute of Hydrology (Wallingford, UK), Swiss Federal Institute of Technology (ETH) (Zürich, Switzerland), Kyushu University (Fukuoka, Japan), Tokyo Metropolitan University (Tokyo, Japan), Nara Institute of Science and Technology (Nara, Japan), European Centre for Medium-range Weather Forecasting (Reading, UK) and Politecnico di Milano (Milan, Italy)

Scientific commitments

ASSIGNMENTS & AWARDS

- » **2021-2025** Swedish delegate in the Management Committee of COST Action CA20136 OPENSENSE *Opportunistic Precipitation Sensing Network*
- » **2023** Faculty opponent of Karianne Ødemark, Technical University of Oslo, Ph.D. thesis *Extreme precipitation and physical model-based estimates for return values and PMP in Norway*
- » **2021** Faculty opponent of Jonas Wied Pedersen, Technical University of Denmark, Ph.D. thesis *Using Numerical Weather Prediction and in-sewer sensor data for real-time monitoring and forecasting in urban drainage-wastewater systems*
- » **2020** Invited expert in the project *Sustainable water – climate change* by Royal Swedish Academy of Engineering Sciences
- » **2019** Faculty opponent of Barbara Blumentahl, Karlstad University, Techn.Lic. thesis *Precipitation intensity and other factors affecting cloudburst damage*
- » **2017** Ph.D. dissertation board member of Lotten Wiréhn, Linköping University, Ph.D. thesis *Climate vulnerability assessment methodology – A study for Nordic agriculture*
- » **2015** Faculty opponent of Hong Li, University of Oslo, Ph.D. thesis *Hydrological modelling of mountainous and glacierised regions under changing climate*
- » **2014** Faculty opponent of Hjalte Jomo Danielsen Sørup, Technical University of Denmark, Ph.D. thesis *Modelling of spatio-temporal precipitation relevant for urban hydrology with focus on scales, extremes and climate change*

- » **2013** Ph.D. dissertation board member of Claudia Teutschbein, Stockholm University, Ph.D. thesis *Hydrological modelling for climate change impact assessment*
- » **2013** Ph.D. dissertation board member of Tinghai Ou, University of Gothenburg, Ph.D. thesis *Observed and simulated changes in extreme precipitation and cold surges in China: 1961-2005*
- » **2012** Co-author of paper awarded the large prize of Nordic Association for Hydrology for best publication in Hydrology Research during the last 2 years.
- » **2012-present** Deputy Auditor of Nordic Association for Hydrology
- » **2012** Faculty opponent of Noora Veijalainen, Finnish Environment Institute, Ph.D. thesis *Estimation of climate change impacts on hydrology and floods in Finland*
- » **2011-2015** Swedish delegate in the Management Committee of COST Action ES1102 VALUE *Validating and Integrating Downscaling Methods for Climate Change Research*
- » **2009-2013** Steering group member of Swedish Road Authority project *Adaptation of road drainage structures to climate change*
- » **2007** Ph.D. dissertation board member of Amad Mohammad Kalteh, Lund University, Ph.D. thesis *Rainfall-runoff modelling using artificial neural networks (ANNs)*
- » **2005-2010** Swedish delegate in the Management Committee of COST Action 731 *Propagation of Uncertainty in Advanced Meteo-Hydrological Forecast Systems*

INVITED TALKS

- » **2025** Water Sewerage Circuit, Uppsala, Sweden
- » **2024** Understanding Risk Global Forum, Himeji, Japan
- » **2023** Vattenstämman, Umeå, Sweden
- » **2023** Conference “How can we better manage cloudburst events?”, Karlstad, Sweden
- » **2022** Sewer Networks and Climate, online
- » **2020** Symposium “Downscaling climate projections – towards better adaptation strategies in the Nordic countries”, online
- » **2020** Sewer Networks and Climate, Malmö, Sweden
- » **2016** Research and Innovation for Sustainable Stormwater Management, Stockholm, Sweden
- » **2015** Modeling Hydrology, Climate and Land Surface Processes, Lillehammer, Norway
- » **2015** European Geosciences Union General Assembly, Vienna, Austria
- » **2011** Urban Hydrology and Storm Water Management, Lund, Sweden
- » **2011** IUGG, Earth on the Edge: Science for a Sustainable Planet, Melbourne, Australia
- » **2010** KlimatGIS-dagar, Stockholm, Sweden
- » **2009** VA-fair, Stockholm, Sweden
- » **2009** Nordic Hydrology, Fundamentals and Market Analysis, Oslo, Norway
- » **2006** Joint COST Action 731 and NetFAM Workshop on Uncertainty in High-Resolution Meteorological and Hydrological Models, Vilnius, Lithuania
- » **2001** International Workshop on Scaling Problems in Hydrology, Austrian Academy of Sciences, Vienna, Austria

CONFERENCES

- » **2025** #Flood #Risk #Sweden, Karlstad, Sweden (scientific committee member)
- » **2022** Nordic Hydrological Conference, Tallinn, Estonia (scientific committee member)
- » **2018** Hydrofractals’18, Constanta, Romania (scientific committee member)
- » **2012** Nordic Hydrological Conference, Oulu, Finland (scientific committee member)
- » **2009** 9th European Conference on Applications of Meteorology (ECAM), Toulouse, France (co-convener at the session on Hydrology)
- » **2003** Hydrofractals’03, Ascona, Switzerland (scientific committee member)
- » **1997-2000** European Geophysical Society General Assembly (co-convener (and sometimes chairman) at the session on Nonlinear Processes in Geophysics)

- » **1994** International Workshop on Closing the Gap Between Theory and Practice in Urban Rainfall Applications, St. Moritz, Switzerland (chairman)

REVIEWING

- » **Article manuscripts (since 1996)** Journal of Hydrology (>5); Journal of Geophysical Research (>3); Atmospheric Research (>3); Water Resources Research (>3); Hydrology and Earth System Sciences (>1); Soil Science Society of America Journal (>1); Hydrological Processes (>1); Stochastic Environmental Research and Risk Assessment (>1); Urban Water (>1); International Journal of Climatology (1); Water, Air and Soil Pollution (1); Physics and Chemistry of the Earth (1); Water Science and Technology (1); Journal of Applied Meteorology (1); Nonlinear Processes in Geophysics (1); Journal of Contaminant Hydrology (1); Nordic Hydrology (1); Hydrological Sciences Journal (1); Climatic Change (1); Advances in Geosciences (1); Advances in Water Resources (1); Climatic Change Letters (1); Climate Dynamics (1); Meteorology and Atmospheric Physics (1); Journal of Hydrometeorology (1); Advances in Science and Research (1)
- » **Project applications (since 2000)** Natural Sciences and Engineering Research Council of Canada (4); National Science Foundation, USA (2); Natural Environment Research Council, UK (1); Netherlands Organisation for Scientific Research (1); French National Research Agency (ANR) (1); Environmental Protection Agency of Ireland (1)
- » **Conference contributions** 9th Intl. Conf. on Urban Drainage Modelling (2012); XXVII Nordic Hydrological Conference (2012); 18th World IMACS/MODSIM09 Congress (2009); 11th Intl. Conf. on Urban Drainage (2008)
- » **Book chapters** *Green House Gas Emissions and Climate Change*, ASCE (2011); *Advances in data-based approaches for hydrologic modeling and forecasting*, World Scientific Publishing Company (2008)

Project management

- » **2025-2027** Work Package leader in the EU Water JPI project *NBSPLUS*
- » **2023-2026** Work Package leader in the Formas project *FairWater*
- » **2023-2025** Work Package leader in the Formas project *SPARC*
- » **2019-2023** Work Package leader in the MSB project *Extreme-Index*
- » **2019-2022** Work Package leader in the EU Water JPI project *GlobalHydroPressure*
- » **2016-2019** Coordinator of the EU Water JPI project *MUFFIN Multi-scale Urban Flood Forecasting*
- » **2016-2017** Work Package leader in the EU Copernicus project *Urban SIS Climate Information for European Cities*
- » **2010-2012** Work Package leader in the EU FP7 project *SUDPLAN Sustainable Urban Development Planner for Climate Change Adaptation*
- » **2010-2014** Project Manager of Formas project *HYDROIMPACTS2.0 Hydrological Climate Impact Scenarios*
- » **2003-2004** Work Package leader in the EU FP5 project *CARPE DIEM Critical Assessment of available Radar Precipitation Estimation techniques and Development of Innovative approaches for Environmental Management*
- » **2001-present** Frequent manager of national research projects