

## Curriculum vitae

Sahlin, Ullrika. Date of birth: 7<sup>th</sup> Nov 1975, Lund, Sweden. Nationality: Swedish, Married, 3 children born 04, 07, 10

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URL for web site: <http://www.cec.lu.se/ullrika-sahlin>

### • EDUCATION

- 2017 Reader in Environmental Science at Lund University, Sweden
- 2010 Doctor of Philosophy (PhD) at the Faculty of Science in the subject Ecology, Lund University, Sweden 25/3 2010. Main supervisor Henrik G. Smith
- 2003 Master of Science in Mathematics with a major in Mathematical Statistics, Lund University, Sweden
- 2000 Master of Science in Forestry with a major in Forest management, Swedish Agricultural and Forest University (SLU), Sweden

### • CURRENT POSITION

- 2018–present Associate Professor in Ecological-Economic modelling (80% research, 20% teaching). Centre of Environmental and Climate Research, Faculty of Science, Lund University Sweden
- 2018 – 2021 Honorary Lecturer at Civil Engineering and Industrial Design, University of Liverpool, UK.

### • PREVIOUS POSITIONS

- 2015–2018 Researcher (100% with the possibility to teach 20%). Centre of Environmental and Climate Research, Faculty of Science, Lund University Sweden
- 2013 – 2014 Postdoc in Ecological Economic modelling. Centre of Environmental and Climate Research, Faculty of Science, Lund University Sweden
- 2012 – 2013 Postdoc in Risk Assessment in Fishery management. The Department of Aquatic Resources, Swedish University of Agricultural Sciences, partly placed at Hugh Possingham's Environmental Decisions Group at University of Queensland, Australia.
- 2012 Project leader in the EU-project CADASTER. The Section of Environmental Science and Technology, School of Natural Sciences, Linneaus University Sweden
- 2010 – 2012 Postdoc in Uncertainty Analysis in Chemical Safety Assessment. The section of Environmental Science and Technology, School of Natural Sciences, Linneaus University Sweden

### • FELLOWSHIPS AND AWARDS

- 2016 The Richard J. Burk Outstanding Service Award from the Society for Risk Analysis (2 000 Euro)
- 2004 Sparbanksstiftelsen Skåne Nova scholarship Master thesis in Mathematics at Lund University” (2 500)
- 2001 Arvid Lindman scholarship for the master thesis in Forestry at the Swedish Agricultural and Forest University (SLU) (2 500 Euro)

### • SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 4 ongoing PhD students (2 as main supervisor), 2 finished PhD (one as main supervisor), 1 visiting PhD student.
- 2 Postdocs (finished).
- Supervisor of bachelor and master thesis in Environmental Science, Biology, Risk Management and Societal Safety and Mathematics.

### • TEACHING ACTIVITIES

Undergraduate teaching: Course director of Biostatistics (MASB11) 2020. Lectures and assignments on the course Risk analysis in health, environment and nature (MVEC12, Lund University) the years 2006, 2007, 2009, 2012, 2013, 2014, 2015, 2017, 2018. Lectures in Applied Ecotoxicology (BIOR52, Lund University) 2015, 2016, 2017, 2018, 2020. Introductory course in Environmental Science, Lund University 2008, 2018, 2019. Foundations for Risk Assessment and Management (VRSN05), Lund Technical University, 2016. Tutor and assignments in Mathematical statistics, Lund University, 1999-2004.

Graduate teaching:

\*Initiator, course director and lecturer at Risk, Uncertainty and Decision making (NAMV002, Lund University) 2016, 2019, \*Lectures the 7th SIPTA Summer School on Imprecise Probabilities, Durham University, UK 2016 \*Initiator, course director and lecturer at Bayesian Analysis and Decision Theory (NAMV001, Lund University) 2015, 2018 \*Course director of Interdisciplinarity in Environmental Research 2019, 2020.

- **ORGANISATION OF SCIENTIFIC MEETINGS (selection)**

- 2019 Program committee of ISIPTA 2019 (The 11th International Symposium on Imprecise Probabilities: Theories and Applications).
- 2015 - 2019 Member of the Scientific Committee of the Annual Conference of the Nordic Chapter of the Society for Risk Analysis
- 2014 – 2019 Initiator and permanent member of the organizing committee of the conference Bayes@Lund, Sweden
- 2017 Workshop on Bayesian networks for risk assessment and decision making Lund, invited speakers Wayne Landis and Sakari Kuikka. International audience.
- 2016 Symposia on Transparency and Uncertainty Analysis: Benefits and Pitfalls at the Society for Risk Analysis annual meeting in San Diego, US.
- 2016 Symposia on Small data at the European Safety and Reliability Conference ESREL at ETH, Zurich, Switzerland
- 2015, 2016, 2020 Member of the Technical Program Committee of the annual European Safety and Reliability Conference ESREL
- 2015 Seminar on Bayesian inference and prior-data conflict, Lund Sweden. Invited speaker Gero Walter from Technische Universiteit Eindhoven. International audience.
- 2015 Workshop on Bayesian methods using Stan, Lund Sweden. Invited speaker Aki Vehtari from Aalto University.
- 2015 Symposia on Confronting uncertainty beyond Bayesianism, Lund Sweden. Invited speakers Peter Gärdenfors, Lund University and Kristie Ebi, University of Washington.
- 2015 BECC workshop Science of decision making in research, Lund University, Sweden
- 2013 BECC workshop Integrative Modelling and Data Synthesis and Emulation, Invited speaker John Paul Gosling. International audience. Lund Sweden
- 2010 Seminar Robust decision making in an uncertain world, Lund Sweden. Invited speaker Hugh Possingham, University of Queensland, Australia, and Nils-Eric Sahlin, Lund University.

- **INSTITUTIONAL RESPONSIBILITIES**

- 2017 - Leader of the research group “Uncertainty and Evidence Lab” at Centre of Environmental and Climate Research, Lund University, Sweden.  
<http://www.cec.lu.se/research/unevil>
- 2016 - Board member of the Lund University Centre for Risk Assessment and Management

- **COMMISSIONS OF TRUST**

Reviewer for scientific journals: Journal of Risk Research, Journal of Risk Analysis, Journal of Theoretical Biology, Journal of Chemoinformatics, SAR and QSAR in Environmental Research, Ecological Applications, Ecology and Evolution, Biological Invasions, Marine Ecology, Sustainability, Science of the Total Environment, the Nordic Journal of Botany.

- 2019 - Independent scientific expert in the cross cutting working group on uncertainty (SCER) EFSA
  - 2016-2017 Independent scientific expert in the working group Healthy-B and Must-B under the European Food Safety Agency (EFSA) Unit of Animal and Plant Health and Welfare
- Opponent three times, pre-examiner two times.

- **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2018 – current President of the Swedish Society for Risk (Riskkollegiet.nu)
- 2015 – 2017 President of the Nordic Chapter of the Society for Risk Analysis
- 2014 – Member, Research Network “Society for Risk Analysis”

- **MAJOR COLLABORATIONS**

Matthias Troffaes, Decision making under uncertainty and quantification of uncertainty, Durham University, UK. \*Ola Olsson, Henrik Smith, Martin Stjernman, Yann Clough, Maj Rundlöf,

Modelling of risk and ecosystem services in agricultural landscapes, Lund University, Sweden,  
\*Johan Lindström, Rasmus Bååth, Niklas Vareman, Nils-Eric Sahlin, Quantification and communication of uncertainty, Lund University, Sweden.

- **CAREER BREAKS**

Parental leave 9 months 2010-2011; Parental leave 8 months 2007; Parental leave 8 months 2004

**Research projects (examples)**

Environmental management and decision theory under uncertainty – PhD project Faculty of Science Lund University 2019-2023

Evaluating indirect effects of climate change on pollinators and pollination services through pesticide exposure 2018-2020

Robust analysis in evidence-based decision making – PhD project Faculty of Science Lund University 2017 – 2021

Managing agricultural landscapes for ecosystem services under uncertain futures – PhD project Faculty of Science Lund University 2017-2021

Scaling up uncertain environmental evidence – quality assurance in ecosystem services predictions (Swedish research council for sustainable development –FORMAS grant 942-2015-1778 2013-01271) 2013 - 2018

**Commissions (examples)**

Commission to evaluate the threat by imported bumblebees (The Swedish Civil Contingencies Agency and the Swedish Board of Agriculture Proj Nr MSB 2016-2056 SJV Dnr: 6.9.17-1517/17) 2017-2018

Commission to develop indices for biological diversity in grasslands (The Swedish Board of Agriculture Dnr 3.2.17-00668/18) 2018

Commission to conduct regional risk assessment of the invasive species signal crayfish (Swedish Board of Marine and Water Management) 2017

Risk analysis on Marmour crayfish together with Swedish University of Agricultural Sciences, Commission to Swedish Agency for Marine and Water Management 2013

*Bibliometric indicators*

Web of Science: 27 publications, h-index 10, Average citations per item 7.17, Times cited 205 (190 without self citations)

Scopus: 35 publications, h-index 11, Times cited 238

*Invited presentations internationally established conferences and/or advanced schools*

Invited speaker on the quantification of uncertainty in individual predictions to the CADD Gordon Conference on Computer Aided Drug Design, Vermont, US, 2019.

Invited to give lectures on imprecise probability in environmental risk assessment at the 7th SIPTA Summer School on Imprecise Probabilities, Durham University, UK, 2016.

Invited speaker on the use of Bayesian methods for chemical modelling and quantification of model's applicability domain at the CADD Gordon Conference on Computer Aided Drug Design, Vermont, US, 2012.

*Academy memberships*

President of the Swedish Society for Risk (Riskkollegiet) – 2018

President of the Nordic Chapter of the Society for Risk Analysis – 2015 – 2017 -then board member

Representative in the Lund University Centre for Risk Assessment and Management – 2016 – 2019

## Ullrika Sahlin

### Peer-reviewed articles since 2010

- Hristov, J., Brady, M., Clough, Y., Sahlin, U., et al. (2019). Impacts of the EU's Common Agricultural Policy "greening" reform on agricultural development, biodiversity and ecosystem services. *Applied Economics Perspectives and Policy*. Accepted.
- Holmes, M., Kotta, J., Persson, A., U. Sahlin (2019). Marine protected areas modulate habitat suitability of the invasive round goby (*Neogobius melanostomus*) in the Baltic Sea. *Estuarine, Coastal and Shelf Science*, 229, 106380.  
doi:<https://doi.org/10.1016/j.ecss.2019.106380>
- Stjernman, M., Sahlin, U., Olsson, O., H. G. Smith (2019). Estimating effects of arable land-use intensity on farmland birds using joint species modelling. *Ecological Applications* 29(4) <http://dx.doi.org/10.1002/eap.1875>.
- Knaggård, Å., Slunge, D., Ekblom, A., Göthberg, M., U. Sahlin (2019). Researchers' approaches to stakeholders: Interaction or transfer of knowledge? *Environmental Science and Policy* 97:25-35. <http://dx.doi.org/10.1016/j.envsci.2019.03.008>
- Blanke, J., Boke-Olen, N., Olin, S., Chang, J., Sahlin, U., Lindeskog, M., V. Lehsten (2018). Implications of accounting for management intensity on carbon and nitrogen balances of European grasslands. *PLoS ONE* 13(8)  
<http://dx.doi.org/10.1371/journal.pone.0201058>
- Holmquist, H., J. Lexén, M. Rahmberg, U. Sahlin, J. G. Palm and T. Rydberg (2018). The potential to use QSAR to populate ecotoxicity characterisation factors for simplified LCIA and chemical prioritisation. *The International Journal of Life Cycle Assessment*.
- Baey, C., U. Sahlin, Y. Clough and H. G. Smith (2017). A model to account for data dependency when estimating floral cover in different land use types over a season. *Environmental and Ecological Statistics* 24(4): 505-527.
- Sahlin, U., and M. C. M. Troffaes. 2017. Imprecise Swing Weighting for Multi-Attribute Utility Elicitation, *ISIPTA'17*
- Sahlin, U., and M. C. M. Troffaes. 2017. A note on EFSA's ongoing efforts to increase transparency of uncertainty in scientific opinions. *Journal of Risk Research*:1-8. DOI: 10.1080/13669877.2017.1313769
- Blanke, J. H., S. Olin, J. Stürck, U. Sahlin, M. Lindeskog, J. Helming, and V. Lehsten. 2017. Assessing the impact of changes in land-use intensity and climate on simulated trade-offs between crop yield and nitrogen leaching. *Agriculture, Ecosystems & Environment* 239:385-398. DOI: 10.1016/j.agee.2017.01.038
- Häussler, J., U. Sahlin, C. Baey, H. G. Smith, and Y. Clough. 2017. Pollinator population size and pollination ecosystem service responses to enhancing floral and nesting resources. *Ecology and Evolution* 7:1898-1908. DOI: 10.1002/ece3.2765
- Sahlin, U. 2016. Small data and conflicting information. Pages 299-305 *Risk, Reliability and Safety: Innovating Theory and Practice*. CRC Press.
- Sahlin U and Rundlöf M (2016). Differences in the strengths of evidence matters in risk-risk trade-offs. Comment on Lofstedt and Schlag (2016). *Journal of Risk Research*. DOI: 10.1080/13669877.2016.1178662
- Sahlin U and Jiang Y. (2015). Bayesian Evidence Synthesis and the quantification of uncertainty in a Monte Carlo simulation. *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability*. DOI: 10.1177/1748006X15609003
- Sahlin U. (2015). What type of uncertainty is robustness referring to in Information Gap Decision Theory? *Safety and Reliability of Complex Engineered Systems*. Eds: Podofillini, et al. CRC Press.

- Sahlin U, Di Maio F, Vagnoli M and Zio E. (2015). Evaluating the impact of climate change on the risk assessment of Nuclear Power Plants. *Safety and Reliability of Complex Engineered Systems*. Eds: Podofillini, et al. CRC Press.
- Tyler T, Karlsson T, Milberg P, Sahlin U and Sundberg S (2015). Invasive plant species in the Swedish flora: Developing criteria and definitions, and assessing the invasiveness of individual taxa. *Nordic Journal of Botany* 33(3). DOI: 10.1111/njb.00773
- Sahlin U. (2014). Assessment of uncertainty in chemical models by Bayesian probabilities – why, when, how? *Journal of Computer Aided Drug Design*, DOI: 10.1007/s10822-014-9822-3.
- Golsteijn L, Iqbal MS, Cassani S, Hendriks HWM, Kovarich S, Papa E, Rorije E, Sahlin U, Huijbregts, M. (2014). Assessing predictive uncertainty in comparative toxicity potentials of triazoles. *Environmental Toxicology and Chemistry* 33(2): 293-301. DOI: 10.1002/etc.2429
- Sahlin U, Jeliaskova N, Öberg, T. (2013). Applicability Domain Dependent Predictive Uncertainty in QSAR Regressions. *Molecular Informatics* 33(1): 26-35. DOI: 10.1002/minf.201200131
- Cassani S, Kovarich, S, Papa E, Roy P, Rahmberg M, Nilsson S, Sahlin U, Jeliaskova N, Kochev N, Pukalov O, Tetko I, Brandmaier S, Durjava M, Kolar B, Peijnenburg W, Gramatica P. (2013). Evaluation of CADASTER QSAR models for the aquatic toxicity of (benzo)triazoles and prioritisation by consensus prediction. *Alternatives to laboratory animals: ATLA* 41(1): 49-64.
- Durjava M, Kolar B, Arnus L, Papa E, Kovarich S, Sahlin U, Peijnenburg W. (2013). Experimental assessment of the environmental fate and effects of triazoles and benzotriazole. *Alternatives to laboratory animals: ATLA* 41(1): 65-75.
- Iqbal S, Golsteijn L, Öberg T, Sahlin U, Papa E, Kovarich S, Huijbregts M. (2013). Understanding quantitative structure-property relationships uncertainty in environmental fate modeling. *Environmental Toxicology and Chemistry* 32(5): 1069-1076. DOI: 10.1002/etc.2167
- Sahlin U, Golsteijn L, Iqbal S, Peijnenburg W. (2013). Arguments for considering uncertainty in QSAR predictions in hazard and risk assessments. *Alternatives to laboratory animals: ATLA* 41(1): 91-110.
- Sahlin U. (2013) Uncertainty in QSAR predictions. *Alternatives to laboratory animals: ATLA* 41:111-125.
- Söderström M, Boldemann C, Sahlin U, Martensson F, Raustorp A, Blennow, M. (2013). The quality of the outdoor environment influences childrens health - a cross-sectional study of preschools. *Acta Paediatrica* 102(1):83-91. DOI:10.1111/apa.12047
- Sahlin (2012). Reliability in Predictive Models under Alternative Treatments of Predictive Uncertainty – QSPRs in Chemical Safety Assessments. *Conference Proceedings European Safety and Reliability Association (ESREL) 2012*.
- Iqbal S and Sahlin U. (2012). Treatment of Epistemic Uncertainty in Environmental Fate Models – Consequences on Chemical Safety Regulatory Strategies. *Conference Proceedings European Safety and Reliability Association (ESREL) 2012*.
- Brandmaier S, Sahlin U, Tetko I, Öberg T (2012). PLS-Optimal: A Stepwise D-Optimal Design Based on Latent Variables. *Journal of Chemical Information and Modeling* 52(4): 975-983.
- Lubbe N and Sahlin U. (2012). Benefits of Biofuels in Sweden: A Probabilistic Re-assessment of the Index of New Cars' Climate Impact. *Journal of Applied Energy* 92:473-479.

- Svensson G, Sahlin U, Brage B, Larsson MC. (2011). Modelling dispersal in saproxylic insects based on pheromone capture and radio telemetry: a case study on the threatened hermit beetle *Osmoderma eremita*. *Biodivers Conserv* 20:2883-2902.
- Sahlin U, Filipsson M, Öberg T. (2011). A risk assessment perspective of current practice in characterizing uncertainties in QSAR regression predictions. *Mol Inform* 30:551-564.
- Sahlin U, Rydén T, Nyberg CD, Smith HG. (2011). A benefit analysis of screening for invasive species – base-rate uncertainty and the value of information. *Methods in Ecology and Evolution* 2:500–508.
- Sahlin U, Smith H, Edsman L, Bengtsson G. (2010). Time to establishment success for introduced signal crayfish in Sweden - a statistical evaluation when success is partially known. *Journal of Applied Ecology* 47:1044-1052.