Curriculum vitae

Personal details

Name: Helske, Jouni Veikko Taneli
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Degrees

9.12.2015	PhD in Statistics, University of Jyväskylä, Finland
25.8.2010	MSc in Statistics, University of Jyväskylä, Finland
28.7.2010	BSc in Statistics, University of Jyväskylä, Finland

Current employment

1.9.2020–present **Senior Researcher (yliopistotutkija)** University of Jyväskylä, **Finland**
Research on Bayesian statistics, causal inference, state space models, statistical software development, leading the statistics subconsortium of PREDLIFE

Previous work experience

1.9.2019–31.8.2019 **Postdoctoral Researcher** University of Jyväskylä, **Finland**
Research on Bayesian statistics, causal inference, state space models, statistical software development

16.10.2017–31.8.2019 **Postdoctoral Researcher in Visual Analytics** Linköping University, **Sweden**
Research on Bayesian statistics, information visualization, state space models

1.1.2016–15.10.2017 **Postdoctoral Researcher** University of Jyväskylä, **Finland**
Research on Bayesian statistics, state space models, statistical software development

1.9.2010 –31.12.2015 **Doctoral Student** University of Jyväskylä, **Finland**
Research on state space models, time series, statistical software development

1.6.2010 –31.8.2010 **Research Assistant** Tampere University of Technology, **Finland**
Research on hidden Markov models

International research visits:

9/2016–7/2017	Department of Statistics, University of Oxford, **United Kingdom**
9–10/2017	Department of Information Technology, Uppsala University, **Sweden**
5-6/2012	School of Mathematics, University of Bristol, **United Kingdom**

Career breaks

1.10.2013–31.8.2014 Parental leave between October 2013 and August 2014.

Research funding and grants

2020 Academy of Finland: **Project funding for a consortium project**: Towards well-informed decisions: Predicting long-term effects of policy reforms on life trajectories (PREDLIFE) (9.2020–8.2024). Decision numbers 331816 and 331817.
Consortium PI Satu Helske (University of Turku) 280,000€
Subconsortium-PI Jouni Helske (University of Jyväskylä) 280,000€
2013 Emil Aaltonen Foundation: **Personal scholarship** for full-time doctoral studies. 25000€
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Research output

Since 2010 I have **authored 15 peer-reviewed, 3 non-peer-reviewed scientific articles or book chapters**, and have 6 papers currently under review.

In addition to these, I have **produced nine R statistical software packages** currently at The Comprehensive R Archive Network (CRAN) as a result of my research, most notably the R packages KFAS, seqHMM, and bssm for exponential family state space modelling, multivariate hidden Markov modelling, and Bayesian non-Gaussian state space modelling respectively.

Research supervision and leadership experience

- I lead the statistics subproject of the Academy Finland project PREDLIFE.
- I supervise two PhD students and one MSc student at the University of Jyväskylä.
- I have graded two Master's theses.

Teaching merits

- Lecturer in Statistical inference 1. University of Jyväskylä, 2021.
- Lecturer in Bayesian statistics 1. University of Jyväskylä, **multiple times**: 2020 and 2021.
- Lecturer in Generalized linear models 2. University of Jyväskylä, 2020.
- Lecturer in R programming. University of Jyväskylä, **multiple times**: 2x2012, 2013, 2014, 2015.
- A guest lecture on Computationally efficient state space modelling in Graduate Lecture series (in English). University of Oxford (23 February 2017).
- A lecture on state state space models in Time series analysis. University of Jyväskylä, 2015.
- Organizer of Book seminar of Statistical Programming in C++ and R (in English). University of Jyväskylä, 2013.
- Lab supervision in Stochastic simulation (in English). University of Jyväskylä,2016.
- Lab supervision in Basics in statistics 1, University of Jyväskylä, 2008, 2010, 2011.
- Lab supervision in Sampling methods, University of Jyväskylä, 2011.
- Lab supervision in Advanced course in statistics, University of Jyväskylä, 2010.
- Lab supervision in Basic course in statistics, University of Jyväskylä, 2008.

Patents, inventions, awards and honours

2016 Longitudinal Data Analysis Contest Award, LaCOSA II Conference, Lausanne, Switzerland.
2015 Best poster award, UseR! 2015 Conference, Aalborg, Denmark.

Other key scientific or academic merits

Reviewer for (with multiple rounds and several papers for some)

- Australian & New Zealand Journal of Statistics, Industrial & Engineering Chemistry Research, Stat, Stochastic Environmental Research and Risk Assessment, Sensors, Applied Computational Intelligence and Soft Computing, Mathematical and Computational Applications, Mathematics, R Journal, Journal of Statistical Software, and CHI 2022 conference (with note of excellence).

Member of the organizing committee for

- Novel approaches to numerical challenges related to environmental monitoring, 2015, Jyväskylä, Finland.
- Statistical Days 2013, 2013, Jyväskylä, Finland.
- Seminar on Current Doctoral Research in Biostatistics, Statistics and Related Areas, 2011, Helsinki, Finland.

Scientific and societal impact

- 2016-2018 I provided statistical consultancy for the Finnish Environment Institute on project SAVE which studied the effects of gypsum in agriculture.
- I have collected open access data for assessing the effects of visualization on statistical inference, available at https:..github.com.helske.statvis.
- Codes for reproducing the analysis of my recent and upcoming publications are available online at github.com.helske.