# Curriculum vitae

## Personal details

Name: Helske, Jouni Veikko Taneli (previously Lehtonen)
ORCID: 0000-0001-7130-793X
Year of birth: 1983
Nationality: Finnish
Date of CV: 20.12.2021

## 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*

## 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**

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|---|---|
| 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.<br>Consortium PI Satu Helske (University of Turku) 280,000€<br>**Subconsortium-PI** Jouni Helske (University of Jyväskylä) 280,000€ |
| 2013 | Emil Aaltonen Foundation: **Personal scholarship** for full-time doctoral studies. 25000€ |
| 2012 | Emil Aaltonen Foundation: **Personal scholarship** for full-time doctoral studies. 23000€ |
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**Research output**

Since 2010 I have **authored 14 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.