Curriculum Vitae, Marko Laine, March 6, 2025

Personal details

Laine, Marko Juhani, ORCID-ID: `http://orcid.org/0000-0002-5914-6747`,
Google Scholar: `http://scholar.google.fi/citations?user=v2xdrFEAAAAJ`

Education and degrees completed

2014-12-29 *Title of Docent* in applied mathematics at Lappeenranta University of Technology, School of Engineering Science, Finland.

2008-03-28 *Doctor of Philosophy* in applied mathematics at Lappeenranta University of Technology, Finland, passed with honours.

1999-09-17 *Licentiate of Philosophy* in applied mathematics, University of Helsinki, Finland

1990-06-21 *Master of Science* in mathematics, stochastics curriculum, University of Helsinki.

Current position

Research Professor, Head of Group, Meteorological Research Applications, Finnish Meteorological Institute, Meteorological Research unit. Research areas: statistical postprocessing for numerical weather prediction, geophysical inverse problems, climate time series, uncertainty quantification in large scale computer models, Monte Carlo methods in statistics.

Previous work experience

Finnish Meteorological Institute
– 2016/2022 Research Professor (tenure track) on statistical postprocessing to improve numerical weather forecasts.
– 2006/2016 Researcher and senior researcher in various Academy and TEKES funded projects. Permanent position from 2008.

University of Helsinki Department of Mathematics
– 1997/2005 Researcher in several Academy and EU funded projects. Fee-paid teaching in mathematics.

ProfMath Oy, Helsinki, Finland
– 2000/2006 Statistical and mathematical consulting, software engineering. Part time jobs.
– 2005/2006 National Technology Agency of Finland (TEKES) funded project *Rapid estimation of chemical kinetics by implicit calibration*.

Auspex Oy, Helsinki, Finland
– 2007/2022 Self-owned company for statistical consulting and teaching. Part time jobs. Statistical consultant for Finnish Environment Institute for laboratory proficiency testing services.

University of Helsinki Computing Centre
– 1994/1997 Acting assistant.
– 1990/1993 Different computer technology positions.

Personal research funding and grants
  – 2024/2028 FMI-co-PI for Research Council of Finland *Flagship of Advanced Mathematics for Sensing Imaging and Modelling (FAME)*.
  – 2023/2025 FMI-co-PI for Research Council of Finland *Centre of Excellence in Inverse Modelling and Imaging*.
  – 2023/2025 FMI-PI for EU Horizon Europe project *Asset Level Modelling of Risks in the Face of Climate Induced Extreme Events and Adapttation (RISKADAPT)*.
  – 2020/2023 Principal Investigator and consortium leader for Academy of Finland project *Advanced data fusion methods for environmental modeling (ADAFUME)*.
  – 2020/2023 FMI-PI for EU H2020-SC5 project *Structured Approaches for Forest fire Emergencies in Resilient Societies (SAFERS)*.
  – 2018/2019 Principal Investigator for Academy of Finland funded ICT2023 project *Industrial Internet and Data Analysis for Marine Industries (IIDA-MARI)*.
  – 2010/2012 Academy of Finland postdoctoral researcher's fund, *Computational methods for Bayesian statistical analysis of complex models*.

Supervision experience
  – Thesis supervision: Anu Kauppi, Otto Lamminpää, Jouni Susiluoto (PhD, Department of Mathematics and Statistics, University of Helsinki), Madeleine Ekblom, Pirkka Ollinaho (PhD, Department of Physics, University of Helsinki), Michel Rwema (PhD, LUT University), Janne Hakkarainen, Aki Koyama (MSc, Department of Mathematics and Statistics, University of Helsinki), Niilo Latva-Pukkila (MSc, University of Jyväskylä), Horahenage Vimalajeewa, Dereje Derene (MTech, LUT University), Tuukka Himanka (MTech, Aalto University).

Teaching experience
  – 2010/2019 Fee-paid teaching in mathematics at Lappeenranta University of Technology.
  – 1995/2015 Several courses given in mathematics, mathematical and statistical software and modelling at University of Helsinki Computing Centre, at several departments, and at University Adult Training Centre (*Palmenia*).
  – 2006 Lecturer at the Finnish Graduate School in Astronomy and Space Physics Summer School.
  – 1999/2000, 2004/2006 Fee-paid teaching at Espoo-Vantaa Institute of Technology (EVTEK).

Awards and honours
  – Knight of the Order of the White Rose of Finland, 2019-12-06.
  – Finnish Inverse Problems Society's The Finnish Inverse Prize, 2007.
  – Finnish Mathematical Society Award for an excellent Pro Gradu, 1990.

Other key scientific or academic merits
  – Invited key note speaker at Computational Inverse Problems conference, Australian Mathematical Sciences Institute, Creswick, Australia, 2017-06-15.
  – Invited key note speaker at Inverse Problems Africa 2012, Bahir Dar, Ethiopia, 2012-08-26.

Memberships and positions of trust in scientific societies

Member of Finnish Inverse Problems Society and Finnish Mathematical Society.

Contact Information

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