

**Curriculum Vitae: Prof. Johanna Tamminen**

Date: 30.5.2025  
 Family name: Tamminen  
 First name: Johanna  
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**Degrees**

2018 Research Professor (Atmospheric Remote Sensing), Finnish Meteorological Institute  
 2012 Title of Docent (Applied mathematics), University of Helsinki, Finland  
 2004 PhD (Applied mathematics), University of Helsinki, Finland  
 1999 Phil. Lic. (Applied mathematics), University of Helsinki, Finland  
 1993 M. Sc. (Mathematics), University of Helsinki, Finland

**Current employment**

Since 2018 Head of Earth Observation Research Unit, Finnish Meteorological Institute (FMI),  
 Space and Earth Observation Centre  
 Since 2018 Research professor, Finnish Meteorological Institute

**Previous work experience**

2008 – 2017 Head of Atmospheric Remote Sensing group, FMI  
 2013 – 2016 Tenure track prof. Remote sensing of greenhouse gases, FMI  
 2005 – 2007 Head of Middle Atmosphere Research Group, FMI  
 1992 – 2005 Trainee and Scientist, FMI

**Career breaks**

Maternity leave 9 months during 2000-01 and 9 months during 2005-06.

**Research funding and grants**

National projects: Vice director of Centre of Excellence in Inverse Modelling and Imaging (2018 – 2025), PI of Research Council of Finland's (RCF) Flagship on Advanced Mathematics for Sensing, Imaging and Modelling, Responsive leader in RCF projects: Proof-of-Concept study SHARP-Africa (2024-2025), INQUIRE (2013-17), NOVAC (2010-13) and THERMES project (2008-11). Responsive leader in Tekes/Business Finland funded projects: SpaceCasting (2022-23), OMIVAL (2005-07), PP-TROPOMI, MASI-INVMAT (2007-09) and WP leader in Tekes funded HyperGlobal project (2015-2017). Numerous participations in international projects funded by ESA (MethaneCAMP (2022-24, coordinator), AMPAC-Net (2022-25, co-PI), CCI-ozone(co-PI), Dragon, ON-TRAQ(Co-PI), EU (CoCO2 (2022-2023, Task leader), GMES-Pure, EMERGE). Total funding granted > 2 Meur.

## Research output

- Over 170 publications in total out of which 130 peer-reviewed, covering atmospheric remote sensing, remote sensing algorithms, mathematical and statistical methods, air quality, greenhouse gases, climate and ozone (see [www.space.fmi.fi/~jtammine/publications.pdf](http://www.space.fmi.fi/~jtammine/publications.pdf))
- Numerous scientific talks and poster presentations at international conferences. Several articles and lectures targeted for public. Typically, several interviews, press releases or science news yearly.

## Research supervision and leadership experience

- Supervision: Principal advisor of 3 Postdocs and Principal/co-advisor 4 PhD Students, 1 licentiate student, and 3 master's students. On-going supervision of 6 PhD students (applied mathematics/atmospheric physics).
- Leadership: Group leader since 2005; Head of Unit since 2018, Research project leader since 2005.

## Teaching merits

- Lectures in atmospheric remote sensing, University of Helsinki, Aalto University, European Space Agency training courses, Space for Humanity bootcamp.

## Awards and honours

- |      |   |
|------|---|
| 2021 | American Meteorological Society Special Award for Ozone Monitoring Instrument (OMI) International Team                  |
| 2018 | William T. Pecora Award by the U.S. Geological Survey, USGS to the Ozone Monitoring Instrument (OMI) International Team |
| 2018 | NASA group Achievement Award to Orbiting Carbon Observatory 2 (OCO-2) Science team                                      |
| 2009 | NASA Group Achievement Award to OMI Instrument Team   |

## Other key academic merits

- 2024-26 Member of European Space Sciences Committee, European Science Foundation
- 2019-23 Member of the Advisory Committee for Earth Observation, European Space Agency
- 2019-23 Member of the World Meteorological Organization's Global Climate Observing System (GCOS) Atmospheric Observation Panel for Climate (AOPC)
- Since 2018 Vice director, Center of Excellence in Inverse Modeling and Imaging
- Since 2024 Member of FAME Management group (RCF Flagship on Advanced Mathematics ...)
- Since 2016 Member of Board, Finnish Inverse Problems Society, Finland
- 2014-20 Member of the Swedish National Space Board's Space Research Advisory Committee
- Since 2018 Chair of Steering Group, EUMETSAT Atmospheric Composition Satellite Application Facility (AC-SAF)
- 2017-19 Member of ESA CO2M Mission Advisory Group, Copernicus High Priority Anthropogenic CO<sub>2</sub> Mission
- 2016-18 Member of Jury for Multiannual Strategic Research Program of the Royal Netherlands Meteorological Institute 2016-18
- Since 2024 Member of Science Advisory Group of European Space Agency's TANGO satellite
- 2012-18 Member of ESA Mission Advisory Group, Sentinel 5 Precursor / TROPOMI

- Since 2005 Co-Principal-Investigator of Dutch-Finnish Ozone Monitoring Instrument (OMI) on-board NASA's EOS-Aura satellite, 2005 onwards. Member of OMI Science Advisory Board.
- 2012-21 Member of the International Ozone Commission (IO3C)
- 2014-20 Member of Board, Academy of Finland funded Center of Excellence in Inverse Problems, Finland
- 2016-20 Member of Advisory board of Lappeenranta University of Technology Research Platform "RED - Revealing emission discrepancies", Finland
- Since 2011 Member of National Copernicus/GMES User Forum team in Finland with focus area on Atmosphere
- 2022 Session convener/chair, European Space Agency Living Planet Symposium
- 2015-24 Session convener/chair, European Space Agency ATMOS (every three years)
- 2016-21 Session convener/chair, Quadrennial Ozone Symposium (every four years)
- 2020 Co-organizer, Inverse Days (virtual)
- 2018-20 Co-organizer, Remote Sensing Days, Helsinki, Finland
- 2018 Co-organizer, EUMETSAT Meteorological Satellite conference 2018, Estonia
- 2018 Co-organizer, Workshop on Inverse Problems and Uncertainty Quantification in Satellite Remote Sensing, Helsinki, Finland
- 2017 Organizer, Remote Sensing Days, Helsinki, Finland
- 2017 Organizer, 13<sup>th</sup> International Workshop on GHG Measurements from Space
- 2013 Organizer, Workshop on Past Changes in the Vertical Distribution of Ozone.
- 2013 Co-Organizer, Workshop on Absorption Cross Sections of Ozone, WMO Geneva,
- 2011 Organizer, EOS-Aura and OMI Science Team meetings, Helsinki
- 2009-10 Co-Organizer, Ozone Theme Meeting, WMO Geneva, Switzerland
- 2009 Co-Organizer, 5<sup>th</sup> International Atmospheric Limb Conference, Helsinki, Finland
- 2018-19 Guest editor of Canadian Journal of Remote Sensing, Special Issue on Arctic Research
- 2015-17 Guest editor of Atmospheric Chemistry and Physics and Measurement Techniques, Special Issue Ten years of Ozone Monitoring Instrument Observations
- 2012-15 Guest editor of Atmospheric Measurement Techniques, GOME-2 Special Issue
- Since 2007 Reviewer for ACP, AMT, JGR, Inverse Problems, Frontiers of Remote Sensing, ...

### Scientific and societal impact

- 2019 Member of proposing team, scientific leader, CityScout satellite mission proposal to ESA
- 2017 Member of proposing team, Canadian AIM-North Mission proposal
- 2011-12 Member of Canadian led PCW/PHEMOS Science Team
- 2008-18 Coordinator of the World Meteorological Organizations (WMO) IGACO Ozone and UV Theme Office
- 2008-16 Member of the WMO Global Atmospheric Watch Science Advisory Group on Ozone
- 2011-12 Activity leader in SPARC, IO3C, WMO/IGACO-O3, NDACC Initiative *Past Changes in the Vertical Distribution of Ozone*
- 2009-15 Activity leader of the WMO's Expert Team ACSO – *Absorption cross sections of ozone*

### Other

- *Decoration:* Knight, First Class, of the Order of the Lion of Finland, 6.12. 2020
- *Academy Memberships:* Member of the Finnish Society of Sciences and Letters (2020), Member of the Finnish Academy of Technology (2023).
- *Member of the Board:* Porvoo Museum Association.