

Curriculum vitae – Timo Nousiainen

1. Full name and date

- **Surname, given names:** Nousiainen, Timo Petteri
- **Gender:** male
- **Date of birth:** 6 April 1970

2. Education and degrees awarded

- Ph.D., Meteorology, University of Helsinki, Finland, 13 September 2002 (Light scattering by nonspherical atmospheric particles)
- M.Sc., University of Helsinki, Meteorology, 16 Sept. 1994

3. Adjunct professorships

- Meteorology, University of Helsinki, Finland, 18 December 2006

4. Present employment

- 1 Aug. 2013 – ... : Senior researcher, Finnish Meteorological Institute, Earth Observation Programme

5. Previous work experience

- 1 Aug. 2008 – 31 July 2013: Academy Research Fellow, Department of physics, University of Helsinki, Finland
- 1 Aug. 2005 – 31 July 2008: Postdoctoral researcher of the Academy of Finland, Department of Physics, University of Helsinki, Finland
- 5 Oct. 2004 – 31 July 2005: Researcher, Department of Physical Sciences, University of Helsinki, Finland
- 17 Dec. 2003 – 15 Aug. 2004: Science subcontractor for the Army Research Laboratory, Adelphi, MD, USA, through Battelle Chapel Hill Operations
- 21 Jan. 2003 – 15 Aug. 2004, Post-doc Research Associate, Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, IL, USA
- 12 July 2000 – 31 Dec. 2002, Project Scientist, Geophysical Research Division, Finnish Meteorological Institute, Finland
- 1 Aug. 1998 – 11 July 2000, Acting Assistant, Department of Meteorology, University of Helsinki, Finland
- 1 Jan. 1997 – 31 July 1998, Researcher, Department of Meteorology, University of Helsinki, Finland (6 months with a grant from Vaisala Oyj)
- 1 Sept. 1994 – 31 Dec. 1996, Reseacher, Observatory, University of Helsinki, Finland

6. Most important visits abroad

- A joint Postdoctorate and Science subcontractor position in the University of Illinois at Urbana-Champaign, 21 Jan 2003 – 15 Aug 2004

7. Most important scientific and academic administrative positions

- None

8. Most important awards, prizes and honours

- Researcher of the Month (Dec 2012), Academy of Finland (in Finnish; <http://www.aka.fi/fi/T/>)
- Most valued reviewer for the Journal of Quantitative Spectroscopy and Radiative Transfer (JQSRT) in 2011
- JQSRT Milestone Paper Award: in 2010, the Journal of Quantitative Spectroscopy and Radiative Transfer (JQSRT; Elsevier) granted a 50-year Milestone Paper Award to Muinonen et al., JQSRT, **55**, 577-601, placing it among the four most significant articles in light scattering in the history of the journal (as a co-author)
- Nousiainen et al. (JGR, **114**, D22208, 2009) was chosen for JGR-Atmospheres Editor's highlights
- The National Aeronautics and Space Administration's Group Achievement Award to AURA project, for success in designing, building, and launch of the Aura observatory, May 17, 2005 (as a member of the OMI Science Team)
- Finalist for the ERC 2014 Consolidator Grant.

9. Most important research funding

- Academy of Finland Research Fellow; 1 Aug 2008 – 31 July 2013; **621,767 €**
- Academy of Finland research project; 1 Jan 2009 – 31 Dec 2012; **137,000 €**
- Academy of Finland research project; 1 Jan 2008 – 31 Dec 2011; **184,000 €**
- Academy of Finland Postdoctoral Researcher; 1 Aug 2005 – 31 July 2008; **156,090 €**
- Finnish Funding Agency for Technology and Innovation, research project; 1 Jan 2005 – 31 Dec 2005; **97,200 €**

10. Research leadership and supervised doctoral dissertations

- **Leadership in research work:**
 - PI or co-PI in 5 international/national (4/1) research projects
 - Group leader of the Atmospheric Radiation Group, 2008 – 2013, University of Helsinki
- **Supervision of doctoral students:**
 - Jani Tyynelä, University of Helsinki, 2011
 - Jussi Leinonen, Aalto University, 2013
 - Hannakaisa Lindqvist, University of Helsinki, 2014
 - Anu-Maija Sundström, University of Helsinki, 2015

- Sini Merikallio, Aalto University, 2016
- Osku Kemppinen, Aalto University, 2016

11. Other academic expert positions

- **Memberships in Scientific Organizing Committees:**
 1. Vice-Chair, ELS XII, 2010, Helsinki, Finland
 2. Member, ISALSaRS'11, 2011, Lanzhou, China
 3. Member, ISALSaRS'13, 2013, Nagoya, Japan
- **Assessment of scientific qualifications**
 1. Member of the appointment committee for the Professor of Meteorology, 2000, University of Helsinki, Finland
- **Memberships in evaluation committees:**
 1. Member, Award Committee of the 2013 Elsevier/JQSRT van de Hulst Light-Scattering Award, 2013
- **Editorial responsibilities:**
 1. Visiting editor "Electromagnetic and Light Scattering by Nonspherical Particles XII", *Journal of Quantitative Spectroscopy and Radiative Transfer* **112**, Special Issue, Elsevier, 2010-2011
 2. Editor of the Muinonen, K., Penttilä, A., Lindqvist, H., Nousiainen, T., and Videen, G., Eds. (2010). *Electromagnetic and Light Scattering XII*, Conference Proceedings (University of Helsinki, Finland), 1-347 (ISBN 978-952-10-6374-9 and 978-952-10-6375-6 for the electronic version)
- **Referee for journals:** (1) Applied Optics; (2) Atmospheric Research; (3) Atmospheric Measurement Techniques; (4) Atti della Accademia Peloritana dei Pericolanti ; (5) Chinese Optics Letters; (6) Geophysica; (7) Journal of Atmospheric and Oceanic Technology; (8) Journal of Aerosol Science; (9) Journal of Quantitative Spectroscopy and Radiative Transfer; (10) Optics Express
- **Invited keynote lectures abroad:**
 1. T. Nousiainen (2008): Optical modelling of mineral dust aerosol: a review. In 11th Electromagnetic & Light Scattering Conference, September 7-12, University of Hertfordshire, Hatfield, UK

12. Scientific and societal impact of research

- **Total number of peer-reviewed journal articles:** 64
- **Total number of peer-reviewed books or book chapters:** 3
- **H-index:** 21 (Thomson Reuters ISI Web of Knowledge)
- **10 publications with most citations [ISI Web of Knowledge citation#]:**
 1. Volten, H., Muñoz, O., Rol, E., de Haan, J., Vassen, W., Hovenier, J., Muinonen, K., and Nousiainen, T. (2001): Scattering matrices of mineral aerosol particles at 441.4 nm and 632.8 nm. *J. Geophys. Res.*, **106**, 17375–17401. [234]

2. Muinonen, K., Nousiainen, T., Fast, P., Lumme, K., and Peltoniemi, J. I. (1996). Light scattering by Gaussian random particles: ray optics approximation. *J. Quant. Spectrosc. Radiat. Transfer*, **55**, 577–601. [125]
3. Nousiainen, T. (2009). Optical modeling of mineral dust particles: A review. *J. Quant. Spectrosc. Radiat. Transfer*, **110**, 1261–1279. [76]
4. Nousiainen, T., Kahnert, M., and Veihelmann, B. (2006). Light scattering modeling of small feldspar aerosol particles using polyhedral prisms and spheroids. *J. Quant. Spectrosc. Radiat. Transfer*, **101**, 471–487. [55]
5. Mitchell, D., Rasch, P., Ivanova, D., McFarquhar, G., and Nousiainen, T. (2008). Impact of small ice crystal assumptions on ice sedimentation rates in cirrus clouds and GCM simulations. *Geophys. Res. Lett.*, **35**, L09806. [50]
6. Kahnert, M., Nousiainen, T., and Räisänen, P. (2007). Mie simulations as an error source in mineral aerosol radiative forcing calculations. *Q. J. R. Meteorol. Soc.*, **133**, 299–307. [47]
7. Nousiainen, T. and Vermeulen, K. (2003). Comparison of measured single-scattering matrix of feldspar particles with T -matrix simulations using spheroids. *J. Quant. Spectrosc. Radiat. Transfer*, **79-80**, 1031–1042. [44]
8. Nousiainen, T., Muinonen, K., and Räisänen, P. (2003). Scattering of light by large Saharan dust particles in a modified ray optics approximation. *J. Geophys. Res.*, **108**, 4025. [43]
9. Zubko, E., Muinonen, K., Shkuratov, Yu., Videen, G., and Nousiainen, T. (2007). Scattering of light by roughened Gaussian random particles. *J. Quant. Spectrosc. Radiat. Transfer*, **106**, 604–615. [40]
10. Muñoz, O., Volten, H., Hovenier, J., Nousiainen, T., Muinonen, K., Guirado, D., Moreno, F., and Waters, L. (2007). Scattering matrix of large Saharan dust particles: Experiments and computations. *J. Geophys. Res.*, **112**, D13215. [40]

- **Other**

1. Co-author of the publicly available SIRIS (<https://wiki.helsinki.fi/display/PSR/SIRIS>) light- scattering code
2. Frequent Visiting expert for Q&A sections of Finnish popular science magazines “Tiede” and “Tähdet ja Avaruus”