

1: Full name and date

Name: Vainio, Rami Olavi
Gender: Male
Date of CV: 13 June 2018



2: Education and degrees awarded

09/2014 Title of Docent in space physics, University of Helsinki (UH), Finland
06/2002 Title of Docent in astrophysics, University of Turku (UTU), Finland
06/1998 PhD (physics), UTU
09/1993 MSc (theoretical physics), UTU

3: Linguistic skills

Finnish (mother tongue), English (proficient user), Swedish (independent user), German (basic user)

4: Current positions

01/2014– Professor in Experimental Space Physics, Department of Physics and Astronomy, UTU
01/2014– Head of Space Research Laboratory, Department of Physics and Astronomy, UTU

5: Previous work experience

08/2004 – 04/2014 University lecturer, Department of Physics, UH
09/2008 – 07/2009 Academy Research Fellow, Academy of Finland / Department of Physics, UH
08/2002 – 07/2004 Doctoral assistant, Department of Physical Sciences, UH
08/1999 – 07/2002 Postdoctoral researcher, Academy of Finland / Department of Physics, UTU
06/2001 – 08/2001 Research fellow, Theoretische Physik IV, Ruhr-Universität Bochum, Germany
03/1997 – 07/1999 Assistant of Physics, Department of Physics, UTU
09/1993 – 02/1997 Researcher (PhD student), Department of Physics, UTU

6: Research funding, leadership and supervision

Granted funding

European Union (Project grants)

- SEPServer (FP7 / Collaborative Project); Coordinator, 2010–2013
- HESPERIA (H2020 / Research and Innovation Action); co-PI (Coordinator: O. Malandraki), 2015–2017

European Space Agency (Project funding)

- Solar Energetic Particle Advanced Warning System (SAWS); WP leader, 2017–2019
- Radiation Expert Service Centre / SWE / SSA-2; Expert group leader, 2015–2017
- Interplanetary and Planetary Radiation Model for Human Spaceflight; co-PI, 2012–2013

Academy of Finland (Academy research projects and researcher positions)

- Finnish CoE in Research of Sustainable Space, vice director (director: M. Palmroth), 2018–2022.
- Towards Electron-scale Modelling of space Plasmas: Observations and global simulations; co-PI (PI: M. Palmroth), 2017–2021
- Hybrid-Vlasov simulations of Solar and Magnetospheric Plasmas; co-PI (PI: M. Palmroth), 2014–2017
- High and low energy particles: solar wind expansion and its effects on planetary atmospheres; co-PI (PI: E. Kallio), 2010–2013
- Solar eruptions, energetic particles and the induced radiation; *Academy research fellow* position and research grant, 2008–2009
- Energetic particles and high-frequency plasma waves in the solar corona; PI, 2008–2011
- Nonlinear effects in cosmic-ray transport and acceleration, *Postdoctoral researcher* position and research grant, 1999–2002

Academy of Finland (Researcher mobility)

- Gradual solar energetic particle events: observations, modeling and future experiments; PI, 2016–2017
- Energetic particles and high-frequency plasma waves in heliospheric plasmas; PI, 2012–2013
- Collective processes in astrophysical plasmas: waves, heating and accelerated particles; PI, 2002–2004

Ministry of Education and Culture (Project funding)

- PAS Pilot Project for open-access long-term storage of ERNE Measurements, PI, 2015

Finnish foundations (Research grants)

- RADMON radiation monitor for Aalto-1 satellite; PI, grants from *Väisälä foundation* in 2011–2012 and from *Magnus Ehrnrooth foundation* in 2012

Leadership in research work

- 2018– Vice-director, Finnish Centre of Excellence in Research of Sustainable Space, Acad. FI
- 2014– Head of Space Research Laboratory, UTU, 20 people (including PhD students on grants)
- 2015– Co-PI, Energetic Particle Experiment for THOR (ESA M4 Candidate mission), ESA
- 2015– Co-PI, Solar Intensity X-ray and particle Spectrometer (SIXS) for BepiColombo, ESA
- 2004–2014 Instrument Scientist, SIXS for BepiColombo, ESA
- 2011– Instrument Manager, RADMON for Aalto-1 satellite (national)
- 2006–2009 National coordinator of *International Heliophysical Year 2007*
- 2003–2007 Leader of COST-724 / Working Group 2: Radiation Environment of the Earth

Supervision of students (theses) and post-doctoral researchers

- 1998– 6 postdocs; 15 PhD students; 17 MSc students; 12 BSc students

7: Other academic merits

Evaluation of PhD / Phil.lic. theses

- 2016 External examiner of Andreas Johlander's Phil.lic. thesis, Uppsala University, Sweden
- 2007 Member of PhD Thesis Committee of M. Angels Aran i Sensat, UB

Evaluation of scientific merits

- 2015 Reviewer for Antti Hakola's application for the Title of Docent, UH

Evaluation of grant applications

- 2004– National Science Foundation, USA
- 2011– Natural Sciences and Engineering Research Council of Canada
- 2014 Vetenskapsrådet, Sweden
- 2014– Finnish foundations: Alfred Kordelin foundation, Väisälä foundation

Editorial activities and refereeing

- 2014–2018 Associate editor, Journal of Space Weather and Space Climate (SWSC)
- 2008– Editorial Board member, Advanced Science Letters
- 2008 Guest editor, Acta Geophysica
- 2004–2013 Editor, Astrophysics and Space Sciences Transactions (ASTRA)

Memberships in expert groups and positions of trust

- 2016– Finnish Delegate in the *Science Programme Committee*, ESA
- 2016–2018 Scientific Advisory Team member for *Virtual Space Weather Modelling Centre*, ESA
- 2015–2018 Science Study Team member for *Turbulence Heating Observer* (THOR), ESA
- 2008– Co-I, Energetic Particle Detector for *Solar Orbiter*, ESA
- 2008– Science Team member, Magnetometer for *Solar Orbiter*, ESA
- 2004– Co-I, Solar Intensity X-ray and particle Spectrometer for *BepiColombo*, ESA
- 2016–2018 Representative of UTU in the URSI National Committee
- 2017– President, Finnish Physical Society
- 2015–2017 Vice president, Finnish Physical Society
- 2014– Member of the Board, Finnish Physical Society
- 2014– Official representative of Finland, Commission H (Waves in Plasmas) of URSI
- 2003–2007 National representative of Finland in Management Committee of COST Action 724

8: Scientific and societal impact of research

Scientific publications

- Author or co-author of 115 articles in peer-reviewed journals; 18 articles in refereed conference proceedings and monographs; one scientific monograph (PhD thesis); 58 articles in non-refereed conference proceedings and monographs; and one textbook
- Total number of citations: 1897 (ISI WoS, 13 June 2018)
- h-index: 23 (ISI WoS, 13 June 2018)