

CURRICULUM VITAE

July 25, 2017

Emilia Katja Johanna Kilpua (née: Huttunen)

Born November 18, 1977, Oulu, Finland

UNIVERSITY DEGREES

- *Docent in Space Physics*, June, 2013, University of Helsinki, Finland
- *Doctor of Philosophy*, April 24, 2005, University of Helsinki, Finland
Major subject: Theoretical physics
PhD Thesis: Interplanetary shocks, magnetic clouds and magnetospheric storms
- *Master of Science*, June 16, 2000, University of Helsinki, Finland,

PRESENT POSITION

- *Associate professor at* Department of Physics, University of Helsinki (tenure track, 2015-2020)

PREVIOUS ASSIGNMENTS

- 2015 University Lecturer / Department of Physics, University of Helsinki, Finland
- 2009 – 2015 Academy Research Fellow, Academy of Finland
- 2008 – 2009 Post-doc/ Department of Physics, University of Helsinki, Finland
- 2007 – 2008 Assistant Research Physicists, Space Sciences Laboratory, University of California, Berkeley, USA
- 2005 – 2007 Post-Doc/ Space Sciences Laboratory, University of California, Berkeley, USA
- 2001 – 2005 Scientist/ Department of Physics, University of Helsinki, Finland
- 2000 – 2001 Research assistant/ Department of Physics, University of Helsinki, Finland

CAREER BREAKS

- Maternity leave 1.11.2010-1.9.2011

PARTICIPATION IN ACADEMIC EDUCATION

- *Supervisor four of post-docs:* K. Snekvik (2015), A. Isavnin (August 2014 →), J. Pomoell (September 2015 →), E. Asvestari (May 2017 →)
- *Supervisor of six doctoral thesis* of M. Alalahti (expected 2021), E. Lumme (expected 2020), E. Palmerio, UH (expected 2018) M. Myllys, UH (expected 2017), A. Isavnin, UH (2014), L. Turc, Ecole Polytechnique (with D. Fontaine), France (2014)
- *Supervisor of nine MSc thesis* of JebaRaj (expected fall 2017), M. Kalliokoski (expected ay 2018) M. Ala-Lahti (May 2017), E. Lumme (September 2016), N. Wijsen (KU Leuven, co-supervised, August 2016), A. Potemine, Paul Sabatier University, Toulouse, France (September 2015, co-supervised). E. Palmerio, UH (January 2015), S. Käki, UH (spring 2015), S. Nikbakhsh, UH (2014), M. Marsch, UH (2012)
- *Supervisor of five BSc thesis* of I. Pippa (expected fall 2017), M. Kalliokoski (May

2017), M. Lotti (2015), E. Lumme, UH (2015), J. Havukainen, UH (spring 2015).

SCIENTIFIC EXPERT POSITIONS

- 2016 – Member of Board of The Finnish Physical Society
- 2015 – CO-I, Bebicolumbo SIXS
- 2015 – Chair of Space Division of The Finnish Physical Society
- 2014 – Tekes Senior Advisor Pauli Stigell's Horizon 2020 Space Support group
- *Reviewer of scientific journals* (e.g., Annales Geophysicae, Journal of Atmospheric and Solar-Terrestrial Physics, Astrophysics and Space Science, The Astrophysical Journal, Journal of Geophysical Research,
- *Reviewer of research proposals* (e.g., NFS, USA 2011-2012 and Czech Science Foundation)
- Member of *Academy Club for Young Scientists*, 2009-2010

INSTITUTIONAL RESPONSIBILITIES

- 2016 – Member of Education Jury Board, UH
- 2016 - Committee of Master's Course Development Programme (Isopyörä), University of Helsinki, Finland
- 2014 - Steering group of Doctoral Programme in particle physics and universe sciences / Department of Physics, University of Helsinki, Finland
- 2014 - Member of Teaching Committee, University of Helsinki, Finland

TEACHING

- Fall 2018: *Lecturer of Johdatus Avaruusplasmafysiikkaan* at Department of Physics, University of Helsinki, Finland
- Fall 2017: *Lecturer of Electromagnetisms* at Department of Physics, University of Helsinki, Finland
- Spring 2016: *Lecturer of Advanced Space Plasma Physics* at Department of Physics, University of Helsinki, Finland
- Fall 2008, 2009, 2013-2016: *Lecturer of Plasma Physics*, Department of Physics, University of Helsinki, Finland
- Fall 2009, 2012, 2016: *Lecturer of Space Applications of Plasma Physics*, Department of Physics, University of Helsinki, Finland

MOST IMPORTANT FOREIGN VISITS (OVER ONE MONTH)

- Spring 2001, *Visiting scientist*, LASCO&ACE data analysis, with Dr. Rainer Schwenn Max Planck Institute for Solar System Research, Katlenburg-Lindau, Germany (1.5 month)
- Fall 2002, *Visiting scientist*, LASCO and ACE data analysis, Max Planck Institute for Solar System Research, Katlenburg-Lindau, Germany (1.5 month)
- Fall 2003, *Visiting scientist*, Cluster data analysis with Dr. James Slavin NASA Goddard Space Flight Center, Greenbelt, U.S. (3 months)
- 1.9.2005 – 31.12.2007, *Post-doc*, STEREO data analysis with Dr. Janet Luhmann and Prof. Stuart Bale, Space Sciences Laboratory, University of California, Berkeley

- 1.1.2008 – 31.7.2008, *Visiting scientist*, STEREO data analysis with Dr. Janet Luhmann and Prof. Stuart Bale, Space Sciences Laboratory, University of California, Berkeley

INVITED TALKS

- IAU Symposium 226: Coronal and stellar mass ejections, Beijing, 2004
- SOHO 20 Transient Events on the Sun and in the Heliosphere, Ghent, Belgium, 2007
- European Geosciences Union, General Assembly, Vienna, Austria, 19-24 Apr, 2009
- European Geosciences Union, General Assembly, Vienna, Austria, 19-24 Apr, 2009 (two invited talks)
- Three Eyes on the Sun STEREO-3/SOHO-22 Workshop, Bournemouth, UK, Apr, 2009
- 11th IAGA Scientific Assembly, Sopron, Hungary, Aug, 2009
- European Geosciences Union, General Assembly, Vienna, Austria, May, 2010
- Stereo-4/SDO-2/SOHO-25 meeting, Kiel, Germany, Jul, 2011
- 8th European Space Weather Week, Namur, Belgium, Dec 2011
- 14th European Solar Physics Meeting, Trinity Colleague, Dublin, UK, Sep, 2014
- Invited seminar, ESA Scientific Support Office Seminar Program, ESTEC, Noordwijk, Netherlands, March 4, 2016
- ISSI Workshop on The scientific foundations of Space Weather, Bern, Switzerland, 27 June - 1 July 2016
- European Week of Astronomy, 4-8 July 2016, Athens, Greece
- Cospar Meeting, Istanbul, Turkey, 31 July – 7 August, 2016 (Meeting cancelled)
- Space Weather Week, 14-18 November, 2016, Belgium, Session 9
- Space Weather Week, 14-18 November, 2016, Belgium, Session 3
- 7th Solar Orbiter Workshop, Granada, Spain, 3-6, April 2017

RESEARCH FUNDING

- 2018 - 2023: Finnish Center of Excellence for Sustainable Space, team leader, Academy of Finland
- 1.8.2018 -1.8.2021: Shocks and Magnetosheaths in the Heliosphere, Academy of Finland SMASH (co-PI) (398keur)
- 1.6.2017 -31.5.2022: ERC Consolidator Grant (PI) (1.93meur)
- 2015-2017: University of Helsinki 3-year research grant (PI) (150keur)
- 2015-2016: Coupling transient activity from the Sun to the Heliosphere, The Royal Society International Exchange Grant (co-PI) (7keur)
- 2014-2017: HELCATS, EU-FP7 (Task Leader) (220keur)
- 2013-2017: Missing Links in Space Weather Driving, Academy of Finland (Co-I) (256keur)
- 2009-2015: Academy of Research Fellow, Academy of Finland (PI) (606keur)
- 2012-2013: Turbulent properties of coronal mass ejection-driven sheath regions and related space weather effects, Academy of Finland (PI) (83keur)
- 2008-2010: University of Helsinki Post-Doc (PI)
- 2008: Microphysics of magnetic reconnection in the solar wind, Academy of Finland, (PI) (8keur)

- 2007: Observations of plasma wave activity in the solar wind magnetic reconnection regions, Academy of Finland, (PI) (8keur)
- 2001-2015: > 20 travel and visitor grants (1– 4keur) in (from Finland, UK; Germany & USA)

CONFERENCE ORGANIZING

- 2017: EGU meeting, Session ST1.4 (co-convener)
- 2017: 4th SOLARNET Meeting, Canary Islands, Spain (SOC)
- 2016: Global Space Weather Modelling Workshop, Espoo, Finland (SOC, LOC)
- 2016: EGU meeting/Session ST1.2 (convener, chair) and ST2.4 (co-convener) Vienna
- 2015: EU/FP7 HELCATS project meeting /Helsinki, Finland (main organizer)
- 2015: The 49th Annual Meeting of Finnish Physical Society/ Helsinki, Finland (LOC)
- 2014: The 48th Annual Meeting of the Finnish Physical Society/ Tampere (chair)
- 2013: EPS conference of Plasma Physics/ Espoo, Finland (LOC)
- 2013: European Week of Astronomy and Space Science, Turku Finland (SOC)
- 2013: EGU meeting/Session ST1.4/ Vienna, Austria (co-convener)

MERITS RELATED TO DISSEMINATION OF RESEARCH RESULTS TO WIDER PUBLIC

- Numerous outreach public lectures and key organizer of outreach events, e.g.
 - Coordinator of the 70th Anniversary Year of the Finnish Physical Society (various outreach events, exhibition, webpages)
 - Organizer of outreach events (e.g., Kosmoksen Valoja 2015 and Uusi Avaruus, 2016, Elämää Avaruudessa? 2017 at Tiedekulma, Tutkijoiden Yö 2016)
 - Public talks e.g., in URSA, and LUMA events, schools (latest at University of Helsinki for high school students, November 2016)
- Active appearances in media, including TV (latest November 2015) and radio (latest July 2015)
- Actively using social media to promote science and research results for a wider public and for a scientific community (e.g., Twitter @EmiliaKilpua)