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EDUCATION AND DEGREES AWARDED

- 28.1.2020 **Docent** in Space Physics, Dept. of Physics and Astronomy, University of Turku, Finland
- 26.10.2012 **Ph.D.**, Dept. of Physics, University of Helsinki, Finland
 - *Multi-Spacecraft Studies on Space Plasma Shocks*, grade Pass with Distinction
 - major in theoretical physics, grade excellent, 5/5
- 20.12.2007 **M.Sc.**, Dept. of Physics, University of Helsinki, Finland
 - *Exploring the Effects of Disorder on Fragmentation with Molecular Dynamics simulations*, grade eximia cum laude approbatur
 - major in theoretical physics, grade excellent, 5/5
 - minors: physics (5/5), geophysics (5/5), and mathematics (5/5)

OTHER EDUCATION AND TRAINING, QUALIFICATIONS AND SKILLS

- 23.1.2020 *Project Management: Core Skills*, Imperial College Postdoc and Fellows Development Centre (IC: PFDC), UK
- 7/2019 – 1/2020 *Imperial Essentials training (incl. Risk Assessment, Data Protection, Information Safety, and Equality and Diversity)*, Imperial College, UK
- 28.10.2019 *Mentoring Workshop*, Royal Society, UK
- 1.10.2019 *Introduction to supervising PhD students at Imperial*, Imperial College Educational Development Unit, UK
- 27.4.2018 *ERC funding applications*, Yellow Research, University of Turku, Finland
- 5.12.2014 *Springboard Women's Development Programme*, Imperial College Postdoc Development Centre (IC: PDC), UK
- 11.6.2013 *Preparing Successful Research Funding Applications*, IC: PDC, UK
- 15.2.2013 *Time Management & Personal Organisation for Postdocs*, IC: PDC, UK
- 7.12.2012 *Risk Assessment Foundation Training*, Imperial College, UK
- 21. – 23.11.2012 *Launching Your Career*, IC: PDC, UK
- 29.10.2012 *How to Peer-Review Research Papers*, IC: PDC, UK
- 9/2006 – 6/2007 **Master's 2nd year** (60 ECTS programme, ERASMUS exchange), Université Pierre et Marie Curie / Ecole Normale Supérieure, France
 - specialisation *Physics of Liquids and Soft Matter*

CURRENT POSITION

- 7/2019 – present **Royal Society University Research Fellow**, Space and Atmospheric Physics Group, Imperial College London, United Kingdom
- shocks, magnetic reconnection, and particle acceleration

PREVIOUS RESEARCH EXPERIENCE

- 4/2018 – 7/2019 **Junior Group Leader / Collegium Researcher / Senior Researcher**, Space Research Laboratory, Dept. of Physics and Astronomy, Univ. of Turku, Finland
- shocks, magnetic reconnection, and particle acceleration
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- 7/2018 – 5/2019 **Associate Researcher**, Experimental Space Physics Group, Dept. of Earth, Planetary and Space Sciences, University of California Los Angeles, USA
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- 9/2015 – 6/2018 **Assistant Researcher**, EPSS, UCLA, USA
- reconnection, solar wind – magnetosphere interaction
 - analysis of multi-point spacecraft observations
 - statistical data-analysis and modelling
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- 9/2015 – 7/2019 **Visiting Researcher**, Space and Atmospheric Physics Group, Imperial College London, United Kingdom
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- 8/2012 – 9/2015 **Post-doctoral Research Associate**, Space and Atmospheric Physics Group, Imperial College London, United Kingdom
- reconnection, shocks and sheaths
 - analysis of multi-point spacecraft observations
 - statistical data-analysis and modelling
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- 5-9/2015 **Visitor**, Space and Atmospheric Electricity, Dept. of Meteorology, University of Reading, UK (0,5-1 day per week)
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- 5/2014 **Visitor**, Space Sciences Laboratory, University of California Berkeley, US (5-week visit funded by Marie Curie Network project *Turboplasmas*)
- magnetotail reconnection
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- 8/2010 – 9/2012 **Doctoral student**, funded by the Finnish Graduate School of Astronomy and Space Physics, Dept. of Physics, University of Helsinki (UH), Finland
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- 8/2008 – 7/2010 **Researcher** (2 personal grants from Väisälä Foundation), Dept. of Physics, UH, Finland
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- 1/2008 – 7/2008 **Doctoral student**, Dept. of Physics, UH, Finland
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- 9/2007 – 12/2007 **Research assistant**, Dept. of Physical Sciences, UH, Finland
- shocks, particle acceleration, magnetosheath
 - analysis of multi-point spacecraft observations
 - observation-driven modelling, comparison of observations and simulations
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1/2007 – 6/2007 **Intern**, Laboratoire de Physique Théorique de la Matière Condensée, Université Pierre et Marie Curie, France (as a part of ERASMUS studies)

- numerical statistical physics study on the effects of disorder on impact fragmentation

2005 – 2006 **Research assistant**, Division of Atmospheric Sciences, Dept. of Physical Sciences, UH, Finland

3 months full time; 132h part time

- numerical simulation of condensation to aerosols

CAREER BREAKS

7/2017 – 3/2018 maternity leave (part-time)

RESEARCH FUNDING

- Royal Society University Research Fellowship** URF\R1\180671, *Accelerating charged particles in space: the role of transient plasma structures*, £517,898, 7/2019 – 6/2024
- Principal Investigator** for Royal Society Enhancement Award RGF\EA\181090, *Forecasting the space weather impacts of transient structures downstream of space plasma shocks*, £88,934, 7/2019 – 3/2021
- Principal Investigator** for Wihuri Foundation ‘homing’ grant, *Particle acceleration in space plasma shocks: the effect of shock surface rippling*, 50,000€, 10/2018 – 9/2020
- Principal Investigator** for NASA Heliophysics Supporting Research grant NNX17AI45G, *Understanding the 3D structure and dynamics of magnetosheath high-speed jets and their role in dayside processes*, \$730,800, 04/2017 – 03/2020
- Personal postdoc support **grant**, Foundations' Post Doc Pool, 12,000€, 2012 – 2014
- 2 personal research **grants** for doctoral studies, Finnish Academy of Science and Letters: Väisälä Foundation, total 30,000€, 2008 – 2010
- 15 travel and support **grants** from the Magnus Ehrnrooth Foundation, the Väisälä Foundation, the Emil Aaltonen Foundation, etc., total 24,450€, 2004 – 2013

DISTINCTIONS AND AWARDS

- Leader** of the International Team on *Foreshocks Across the Heliosphere: System Specific or Universal Physical Processes?* at the International Space Science Institute (ISSI), Bern, Switzerland, 2019 – present
- Lead-proposer** and **co-chair** of the National Science Foundation (NSF) GEM Focus Group *Dayside kinetic processes in global solar wind-magnetosphere interaction*, 2016 – 2020
- Co-lead** (with F. Plaschke) of the International Team on *Jets Downstream of Collisionless Shocks* at the International Space Science Institute (ISSI), Bern, Switzerland, 2015 – 2017
- Outstanding contribution** to the Cluster and Double Star missions, ESA 2015
- Outstanding Student Paper Award**, Space Physics & Aeronomy Section, AGU 2011
- Outstanding Student Poster Award**, Solar-Terrestrial Sciences Division, EGU 2011
- Best Presentation in Parallel Sessions**, Physics Days - Annual Meeting of the Finnish Physical Society 2009
- Representative** of the Dept. of Physical Sciences, Univ. of Helsinki, in Unesco's World Year of Physics 2005 inauguration conference *Physics for Tomorrow*, 13.–15.1.2005, Paris, France

PROFESSIONAL AFFILIATIONS AND SERVICE

APPOINTMENTS TO NATIONAL AND INTERNATIONAL EXPERT GROUPS

- **Member** of the International Team on *Study of the Physical Processes in Magnetopause and Magnetosheath Current Sheets Using a Large MMS Database* led by G. Paschmann and T. Phan at ISSI, Bern, Switzerland, 2018 – present
- **Member** of the scientific commission H (*Waves in Plasmas*) of the Finnish National Committee of the International Union of Radio Science (URSI), 2014 – 2018 and 2019 – present
- **Official representative** of Finland, scientific commission H (*Waves in Plasmas*) of the International Union of Radio Science (URSI), 4/2018 – 3/2019
- **Co-Investigator** of the global hybrid-Vlasov simulation model *Vlasiator* developed at the Finnish Meteorological Institute, 2012 – 2019
- **Member** of the CCMC-LWS Space Weather working team on *Magnetopause crossings of geosynchronous orbit and location*, 2017 - 2018
- **Young Scientist** in the International Team on *Ion and Electron Bulk Heating by Magnetic Reconnection* led by T. Phan at ISSI, Bern, Switzerland, 2013 – 2015

PARTICIPATION TO SPACE MISSIONS AND INSTRUMENTS

Operational

- THEMIS/ARTEMIS (NASA): I have developed particle detector data processing methods and serve as a rotating scientist-on-duty.

In development

- FORESAIL-1 (Finnish CubeSat mission, phase C/D): I am a member of the science team. The satellite mission of Finnish Centre of Excellence for Sustainable Space hosts two payloads – a particle telescope and a deorbiting device (plasma brake).
- SMILE (ESA and Chinese Academy of Sciences joint mission): I am a member of the proposing team and the Modeling Working Group. The mission uses soft X-rays to image the solar wind-magnetosphere interaction, including the bow shock. I participated, e.g., to the mission planning and the kick-off meeting.

Proposed

- THEIA (NASA Mission of Opportunity and Medium Class Explorer proposals): I was a co-I/institutional-PI and contributed to the dayside mission definition.
- DEBYE (ESA F-class phase-2 mission proposal): I was a co-I of the magnetometer.
- PROSPERO (ESA F-class phase-1 mission proposal): I was the PI of the energetic particle detector. The mission concept used multiple small probes to study the structure of quasi-parallel shock and magnetopause vortices.
- THOR (ESA M-class mission proposal): I was a member of the science team. The mission concept explored turbulent energy dissipation and particle energisation up- and downstream of the Earth's bow shock and in the solar wind.
- Alfven+ (ESA M-class mission proposal): I was a co-I of the magnetometer. The mission concept explored particle acceleration processes and their consequences in low beta plasmas. I represented the Imperial College team at the kick-off meeting, presenting the outline magnetometer design and participating in technical discussions.

MEMBERSHIPS IN SCIENTIFIC SOCIETIES

- American Geophysical Union (AGU), 2009 – present
- European Geosciences Union (EGU), 2012, 2019 – present
- Finnish Physical Society, 2008 – 2012, 2019 – present

REVIEWING

Scientific journals

- Journal of Geophysical Research – Space Physics
- Geophysical Research Letters
- Nature Communications
- Annales Geophysicae
- Journal of Atmospheric and Solar Terrestrial Physics

Funding agencies

- NASA
- National Science Foundation (NSF)
- US Department of Energy

Judge

- AGU Virtual Poster Showcase, spring and fall 2018
- GEM Summer Workshop student poster competition, 2016 and 2018
- Outstanding Student Paper Award, AGU 2015, 2016, 2017, 2019
- Outstanding Student Poster Award, EGU 2017

CONVENING SESSIONS AND ORGANIZING MEETINGS

- **Organizer** of a meeting of the ISSI team 465 on *Foreshocks Across the Heliosphere*
 - 2–6 Mar 2020, Bern, Switzerland
- **Convener/organizer** of the *GEM Dayside Kinetics Focus Group*, 2016–2019
 - 4 sessions in each GEM Summer Workshop, 2016 (Santa Fe, USA), 2017 (Portsmouth, USA), 2018 (Santa Fe, USA), and 2019 (Santa Fe, USA)
 - 1 session in each Mini-GEM workshop, 2016 (San Francisco, USA), 2017 (New Orleans, USA), 2019 (San Francisco)
- **Co-convener** of session ST2.2 *Solar wind, foreshock, bow shock, and magnetosheath transient phenomena and their effects*, EGU General Assembly 2019, 7–12 Apr 2019, Vienna, Austria
- **Member of the science organising committee**, 5th Cluster-THEMIS workshop, 24–28 Sep 2018, Chania, Crete, Greece
- **Co-convener** of session SM006: *Dayside Processes and Solar Wind-Magnetosphere Coupling*, AGU Fall Meeting 2017, 11–15 Dec 2017, New Orleans, LA, USA
- **Organizer** of 2 meetings of the ISSI team 350 on *Jets downstream of collisionless shocks*
 - 1–5 May 2017, Bern, Switzerland
 - 15–19 Feb 2016, Bern, Switzerland
- **Primary convener** of session SM030: *Upstream Processes and Solar Wind-Magnetosphere Coupling*, AGU Fall Meeting 2016, 12–16 Dec 2016, San Francisco, CA, USA
- **Chair** of the session on *Shocks*, First MMS Community Science Workshop, 7–9 Sep 2016, Los Angeles, CA, USA

ADMINISTRATIVE RESPONSIBILITIES

- **Member** of the Dept. of Physics and Astronomy *Väisälä Joint Colloquium* organizing committee, University of Turku, 2018 – 2019
- **Organizer** of the Space Research Laboratory seminars, University of Turku, 2018
- **Member** of the *Women in Physics Committee*, Imperial College London, 2015
- **Member** of the *Dept. Research Associate Committee*, Imperial College London, 2013–2015
also the Physics Dept. **representative** to the *Post-doc Development Centre*
- **Member** of the *Committee on post-graduate degrees* of the Faculty of Science, University of Helsinki, 2011
- **Member** of the *Committee on post-graduate studies / Researcher education work group* of the Dept. of Physics, University of Helsinki, 2010–2011

TEACHING, SUPERVISION, AND PEDAGOGICAL TRAINING

TEACHING EXPERIENCE

Lecture courses

- **Primary lecturer** for *Hydrodynamics and Hydromagnetics* (Master level), 8 ECTS, University of Turku, winter 2018-2019
- **Lecturer** on *Collisionless Shocks in Space*, 2-6 ECTS, University of Turku, spring 2019

Guest lectures

I have prepared or selected the material for and delivered a total of **7 guest lectures**, in English, on advanced undergraduate/Master/graduate level courses:

- 1 guest lecture on the analysis of shocks and discontinuities in *Data analysis methods in Space Physics*, UCLA, autumn 2016
- 2 guest lectures on magnetospheric physics in *Space Applications of Plasma Physics*, University of Helsinki (UH), autumn 2009
- 3 guest lectures on hydrodynamics in *Continuum Mechanics*, UH, autumn 2009
- 1 guest lecture on hydrodynamic turbulence, in *Continuum Mechanics*, UH, spring 2008

Exercises and problem-solving sessions

Imperial College: typically 6 groups of 4 students for each academic year

- 3rd year undergraduate tutorials, 2012-2013, 2013-2014, and 2014-2015

Univ. of Helsinki:

I was a teaching assistant responsible for the exercise sessions on six full term (10-12 ECTS) courses. On each course I taught one or two groups of 10-20 students.

- *Advanced Space Physics* (postgraduate), spring 2012
- *Classical Mechanics* (2nd year undergraduate), autumn 2007 and 2010
- *Hydrodynamics* (advanced undergraduate/Master studies), spring 2010
- *Continuum Mechanics* (advanced undergraduate/Master studies), spring 2008
- *Mathematics for Physicists I-II* (1st year undergraduate), autumn 2005
- Revision sessions of *Plasma Physics* (advanced undergraduate/Master studies), autumn 2008

Other teaching experience

I developed and implemented a novel activity concept for research-oriented students called *Tutkijapiiri* (a pun with words *researcher* and *study group*) as part of the *Researcher education programme* of the Dept. of Physics, UH, from 2005 to spring 2010. (Current activities can be found at <http://blogs.helsinki.fi/fys-tutkijapiiri/>)

- organised seminars, visits to laboratories and research institutes
- organised the first student poster session in 2010
- organised social events to bring together students and faculty members
- interviewed students in the programme's admission phase
- negotiated funding for the activities from the Department

SUPERVISION

PhD theses

- **Primary supervisor** of a PhD thesis on *Forecasting the space weather impacts of transient structures downstream of space plasma shocks*, Imperial College London, 10/2019 – present

Master's theses

- **Primary supervisor** of a Master's thesis on *Particle Acceleration in Rippled Space Plasma Shocks*, physical sciences, University of Turku, 1/2019 – present

- **Primary supervisor** of a Master's thesis on *Magnetic characteristics of high-speed jets in the Earth's magnetosheath*, physical sciences, University of Turku, 9/2018 – 2/2020
- **Secondary supervisor** of a Master's thesis on *Solar Energetic Particle Events and Coronal Mass Ejections*, physics, University of Helsinki, spring 2012 – autumn 2012

Bachelor theses

- **Secondary supervisor** of a Bachelor thesis on *Tsallis Entropy*, theoretical physics, University of Helsinki, 2010

Undergraduate research internships

- **Primary supervisor** of an undergraduate summer internship on *Observations of Shock-Shock Interaction*, University of Turku, 5/2019-8/2019
- **Primary supervisor** of an undergraduate summer internship on *Jets Downstream of Interplanetary Shocks*, University of Turku, 5/2019-8/2019
- **Primary supervisor** of an undergraduate summer internship on *Magnetosheath High-Speed Jets: A Statistical Study on When and Where They Occur*, University of Turku, 5/2018-8/2018
- **Responsible supervisor** of an Ogden Trust undergraduate internship on *Observing Magnetic Reconnection in Space*, Imperial College, London, summer 2014
- **Primary supervisor** of an Undergraduate Research Opportunities Programme internship on *Observing Magnetopause Reconnection*, Imperial College, London, summer 2014

THESIS EXAMINATIONS AND EVALUATIONS

- **Member of a PhD examination committee**, Dept. of Physics and Astronomy, Uppsala University, 1.2.2019
- **Examiner of a Master's thesis**, Dept. of Physics and Astronomy, University of Turku, 11/2018
- **Member of a PhD committee**, Dept. of Earth, Planetary and Space Sciences, University of California, Los Angeles
 - Defense of dissertation 29.5.2018
 - Oral exam 2.9.2016

PEDAGOGICAL TRAINING

- *A Practical Guide to Running Seminars and Tutorials* training class, Imperial College, London, 23.10.2012
- *Effective small group teaching* training course, 1 ECTS, University of Helsinki, 2010

OUTREACH

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- **Engaged convention attendants** in Space Weather discussions at the Imperial College's exhibitor stand at the 72nd World Science Fiction Convention Loncon3, 18.8.2014, London, UK (10,800 attendants)
 - **Served at the registration desk** at Imperial Women in Physics Open Day for female A-level students, 4.6.2014, London, UK
 - **Designed and presented a poster** on Space Sciences at Kumpula Campus in *Science Bazaar 2011* – Faculty of Natural Sciences open day for new students and their families.
 - **Primary supervisor** of Academy of Finland's *Viksu – a science competition for senior secondary students* – entry *The Effects of Space Storms on Power Grids (Avaruusmyrskyjen vaikutus sähköverkkoon)* by two high school students, fall 2010

- **Talk** *The Life of a Space Physicist etc.* at *The Night of Mathematics* event (*Avaruusfysiikan elämää ynnä muuta, Matematiikan yö – tapahtuma*) Maunula senior high school, 23.1.2009, Helsinki, Finland
- **Demonstrated a physics experiment** on aerodynamics at *Physics at the Railway Station* event (*Fyssaa assalla*) as part of the World Year of Physics activities, 13.5.2005, Helsinki, Finland

CONTRIBUTIONS TO CONFERENCES AND MEETINGS (FIRST AUTHOR)

INVITED TALKS

1. 29th Cluster Workshop, 7.-11.10.2019, Lanzarote, Canary Islands, Spain
H. Hietala, T. Z. Liu, L. Vuorinen, V. Roytershteyn, Y. Omelchenko, F. Plaschke:
Magnetosheath jets: recent advances from observations and simulations
2. 2nd Vlasiator Hackathon, 20.-24.8.2018, Helsinki, Finland
H. Hietala: *Reconnection – current state-of-the-art and open questions*
3. GEM 2018 Summer Workshop, 17.-23.6.2018, Santa Fe, NM, USA
 Plenary session panel on *Solar Wind - Magnetosphere Interactions (SWMI) and relations to substorm onset: history, current understanding, and new developments in the era of the Heliophysics System Observatory*
H. Hietala: *Solar wind flux and energy transfer from dayside to nightside*
4. AGU Fall Meeting 2016, 12.-16.12.2016, San Francisco, CA, USA
H. Hietala, F. Plaschke, M. Palmroth, X. Blanco-Cano, M. O. Archer, T. Karlsson, D. G. Sibeck, N. Omid, P. Kajdic, D. Schmid, V. Roytershteyn, V. Sergeev, and Desheng Han:
Magnetosheath High-Speed Jets: Coupling Bow Shock Processes to the Magnetosphere
5. 4th Cluster-THEMIS Workshop 2016, 7.-12.11.2016, Palm Springs, CA, USA
H. Hietala, J. P. Eastwood, J. F. Drake, T. D. Phan, A. V. Artemyev, R. Mistry, V. Angelopoulos:
Ion Heating and Anisotropy in Magnetotail Reconnection Jets
6. AGU Fall Meeting 2015, 14.-18.12.2015, San Francisco, CA, USA
H. Hietala, J. F. Drake, T. D. Phan, J. P. Eastwood, and J. P. McFadden: *Magnetotail Reconnection Jets at Lunar Distance*
7. XXXV Dynamics Days Europe, 6.-10.9.2015, University of Exeter, UK
H. Hietala, J. F. Drake, T. D. Phan, J. P. Eastwood, and J. P. McFadden: *Ion heating in magnetotail reconnection jets*
8. NORDITA Magnetic Reconnection in Plasmas workshop, 10.-14.8.2015, Stockholm, Sweden
H. Hietala, J. F. Drake, T. D. Phan, J. P. Eastwood, and J. P. McFadden: *Ion heating in magnetotail reconnection jets*
9. AGU Fall Meeting 2014, 15.-19.12.2014, San Francisco, CA, USA
H. Hietala: *Magnetosheath High Speed Jets: Towards Comprehensive Understanding*
10. AGU Fall Meeting 2013, 9.-13.12.2013, San Francisco, CA, USA
H. Hietala and F. Plaschke: *On the generation of magnetosheath high speed jets by bow shock ripples*
11. ISSI Workshop on Multi-scale structure formation and dynamics in cosmic plasmas, 15.-19.4.2013, Bern, Switzerland
H. Hietala: *Collisionless shocks and shock-shock interactions*
12. THEMIS/ARTEMIS Science Working Group Spring Meeting, 25.-28.3.2013, Fairbanks, Alaska, USA
H. Hietala and F. Plaschke: *Modeling the Flow Behind a Rippled Bow Shock*
13. GEM 2012 Summer Workshop, 17.-22.6.2012, Snowmass, Colorado, USA
H. Hietala: *Supermagnetosonic Subsolar Magnetosheath Jets and Their Effects*

TALKS

1. **H. Hietala**, V. Roytershteyn, Y. Omelchenko, T.Z. Liu, and F. Plaschke, *Magnetosheath Jets in Global 3D Hybrid Simulations*, Autumn MIST, 24.1.2020, London, UK (2020).

2. **H. Hietala**, V. Roytershteyn, Y. Omelchenko, T.Z. Liu, and F. Plaschke, *Magnetosheath Jets in Global 3D Hybrid Simulations*, AGU Fall Meeting 2019, 9.-13.12.2019, San Francisco, CA, USA (2019).
3. **H. Hietala**, V. Roytershteyn, Y. Omelchenko, and T. Z. Liu, *Global 3D hybrid-PIC simulations of magnetosheath jets*, GEM 2019 Summer Workshop, 24.-28.6.2019, Santa Fe, NM, USA (2019).
4. **H. Hietala**, *Structure formation in space plasmas: highlights from the past year*, The Annual Meeting of the Turku Collegium for Science and Medicine, 29.5.2019, Naantali, Finland (2019).
5. **H. Hietala**, T. Z. Liu, V. Roytershteyn, and Y. Omelchenko, *Magnetosheath jets: coupling shocks, reconnection, and particle acceleration*, EGU General Assembly 2019, 7.-12.4.2019, Vienna, Austria (2019).
6. **H. Hietala**, T. Z. Liu, L. Vuorinen, V. Roytershteyn, and Y. Omelchenko, *Recent advances in studies of magnetosheath jets*, Mini-symposium 1.2.2019, Uppsala, Sweden (2019).
7. **H. Hietala**, *Accelerating Charged Particles in Space – the role of transient plasma structures*, The Annual Meeting of the Turku Collegium for Science and Medicine, 30.5.2018, Naantali, Finland (2018).
8. **H. Hietala**, Phan, T. D., Angelopoulos, V., Oieroset, M., Archer, M. O., Karlsson, T., and Plaschke, F., *In situ observations of a magnetosheath high-speed jet triggering magnetopause reconnection*, AGU Fall Meeting, 11.-15.12.2017, New Orleans, LA, USA (2017).
9. **H. Hietala**, F. Plaschke, T. D. Phan, M. D. Hartinger, V. Angelopoulos, T. Karlsson, M. O. Archer, *Magnetopause impacts of magnetosheath high-speed jets*, EGU General Assembly 2017, 23.-28.4.2017, Vienna, Austria (2017).
10. **H. Hietala**, J. F. Drake, T. D. Phan, J. P. Eastwood, and J. P. McFadden, *Ion temperature anisotropy across reconnection exhaust jets*, AGU Fall Meeting, 15.-19.12.2014, San Francisco, CA, USA (2014).
11. **H. Hietala**, J. F. Drake, T. D. Phan, J. P. Eastwood, and J. P. McFadden, *Ion temperature anisotropy across reconnection exhaust jets*, RAS Specialist Discussion meeting Magnetic Reconnection: Where Now and Where Next?, 12.12.2014, London, UK (2014).
12. **H. Hietala**, E. K. J. Kilpua, D. L. Turner and V. Angelopoulos, *Depleting effects of ICME-driven sheath regions on the outer electron radiation belt*, Autumn MIST, 28.11.2014, London, UK (2014).
13. **H. Hietala** and F. Plaschke, *On the generation of magnetosheath high speed jets by bow shock ripples*, Autumn MIST, 29.11.2013, London, UK (2013).
14. **H. Hietala**, *Particle acceleration in shock-shock interaction*, European Week of Astronomy and Space Science, 8-12.7.2013, Turku, Finland (2013), **solicited**.
15. **H. Hietala**, N. Partamies, T. V. Laitinen, L. B. N. Clausen, G. Facskó, A. Vaivads, H. E. J. Koskinen, I. Dandouras, H. Rème, and E. A. Lucek, *Effects of Supermagnetosonic Subsolar Magnetosheath Jets Occurring during Radial IMF*, ESLAB 2011 / Cluster 21, 19.-23.9.2011, Brugge, Belgium (2011).
16. **H. Hietala**, N. Agueda, K. Andréevová, R. Vainio, S. Nylund, E. K. J. Kilpua and H. E. J. Koskinen, *In situ observations of particle acceleration in shock-shock interaction*, FinCOSPAR 2011, 31.8.-2.9.2011, Rokua, Finland (2011).
17. **H. Hietala**, N. Partamies, T. V. Laitinen, A. Vaivads, H. E. J. Koskinen, E. A. Lucek and H. Rème, *A Mechanism for Large Magnetopause Perturbations during Steady Solar Wind Conditions and Coupling to Ionospheric Convection*, COSPAR, 18.-24.7.2010, Bremen, Germany (2010).

18. **H. Hietala**, T. V. Laitinen, K. Andréevová, E. K. J. Kilpua, A. Vaivads, M. André, H. E. J. Koskinen, E. A. Lucek, and H. Rème, *Multi-spacecraft Observations of the Local Dynamics of the Quasi-parallel Bow Shock*, EGU General Assembly 2009, 19.-24.4.2009, Vienna, Austria (2009).
19. **H. Hietala**, T. V. Laitinen, K. Andréevová, E. K. J. Kilpua, A. Vaivads, M. André, H. E. J. Koskinen, E. A. Lucek, and H. Rème, *Multi-spacecraft Observations of the Local Dynamics of the Quasi-parallel Bow Shock*, Physics Days – Annual Meeting of the Finnish Physical Society 2009, 12.-14.3.2009, Espoo, Finland (2009).
Best Presentation in Parallel Sessions award
20. **H. Hietala**, *Analysing Cluster data: 17 March 2007 17.00-23.00*, 1st EPTUP Consortium Meeting, 11.6.2008, Helsinki, Finland (2008).

POSTERS

1. **H. Hietala**, Phan, T. D., Angelopoulos, V., Oieroset, M., Archer, M. O., Karlsson, T., and Plaschke, F., *In situ observations of a magnetosheath high-speed jet triggering magnetopause reconnection*, Physics Days 2019, 5.-7.3.2019, Helsinki, Finland (2019).
2. **H. Hietala**, V. Roytershteyn, and Y. Omelchenko, *Global 3D Simulations of Magnetosheath High-Speed Jets*, GEM 2018 Summer Workshop, 17.-23.6.2018, Santa Fe, NM, USA (2018).
3. **H. Hietala**, A. V. Artemyev, V. Angelopoulos, *Ion Dynamics in Anti-parallel Magnetotail Reconnection in the Presence of Density Asymmetry*, AGU Fall Meeting 2016, 12.-16.12.2016, San Francisco, CA, USA (2016).
4. **H. Hietala**, J. F. Drake, T. D. Phan, J. P. Eastwood and J. P. McFadden, *Ion Temperature Anisotropy Across Reconnection Exhaust Jets*, GEM 2014 Summer Workshop, 15.-20.6.2014, Portsmouth, VA, USA (2014).
5. **H. Hietala**, E.K.J. Kilpua, D. L. Turner and V. Angelopoulos, *ICME-driven sheath regions deplete the outer radiation belt electrons*, AGU Fall Meeting, 9.-13.12.2013, San Francisco, CA, USA (2013).
6. **H. Hietala**, M. E. Decreau, J. J. Mitchell, J. P. Eastwood, S. J. Schwartz, S. Enestam, *Shock-shock collision: Cluster observations*, Autumn MIST, 30.11.2012, London, UK (2012).
7. **H. Hietala**, K. Andreeva, R. Vainio and H. E. J. Koskinen, *On foreshock dynamics in shock-shock interaction*, EGU General Assembly 2012, 23.-27.4.2012, Vienna, Austria (2012) **solicited**.
8. **H. Hietala**, A. Sandroos and R. Vainio, *Particle acceleration in shock-shock interaction: model to data comparison*, EGU General Assembly 2012, 23.-27.4.2012, Vienna, Austria (2012) **solicited**.
9. **H. Hietala**, A. Sandroos and R. Vainio, *Particle Acceleration in Shock-Shock Collision: Model to Data Comparison*, AGU Fall Meeting 2011, 5.-9.12.2011, San Francisco, USA (2011).
Outstanding Student Paper award
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(ii) BOOKS AND BOOK CHAPTERS

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