

# CURRICULUM VITAE (14.07.2019)

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## Personal data :

Name: Ilya G. Usoskin  
Gender: Male  
Birth: 17 January 1965, Leningrad, USSR  
Citizenship: Finland + Russia (double citizenship)  
Marital Status: Married (1986), two children (1989, 2001)  
Languages: Russian – mother tongue, English – fluent, Finnish – satisfactory  
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## Academic background :

2012 : Full Professor of Space Physics, Faculty of Sciences, University of Oulu, Finland;  
2016 : Visiting Professor, National Research Nuclear University MEPhI, Moscow, Russia;  
2013-2015: Visiting Professor, Institut de Physique du Globe de Paris, France;  
2006 : Qualified for professor, Lund University and Swedish Institute for Space Physics IRF;  
2002 : Docent (= Habilitation / Assoc. Prof.) in Space Physics from University of Oulu;  
2000 : Ph.D. in Space Physics from University of Oulu, Finland;  
1995 : Cand. Sci. (=Ph.D.) in Astrophysics, Ioffe Phys.-Tech. Inst., St.Petersburg, Russia;  
1988 : M.Sc. (with honour) in Physics (Space Physics), Leningrad Polytechnics, Russia

## Education :

1990-1994 : Doctoral scholarship at A.F.Ioffe Physical-Technical Institute, St. Petersburg, Russia;  
1982-1988 : Leningrad Polytechnics, M.Sc. in Physics (Space Physics), honour diploma;  
1980-1982 : Leningrad High School No.239 with intensified studying of mathematics;  
1972-1980 : Leningrad Primary and Secondary School No.92.

## Current positions and employment history :

2014-2019: Vice-Director of ReSoLVE Centre of Excellence of the Academy of Finland;  
Since 2012: Professor of Space Physics, University of Oulu;  
Since 2000: Head of Cosmic Ray Station, the University of Oulu;  
1997-1999: Postdoctoral Fellow, Italian National Institute of Nuclear Physics, Milan, Italy;  
1988-2000: Staff Researcher, A.F.Ioffe Physical-Technical Institute, St.Petersburg, Russia.

## Merits :

Most honourable  
2018 - *Julius Bartels medal* of the European Geoscience Union;  
2013 – *Knight's cross*, 1st class, of the Order of the Lion of Finland;  
Other selected merits  
2017 – Sole author of the most downloaded paper in Springer Astronomy.  
2010 – Principal author of a top-cited paper in *J. Atmos. Solar-Terr. Phys.* (2005-2010);  
2001 – INTAS Personal Prize for Young Scientists;  
1997 - UNESCO/ICSU/TWAS Personal Award for Research in the Basic Sciences;  
1997 – Personal Prize Scholarship of the Nordic Council of Ministers in the field of Space Research;  
1994 - Award of the American Astron. Soc. for young scientists of the former USSR;  
1993 - Award of the International Science Foundation for scientists of the former USSR;  
1988 - Prize of the Physics Department for the best student's scientific work of the year.

## Publications :

300+ scientific publications (including 9 invited reviews, 4 book chapters, 6 popular articles), in particular 230+ papers in refereed journals, cited 8000+(12000) times in major journals, Hirsch's citation *h*-index = 48(57) according to ISI WoS (Google Scholar). Three *highly cited papers* (ISI WoS) have been published since 2016. Two research monographs are in preparation: "*Extreme Solar Particle Storms: The Hostile Sun*" (Miyake and Usoskin, Eds., at Inst. of Physics IoP, 2019); "*Our variable Sun*" (Usoskin, Charbonneau, Solanki, Kovaltsov, at Cambridge Univ. Press, 2020);

## Public interview and lectures :

Research results been highlighted in the scientific community via press-releases of the *Astron. Astrophys.*, *University of Oulu*, *Leibniz-Institut für Astrophysik Potsdam*, *Max-Planck Society*, *Science News*, by European governmental organizations (*CORDIS*), in popular scientific magazines (*New Scientist*, *American Scientist*, *Natural History*, *Pour la Science*, etc.), news agencies and newspapers: *Kaleva*, *Turun Sanomat*, *Tähtet ja Avaruus*, *Vasabladet* (Finland), *Le Monde* (France), *Berliner Zeitung* and *Spiegel* (Germany), *BBC News*, *Daily Telegraph*, *The Telegraph* (UK), *Observer Budapest* (Hungary), *Washington Times*, *Discovery Channel* and *CBC News* (USA), etc.). Interviews were given to *NKH* (Japan), *YLE TV1* (Finland); *Swedish broadcasting corporation*; *Norwegian broadcasting*, etc. Public lectures were given at Oulu (2005); Bern (2005); Singapore (2006); Helsinki (2010); Moscow (2014, 2016); Boulder, USA (2015, 2019); Vienna (2018).

## Expert duties (selected) :

- \* Council member for Research Council of Russian Academy of Sciences (Cosmic Rays section, since 2011); Romanian National Research Council (Rapporteur/Panellist Earth Sciences, 2012);
- \* Member (national representative) of C4 commission (Astroparticle physics) of IUPAP since 2015;
- \* Member of the Editorial Board of *Solar Physics* journal (since 2009), *J. Astron. Space Sci.*, *Scientific World J.* (Geophysics), *Open Astron. J.*;
- \* Referee for numerous journals: *Adv. Geosci.*, *Adv. Space Res.*, *Annales Geophys.*, *Astron. Astrophys.*, *Astron. Lett.*, *Astrophys. J.*, *Dendrochronology*, *Earth Planet. Sci. Lett.*, *Earth Sci. Rev.*, *Environ. Res. Lett.*, *Geophys. Res. Lett.*, *J. Atm. Solar-Terrestrial Phys.*, *J. Geophys. Res.*, *Mon. Not. Roy. Astron. Soc.*, *Nature*, *New Astronomy*, *Phys. Rev. Lett.*, *Proc. Royal Soc. A*, *Science*, *Solar Physics*, *Space Sci. Rev.*, *Sun & Geosphere*, *Survey Geophys*, etc.
- \* Expert-evaluator of research proposals for: *European Research Council*; *European Science Foundation*; *Czech Science Foundation*; *Russian Science Foundation*; *European Space Agency*; *International Association for the Promotion of Cooperation with Scientists*; *Partnerships for International Research and Education (USA)*; *National Science Foundation (USA)*; *Italian Scientific Committee*; *Australian Antarctic Science Program*; *Natural Environment Research Council (U.K.)*; *Antarctic Research Program (Chile)*; *National Res. Foundation (South Africa)*, *French Polar Institute* etc.;
- \* Invited expert for ESA (2002), French Academy of Sciences (2007), Technical University of Tokyo (2008), Russian Ministry of Education and Sciences (2010-2011), Court of Vancouver (2016), Institute of Sun-Earth Environmental Research, ISEE (Nagoya, Japan, 2018);
- \* Guest editor of topical issues of *Solar Physics* (2004), *Adv. Space Res.* (2007, 2011); *J. Atmos. Solar-Terr. Phys.* (2010).
- \* Meeting organiser: series of biennial International Space Climate Symposia (founder and SOC chair since 2004); biennial International Cosmic Ray Conference (SAC since 2015); European Cosmic Ray Symposia (SOC chair in 2010, member of SAB since 2014); COSPAR Scientific Assembly (Session MSO 2004 and 2012-2020); Extreme Solar Events workshop (Main organizer, Japan, 2018);
- \* Supervisor of 11 Ph.D. and 15 M.Sc. theses;
- \* Examiner/Opponent of 2 Habilitations (Docent), 1 Lic. Phys. and 12 Ph.D. dissertations;
- \* National representative for COST Programs (ES0803, ES1005, CA15211);
- \* Member of: *Finnish Academy of Sciences and Letters* (since 2019), *European Astron. Soc.* (since 1995), *European Physics Society* (since 2000), *COSPAR* (since 2000), *European Geosci. Soc.* (since 2005); *Asian-Oceanic Geophys. Soc.* (since 2004), *Internat. Astron. Union* (since 2009).

## Positions of trust :

- \* Grant Holder for the European COST ES1005 Project (2011-2015);
- \* Member of the *Julius Bartels* medal committee EGU 2018, 2019;
- \* Member of Science Advisory Committee for International Cosmic Ray Conference (since 2015);
- \* Member of Science Advisory Board for European Cosmic Ray Symposia (since 2014);
- \* Member of steering committee of Finnish national SEISLAB project 2012-2013;
- \* Member of the National Board for ESO (European Southern Observatory) 2013-2016;
- \* Chair or member of several tenured/tenure-track selection committees at Oulu University;

## **Grant and Project history :**

### Ongoing projects:

- \* Vice-Director, ReSoLVE Centre of Excellence, the Academy of Finland, 2014-2019 (~6 M€);
- \* PI, Research Project of the Academy of Finland, "ESPERA", 2019-2023 (~700 k€);
- \* PI, Research Project of the Academy of Finland "Cosmic Rays in Polar Atmosphere", 2013-2016, 2017-2019 (~300 k€);
- \* Co-I, Project CAESER of the University of Oulu, 2017-2020;

### Past Project

- \* PI, Research Project of the Academy of Finland "Solar Research with Alpha Magnetic Spectrometer on International Space Station", 2012-2016 (~500 k€);
- \* PI, Research project of the Thule Institute, Finland, "Outer Space Influence on the Low and Middle Polar Atmosphere", 2013-2016 (140 k€);
- \* National PI and Grant Holder, EU FP7 e-infrastructure Project COST ES1005 (~400 k€);
- \* Co-I, EU FP7 Project "SEPserver – Data services and analysis tools for solar energetic particle event and related electromagnetic Emissions", 2010-2013 (total budget >1 M€);
- \* Co-I, Global Changes Joint Program (Project #16) between Russian Academy and Academy of Finland, 1993-1995, 1996-1998, 1999-2001, 2002-2004, 2005-2007, 2008-2010, 2011-2013;

## **Participation in Scientific Conferences :**

160+ contributions, including 53 keynote, rapporteur, highlight, invited, and solicited talks presented at 70+ major international conferences.

## **Student supervision :**

- \* Supervisor of 11 Ph.D. theses (all at the University of Oulu): Mr. P. Vaisanen (expected in 2020), Mr. S. Koldobsky (expected in 2019), Mr. A. Artamonov (2017), Ms. E. Asvestari (2016), Mr. S. Poluianov (2016), Ms. R. Leussu (2016), Mrs. A. Abe Pacini (2015), Mr. I. Virtanen (2013), Ms. L. Zhang (2012), Ms. O. Yakovchuk (2012), Mrs. K. Alanko-Huotari (2007)
- \* Opponent of PhD theses for Mr. F. Inceoglu (Univ. Aarhus, Denmark, 2015), Mr. A. Karelin (National Research Nuclear University MEPhI, Moscow, Russia, 2016).
- \* Examiner of 10 PhD theses;
- \* Supervisor of 15 M.Sc. theses:

## **Lecturing :**

- \* Lecture course "Cosmic rays" at University of Oulu (766655S, 8 ETCS), since 2000.
- \* Lecture course "Solar Physics" at University of Oulu (766654S, 8 ETCS), since 2019.
- \* NCAR/ASP Colloquium, Boulder CO (2015, 2019)
- \* European Research Course on Atmospheres, ERCA (Grenoble, annually 2014-2017);
- \* COST ES1005 TOSCA schools (Thessaloniki, 2013; Trieste, 2014);
- \* CLOUD ITN summer school (Frankfurt, 2012);
- \* Space Climate school (Saariselkä, 2009; Levi, 2016);
- \* Underground Physics School (Pyhäsalmi, 2007);