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Avdelningen för fysik
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Degrees

Docent of Astronomy, University of Helsinki (UH), November 2013

Doctor of Philosophy, University of Helsinki (UH), February 2005:

- Post-graduate studies (astronomy, mathematics), grade: excellent
- PhD thesis: "Doppler imaging and photometric time series analysis of stellar spot activity", grade: magna cum laude

Master of Science, UH, December 1997:

- Major subject: Astronomy, grade: good
- Other subjects: Physics (excellent), theoretical physics (good) and mathematics (excellent)

Matriculation exam:

- Svenska normallyceum, May 1982, grades: 6 x Laudatur

Language skills

Swedish: Mother tongue

Finnish: Excellent, almost a second mother tongue.

English: Excellent, scientific working language

German: Basic knowledge based on school studies

Spanish: Basic knowledge based on university studies (14 credits, CEFR B1)

Work Carrier in astronomy

Summary of carrier:

- 2010-> : Research at the University of Helsinki and the Finnish Centre for Astronomywith ESO (FINCA)
- 2007-2010: Teaching, administrative work and research at the University of Helsinki
- 2005-2007: Project manager for Tekes-funded space technology project "Highperformance DPU for XEUS instruments"
- 1998-2004: Postgraduate student, teaching and administrative duties at the University of Helsinki Observatory

Positions, UH (->2010, 2014->) and FINCA (2010-14):

- University researcher, starting July 2013
- Postdoctoral researcher, January 2011 – June 2013
- University researcher, 5 months starting August 2010
- Amanuensis, approx. 42 months during 1996-1997, 2005 and 2009-2010
- University lecturer, 21 months during 2007-2009
- Project manager, 23 months during 2005-2007
- Researcher, approx. 28 months during 1999-2001 and 2004
- Assistant, approx. 14 months during 1998 and 2003-2004.
- Observer, 8 months during 1995 and 1998
- Research assistant and trainee, approx. 7 months during 1987-1990

Grants:

- Research grants: Wihuri foundation (1998), Kordelin foundation (2001), Väisäläfoundation (2001), Magnus Ehrnrooth foundation (2002), UH (2003), University of Oulu (2003)
- Travel grants: Magnus Ehrnrooth foundation (2001 and 2002), Oskar Öfund's foundation (2017 & 2019), Waldemar von Frenckell's foundation (2019)

Research groups and projects:

- SOLSTICE, project funded by Academy of Finland, Co-PI, 2020-3

- ReSoLVE, Centre of Excellence, external researcher, 2014-2020- Active Suns, UH Department of Physics, researcher 2010-14
- High Energy Astrophysics and Space Astronomy, UH Observatory, member of research group 2005-2009
- High performance DPU for XEUS instruments, UH Observatory, Tekes-project, project manager 2005-2008
- Late type stars and interstellar matter: activity, magnetism, turbulence, University of Oulu, external member of research group 1998-2004
- Time series analysis in astronomy, UH research project, PhD student 1999-2002
- Stellar-planetary astronomy, UH observatory, member of research group 1998-2001

Observing projects:

- PI: Evolution of magnetic regions in FK Comae type active giants (1996-2003) and Surface differential rotation of magnetically active single stars (2004-2006), Nordic Optical Telescope (NOT); Active Suns: Spectropolarimetry of solar-type stars (14 granted nights 12/2013 and 12/2017), ESO-3.6m
- Co-I: 6 projects at the NOT and ESO telescopes

Scientific publications:

- 55 refereed articles and 14 other articles

Participation in some scientific meetings:

- 21st Cambridge Workshop of Cool Stars, Stellar Systems and the Sun, 7/2022, Toulouse, poster- 8th BCool meeting, 7/2019, talk
- Axel Brandenburg 60 symposium, 4/2019, talk- 14th Potsdam Thinkshop, 6/2017, invited talk
- MHD days, MPS Göttingen, 11/2016, talk
- Differential rotation and magnetism across the HR-diagram, NORDITA workshop, 4/2013, Stockholm, key scientist
- Workshop on Science with the Nordic Optical Telescope, 10/2012, Århus, talk
- 17 th Workshop on Cool stars, Stellar Systems and the Sun, 6/2012, Barcelona, poster
- Magnetic fields in stars and exoplanets, 7 th Potsdam thinkshop, 8/2011, Potsdam, member of Scientific Organizing Committee and talk
- The alpha effect and beyond, NORDITA workshop, 2/2011, Stockholm, talk
- Finnish-Swedish Physics days 2009, 11/2009, Helsinki–Stockholm, invited talk
- Solar and stellar dynamos and cycles, NORDITA workshop, 10/2009, Stockholm, invited talk
- 15 posters at scientific conferences
- 18 public popular presentations on astronomy 1998-2012 (eg. Studia Generalia and talks organised by amateur astronomical societies)

Scientific positions of trust:

- Member of OPTICON telescope allocation committee 2023-4
- Member of ChETEC-infra User Selection Panel 2021-4
- Member of European Southern Observatory OPC panel (2017-8)
- Member of the editorial board of Arkhimedes (2011-)
- NOT, Observation Programmes Committee, chairperson (2012-15), member (2009-12), substitute member (2006-8)
- NOT, Instrument User Group on High-Resolution Optical Spectroscopy, chair (2003-)
- Ursa Astronomical Association, board member/substitute (2000-2004)

Positions of trust at the University of Helsinki:

- Member of the University of Helsinki Collegium (2007-9, 2022-24)
- Council of the Faculty of Science, member (2018-20), substitute (2021-25)
- Board member of the Department of Physics (2010)
- Member of the Board for Swedish adult education (SVUX, 2010-13)
- Member of the planning group for the renovation of the UH observatory (2010-11)
- Member/subst. of the board of the Researchers and teachers Association (2009-)
- Subst. of the education development committee at the Faculty of Science (2008-9)
- Member of the Marketing committee for the Faculty of Science (2008-9)
- Member of the wg for development of the astronomy education (2007-)
- Substitute member of the council of the Faculty of Science (2004-9, 2022-24)
- Board member of the Department of astronomy (1992-8)

Educational activities

Pedagogic education:

- University pedagogy (Universitetspedagogik, 4 sw ≈ 8 cr), UH, May 2002
- University pedagogy 3, UH, May 2016

Lecturing/responsibility of courses at the UH during 1997-2023:

- Havaitsevan tähtitieteen pk I (Finnish, Basic course in observational astronomy I), 4 credits, 18 times
- Universum nu (Swedish, Universe now), 3-4 credits, 18 times
- Tähtien rakenne ja kehitys (Finnish, Structure and evolution of stars), 6 credits, 4

times

- Stellar magnetic activity (Finnish/English), 5-7 credits, 4 times
- Johdatus yleisiin asiantuntijatehtäviin (Finnish, Introduction to expert careers), 5 credits, 3 times
- In-service training courses in astronomy for teachers, 2-12 h/course, 11 times

Supervision of students (UH unless noted):

- PhD thesis: Marjaana Lindborg (compl. 2014), Jyri Lehtinen (compl. 2016), Elizabeth Cole (compl. 2017), Teemu Willamo (compl. 2022), Shabnam Nikbakhsh (2015-), Joonas Uusitalo (compl. 2024), András Haris-Kiss (2022-)
- MSc thesis (completed): Satu Joki-Huuki (Univ. of Oulu, 2008), Jyri Lehtinen (2009), Joonas Uusitalo (2016), Teemu Willamo (2017), Julia Rantakylä (2020), Sicheng Yu (2024)
- BSc thesis (completed): Jyri Lehtinen (2008), Lauri Siltala (2014), Joonas Uusitalo (2015), Teemu Willamo (2015), Tytti Mustonen (2016), Juulia Rantakylä (2019), Nora Routamo (2022), Aino Luttinen (2024), Taavi heikkilä (2024)
- Study supervisor in astronomy 2008 – 2009

Other educational activities:

- Teacher in e.g. secondary schools and professional education centres for adults especially during the years 1987-1994