

## 1. Personal information

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Date of birth: 2nd of November, 1974; Nationality: Finnish

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## 2. EDUCATION

- Nov 2008 **Docent in Astronomy**, Department of Astronomy, University of Helsinki  
Sep 1999 **PhD**, Department of Astronomy, University of Oulu, Finland.  
Sep 1998 **Licentiate in Philosophy**, Department of Astronomy, University of Oulu, Finland.  
Dec 1996 **MSc**, Department of Astronomy, University of Oulu, Finland.

## 3. CURRENT POSITIONS

- 2020 - **Associate professor (tenure-track)**, Department of Computer Science, Aalto University/Finland  
2016 - 2021 **Independent Max Planck Research Group Leader**, Max-Planck-Institute for Solar System Research (MPS)/ Germany

## 4. PREVIOUS POSITIONS

- 2014 - 2016 **Research Fellow & Academic Coordinator**, ReSoLVE Centre of Excellence DYNAMO team leader, Dept. of Computer Science, Aalto University/Finland.  
2013 - 2014 **Research Coordinator**, School of Science, Dept. of Information and Computer Science, Aalto University/Finland.  
2012 - 2013 **University Researcher**, Dept. of Physics, University of Helsinki/Finland  
2005 - 2012 **Academy Research Fellow**, Dept. of Physics, University of Helsinki/Finland  
2005 **Postdoctoral Fellow** at NORDITA, Copenhagen/Denmark  
2001 - 2004 **Visiting Postdoctoral Fellow** (Academy of Finland mobility grant), Laboratoire d'Astrophysique, Observatoire Midi-Pyrénées, Toulouse/France  
2000 - 2001 **Postdoctoral Fellow** (Personal grants from Finnish Culture, Ehrnrooth and Väisälä foundations), University of Oulu/Finland  
1997 - 1998 **Visiting Postgraduate Researcher**, University of Newcastle, UK (European Commission Human Capital and Mobility project)  
1996 - 1997 **Research Assistant**, Dept. of Astronomy, University of Oulu/Finland

## 5. CAREER BREAKS (FROM SCIENCE)

- 1999 - 2009 Maternity leaves due to the birth of Toivo (11.2.1999), Aino (28.5.2003), Lauri (28.9.2004), the twins Vilma & Väinö (29.6.2007) and Venla (9.4.2009) ; held 2013 – 2014 full time, 2014–2015 part time, and 2015–2016 full time administrative positions at CS.

## 6. PERSONAL RESEARCH FUNDING & GRANTS

- 2019 – 2023 ERC Consolidator grant 'UniSDyn'  
2018 – 2019 HIIT seed funding for the EUCLID cosmology mission: 'Big data analysis in virtual supercluster'  
2016 - 2020 Academy of Finland FIRI project for EUCLID cosmology mission, PI of Aalto activities.  
2014 - 2019 Academy of Finland CoE 'ReSoLVE', PI of dynamo team, Aalto University  
2010 - 2013 3-year research breakthrough award for 'Active Suns' project, University of Helsinki, co-PI  
2005 - 2012 Academy of Finland Research Group funding for Academy Research Fellow  
2000 Yearly award of the Finnish Academy of Sciences and Letters for high quality PhD thesis  
2000 Yearly award of University of Oulu for high quality PhD thesis  
1997- 2001 Private Foundation grants (Finnish Culture, Ehrnrooth, Väisälä foundations) for PhD and postdoctoral work  
1997 Award for the best Master of Science Thesis of the Faculty of Science, University of Oulu

## 7. LEADERSHIP AND SUPERVISION EXPERIENCE

- Completed: **3 MSc** (University of Oulu, Finland), **4 MSc** (University of Helsinki, Finland), supervision of **7 PhD** (**Petri Käpylä, Marjaana Lindborg, Jan Snellman, Elizabeth Cole, Miikka Väisälä**, University of Helsinki, **Nigul Olsper, Alexander Grigorevskiy (co-instructor)**, Aalto) Ongoing: Supervision of **4 PhD** (**Sami Kivistö**, Aalto; **Ameya Prabhu & Mariangela Viviani**, MPS, **Teemu Willamo**, University of Helsinki) **Supervision of postdocs:** Omer Anjum, Frederick Gent (Aalto/CS/Finland), Atefeh Barekat, Lucia Duarte, Jyri Lehtinen, Harsha Raichur, Nishant Singh, Javier Alvarez Visozo, Jörn Warnecke (MPS/Germany)

## 8. TEACHING EXPERIENCE

- Year 2 and higher:** Stellar structure and evolution, Stellar magnetic activity, Magnetohydrodynamics, Practical Methods in Numerical MHD; **Year 1 and higher:** Introduction to Astronomy, Mathematical Methods in Astronomy, UH/Finland  
Guest lecturer in the course Solar Physics, University of Helsinki and in the course Space Climate, Aalto/ELEC.  
Teacher in summer and winter schools about numerical MHD.

## 9. ORGANISATION OF SCIENTIFIC MEETINGS

- 2020 IAU Symposium 'Dynamics of Solar and Stellar Convection Zones and Atmospheres', Moscow, Russia, member of SOC  
2019 International NORDITA-program 'Solar helicities in theory and observations: implications for space weather and dynamo theory', Stockholm/Sweden, PI  
2017 Annual Meeting of the Astronomische Gesellschaft 2017, Splinter meeting 'Solar and stellar activity and variability', member of SOC  
2016 The 17th MHD Days, Göttingen/Germany, member of SOC/LOC  
2016 The 6th Space Climate Symposium and winter school, Levi/Finland, member of SOC  
2013 EWASS13 symposium 'Stellar magnetic activity across the HR diagram', Turku/Finland, chair of SOC  
2013 International NORDITA-program 'Differential Rotation and Magnetism across the HR Diagram', Stockholm/Sweden, PI  
2012 IAU Symposium 'Solar and Stellar Dynamos and Magnetic Activity', 58th IAU General Assembly, Beijing/China, member of SOC  
2012 the 8th Pencil Code User Meeting, University of Helsinki, Finland, member of SOC/LOC  
2011 The 45th Annual Meeting of the Finnish Physical Society & the 2nd Nordic Physics Meeting 'Sharing methods, exchanging ideas', Helsinki/Finland, LOC member  
2009 International NORDITA-program 'Solar and stellar magnetic activity', Stockholm/Sweden, PI  
2009 International conference on 'Astrophysical magnetohydrodynamics', Kiljavanranta/Finland, chair of SOC  
2008 International NORDITA-program 'Turbulence and dynamos', Stockholm/Sweden, PI

## 10. OTHER KEY SCIENTIFIC OR ACADEMIC MERITS

- 2020- Corresponding Fellow at the Nordic Institute for Theoretical Physics  
2018 PhD evaluation committee member of Azaymi Litzi Siu Tapia & Chi-Ju Wu, Göttingen University, Germany  
2018 Evaluator for the Swiss National Science Foundation  
2016 - Member of the Steering Group of the Max Planck-Princeton Center for Plasma Physics  
2016 - EUCLID cosmology mission, PI of Aalto activities, Aalto University, Finland  
2016 - Member of the advisory group of the directors at MPS, Germany  
2013 - 2016 Member of the steering group of Aalto University Large Infrastructures, Aalto University, Finland  
2013 - Peer reviewer, EU/PRACE HPC Tier-0 calls  
2013 - 2016 Member of the steering group of Science-IT, Aalto University, Finland  
**Over 15 invited talks and reviews at international conferences**