

## 1 Personal details

**Surname:** Räsänen

**First name:** Syksy

**Research identifier:** <https://orcid.org/0000-0003-2296-302X>

**Date of CV:** January 1, 2025

## 2 Degrees

- **September 2010: Title of Docent (dosentti).** Theoretical physics, University of Helsinki, Finland. (University of Helsinki, PO Box 3, 00014 University of Helsinki.)
- **October 2002: Ph.D.** Theoretical physics, University of Helsinki, Finland.
- **December 1999: Master of Science.** Theoretical physics, University of Helsinki, Finland.

## 3 Current positions

- **Jan. 1 2015–: Senior Researcher.** Department of Physics, University of Helsinki, Finland. (From Jan. 2015 to Jul. 2022 as University Researcher.)
- **2010–: Adjunct Researcher.** Helsinki Institute of Physics, University of Helsinki, Finland.

## 4 Previous positions

- **June 3 2010–Dec. 31 2014: Lecturer.** Department of Physics, University of Helsinki, Finland.
- **May 3 2010–May 28 2010: Visiting Researcher.** Laboratoire d'Annecy-le-Vieux de Physique Théorique (LAPTH), France.
- **Apr. 16 2010–Apr. 30 2010: Visiting Researcher.** University of Chicago, Kavli Institute for Cosmological Physics, United States.
- **Mar. 1 2010–Apr. 15 2010: Postdoc.** Washington University, Physics Department, United States.
- **Jan. 2010–Feb. 2010: Visiting Researcher.** CERN, Department of Physics, Theory Unit, Switzerland.
- **Oct. 2007–Dec. 2009: Postdoc.** University of Geneva, Department of Theoretical Physics, Cosmology Group, Switzerland.
- **Oct. 2005–Sep. 2007: Postdoc.** CERN, Department of Physics, Switzerland.
- **Oct. 2002–Sep. 2005: Postdoc.** University of Oxford, Department of Physics, UK.

### Visiting positions (concurrently with the positions in Helsinki)

- **Sep. 1 2018–Jan. 4 2019: Volunteering Professor.** Department of Physics, Birzeit University, Palestine.
- **Nov. 3 2016–Jan. 10 2017: Visiting Professor.** Physics Department, Kobe University, Japan.

## 5 Research funding and grants

- **Jan. 1 2014–Dec. 31 2019: PI of Helsinki Institute of Physics Theory Project.** Grant value: €110 000 to €120 000 per year for 6 years. Prepared the funding application.
- **Aug. 1 2017–Dec. 31 2018: University of Helsinki Faculty of Science support funding.** Grant value: €30 000. Prepared the funding application.

## 6 Research supervision and leadership experience

- **Have supervised 7 Bachelor's theses, 9 Master's theses, and 4 PhD theses.** Currently supervising 3 Master's theses, 1 Licentiate thesis, and 2 PhD theses. Principal supervisor in all.
- **Leader of the 2014-2019 Helsinki Institute of Physics Theory Project *Cosmology of the Late Universe*.**<sup>1</sup>

## 7 Publications and talks

- **56 published peer-reviewed scientific articles in leading physics journals, including Physical Review Letters, JCAP, JHEP, Nuclear Physics B, and Physical Review D,** 1 article accepted for publication, and 5 conference proceedings and other non-refereed scientific articles.
- **49 conference talks and 76 seminars.**

## 8 Teaching merits

- **10 credits of pedagogical studies at the University of Helsinki.**
- **2007 to 2024: lectured 10 different physics courses (several of them several times) from bachelor to PhD level at University of Helsinki, University of Jyväskylä and Birzeit University.** Planned courses and wrote materials, including lecture notes and problems that were made freely available online. Lectured at 6 summer schools in Finland, France and Germany. From 1996 to 2008, teaching assistant and tutor on several physics courses, and supervised student physics projects.

## 9 Awards and honours

- **2014: J.V. Snellman prize.** Awarded by the University of Helsinki annually for science outreach.
- **2001: Waldemar von Frenckell Foundation stipend.** Awarded to gifted students.

## 10 Other key academic merits

- **2012-: Member of the Euclid cosmology consortium,** in the inhomogeneities working group.<sup>2</sup>
- **2024-: Member of the board that decides on the recipients of an annual cosmology grant** at the Department of Physics at the University of Helsinki.
- **2023: Member of the teaching skill assessment committee** at the Faculty of Science of the University of Helsinki.
- **2018: Co-drafted and publicised the Statement by Finnish Astronomers and Astrophysicists on Harassment,** which gathered a large number of signatories from the community, including most people in leadership positions, and was endorsed by the Finnish Astronomical Union.<sup>3</sup>
- **2015 and 2019: Member of the grant evaluation committee** for University of Helsinki three-year grants.
- **2015-2016: Department of Physics representative in the Faculty of Science communication team** at the University of Helsinki.
- **2015: Member of the Visio400 group** tasked by the rector of the University of Helsinki to shape and articulate the vision of the university for the next 25 years.
- **2010-2011: An editor of the CosmoCoffee forum.**<sup>4</sup>

<sup>1</sup><https://www.hip.fi/cosmology-of-the-early-and-late-universe/>

<sup>2</sup>[https://www.esa.int/Science\\_Exploration/Space\\_Science/Euclid](https://www.esa.int/Science_Exploration/Space_Science/Euclid)

<sup>3</sup><https://goo.gl/LJ4GC6>

<sup>4</sup><http://cosmocoffee.info>

- **Evaluated grant proposals** for the Estonian Research Council, National Research Foundation of South Africa, Polish National Science Council, and the United Kingdom's Royal Society.
- **Opponent at 3 Ph.D. thesis examinations, examiner of 2 Licentiate's theses, preliminary examiner of 3 Ph.D. theses.** Approved Master's Thesis examiner in Denmark, opponent of 1 Master's thesis at Niels Bohr Institute in Denmark and 1 at École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland.
- **Refereed for 15 scientific journals.**
- **Advocated for open access publishing.** Have given invited talks and written pieces about the importance of open access publishing to university staff, librarians, people working on scientific publishing, and others, most recently on the University of Helsinki Think Open blog.<sup>5</sup>

## 11 Outreach and societal impact

- **Have given at least 199 popular talks on science** to a wide range of audiences, including schoolchildren from the age of 8 up, high school groups, museum and science centre visitors, artists, teachers, and students of film, design, arts and other non-STEM subjects. For several years, have lectured the course Physics for Poets on relativity and quantum physics to non-STEM audiences at the University of Helsinki.
- **Published 49 popular science articles.**
- **Sep. 2013–:** **Have written a popular physics blog** hosted by the astronomical society Ursa, with more than 320 entries, with at least two long posts per month.
- **2014–2015:** **Wrote a monthly science column** for *Helsingin Sanomat*, the largest newspaper in Finland. (Included in the above count of popular articles.)
- **Nov. 2007–May 2013:** **Wrote a popular physics blog** hosted by the popular science magazine *Tiede*, with more than 150 entries, with at least two long posts per month.
- **Over 130 interviews and appearances on TV and radio programs and podcasts about science.** Details in the Tuhat database.<sup>6</sup>
- **2016:** **Cameo role** as a cosmologist in the play *Automattokaupunki* at Teatteri Takomo.
- **2013:** **Co-scripted the circus show** *Talvisirkus Kosmos* about the history of the universe for Tanssiteatteri Hurjaruuth.
- **2012:** **Scripted and twice presented a planetarium show** about cosmology at science centre Heureka.
- **Have provided featured answers to questions on cosmology and particle physics** sent by members of the public to different publications and fora, including the popular astronomy magazine *Tähdet ja avaruus*, Finland's largest newspaper *Helsingin Sanomat*, and Finnish universities' science education network LUMA<sup>7</sup>.
- **Consulted on physics:** in 2012, 2018 and 2022 with the publishers Gummerus, Siltala and Teos; in 2012 with the game company Remedy Entertainment for the game *Quantum Break*; and with the company Cohu Entertainment on the use of physics in educational games.
- **2011–2014:** **Member of HS-raati**, a group of people from culture and science providing topical commentary for *Helsingin Sanomat*, Finland's largest newspaper.

<sup>5</sup><https://blogs.helsinki.fi/thinkopen/future-of-scientific-publishing/>

<sup>6</sup><https://researchportal.helsinki.fi/en/persons/syksy-r%C3%A4s%C3%A4nen>

<sup>7</sup><http://www.luma.fi/>