

1. Personal details and the date of the CV

Surname: Raumonon

First names: Pasi Antero

ORCID: 0000-0001-5471-0970

Date: 20.08.2024

2. Degrees

19.08.2009, **Doctor of Science (Technology)**, Major: Electromagnetics, Tampere University of Technology, Tampere, Finland, www.tuni.fi

07.04.2004, **Master of Science (Technology)**, Major: Electrical engineering, Tampere University of Technology, Tampere, Finland

3. Current employment

01.04.2020-, **Associate professor** (tenure track), applied mathematics, Unit of Computing Sciences, Tampere University.

4. Previous work experience

- 01.01.2015-30.03.2020, Senior research fellow, Unit of Computing Sciences, Tampere University (before 2019 Laboratory of Mathematics, Tampere University of Technology)
- 01.01.2012-30.03.2020, Project manager, Laboratory of Mathematics, Tampere University of Technology
- 01.03.2010-31.12.2014, Postdoctoral researcher, Department of Mathematics, Tampere University of Technology
- 01.01.2010-28.02.2010, Research fellow, Electromagnetics, Tampere University of Technology
- 25.10.2004-31.12.2009, Researcher, Electromagnetics, Tampere University of Technology
- 01.05.2004-30.06.2004, Researcher, Institute of Electronics, Tampere University of Technology
- 20.05.2002-30.04.2004, Research assistant, Institute of Electronics, Tampere University of Technology

5. Career breaks

- Parental leave: 12/2014-1/2015, 5/2015-8/2015, 3/2019, 7-12/2019, 10-11/2023
- Partial parental leave: 2/2020-3/2020, 12/2023-08/2024.

6. Research funding and grants

- 8/2024-12/2027, DREAM doctoral education pilot for FAME-flagship, Ministry of Education, 765 k€ (own part), co-PI, national consortium
- 1/2024-12/2027, Flagship of Advanced Mathematics for Sensing, Imaging and Modelling (FAME), Research Council of Finland, 179 k€ (own part), co-PI, Coordinating professor for the computational imaging and modelling research program, national consortium
 - o University's additional commitment for the flagship 100 k€ (own part)
 - o Initial funding given until the end of 2027 but the project continues until the end of 2031.

- 1/2023-12/2025, Centre of Excellence in Inverse modelling and Imaging, Research Council of Finland, 223 k€ (own part), co-PI, national consortium
 - o University's additional commitment for the center 150 k€ (own part)
- 5/2020-12/2022, Centre of Excellence in Inverse modelling and Imaging, Academy of Finland, 274 k€ (own part), co-PI, national consortium
 - o University's additional commitment for the center 150 k€ (own part)
- 10/2017-03/2021, ERA-NET ERA-GAS EU Horizon 2020, 250 k€ (own part), co-PI international consortium
- 5-10/2018, Business Finland, 30 k€ (own part), co-PI, national consortium

7. Research output

- 68 scientific journal articles, 33 scientific conference articles
- H-index: 32, 4952 citations (Google Scholar)
- The developer of internationally popular tree modelling software: TreeQSM, freely available from <https://github.com/InverseTampere/TreeQSM>

8. Research supervision and leadership experience

- Supervised Doctor of Science theses as main supervisor: Ongoing doctoral student 1 (S1) (2025), S2 (2026), S3 (2026), S4 (2027), S5 (2027), S6 (2027)
 - o the last three ones start in fall 2024 and are applied mathematics projects, part of DREAM doctoral educational pilot related to the FAME flagship
- Supervised Doctor of Science theses as instructor: S1 (2018), ongoing S2 (2025), S3 (2025)
- Supervised postdoctoral researchers: P1 (2018-2021), P2 (2019-2020), P3 (2024)
- Supervised seven MSc-theses 2012-2024
- Supervised two BSc-thesis 2021-2022
- Supervisor for six overseas internships from City University of Hong Kong, China, 2013-2017
- Leader of the research group 2020-, currently 4 doctoral students in the group.

9. Teaching merits

- Teacher or teaching assistant in many basic and advance level of electromagnetics and mathematics courses (2005-2024)
- Pedagogical Courses 10cr, 2013, Tampere University of Technology / TOAKK

10. Other key academic merits:

- Pre-examiner and opponent of a doctoral dissertation (University of Alberta, 2023)
- Reviewer of adjunct professorship (University of Eastern Finland, 2021)
- Deputy member of Science Council of Tampere University of Technology (2014-2018)
- Board member of Finnish Inverse Problem Society (2021-)
- Member of Faculty Council 01/2023-, Faculty of Information Technology and Communication Sciences, Tampere University
- Reviewer in many scientific journals, including *Nature* and *Remote Sensing of Environment*
- Peer review of funding applications (2022), Dutch Research Council.
- Organising scientific meetings:
 - o *Inverse Days 2014*, Tampere 9-11 Dec 2014

- *Tree data and modelling workshop 2016*, Tampere 7-9 June 2016
- *Inverse Days 2021*, Tampere 14-16 Dec 2021
- Many invited talks/lectures:
 - “Empirical 3D and 4D structural tree models from TLS data” Keynote talk, 3D Tree Models for Forest Dynamics, 9-10 Jan 2020, Helsinki, Finland.
 - “Tree architecture modelling from close-range laser scanner data.” Seminar talk, Ghent University, 28 Nov 2017, Ghent, Belgium.
 - “New 3D and 4D tree and forest models from laser scanning.” The terrestrial laser scanning revolution in forest ecology, 27-28 Feb 2017, Buckinghamshire, UK.
 - “Quantitative structure tree models from terrestrial laser scanner data.” Silvilaser 2015, 28-30 September 2015, France.
 - “Next-generation forest models from ubiquitous laser scanning data.” Applied Inverse Problems 2015, 25-29 May 2015, University of Helsinki, Finland.
 - “Tree models from laser scanning data.” Distinguished Lectures on Inverse Problems, 4-8 August 2014, University of Helsinki, Finland.
 - “Massive-scale tree reconstruction from big TLS data.” Terrestrial Laser Scanner International Interest Group (TLSIIG) meeting, 16-20 June 2014, University of Salford, Manchester, UK.
 - “3D tree modelling from laser scanner data.” 1st Working Group Meeting on TLS applications for forestry, 15 January 2014, Forest Research, Farnham, UK
 - “Comprehensive and quantitative tree models from TLS data.” Beijing Forestry University, 26 September 2012, Beijing, China
 - “Asteroid models from photometry and other data: inverse problems in astronomy.” Purple Mountain Observatory, Chinese Academy of Science, 31 October 2012, Nanjing, China.