

Curriculum vitae 23.5.2025: Siltanen, Samuli

Homepage <https://siltanen-research.net/>, ORCID <https://orcid.org/0000-0002-5988-5232>

Degrees:

1999 PhD, Helsinki University of Technology.

1998 Lic.Tech., Helsinki University of Technology. Major: applied mathematics.

1994 MSc (eng.), Helsinki University of Technology. Major: applied mathematics.

Current employment:

2009-present Professor of Industrial Mathematics, University of Helsinki

2018-present Vice Dean of Faculty of Science, University of Helsinki

Previous work experience:

2006-2009 Professor of mathematics at Tampere University of Technology, Finland.

2004-2005 R&D Scientist at GE Healthcare Finland

2002-2004 JSPS Postdoctoral Fellow at Gunma University, Kiryu, Japan.

1999-2002 R&D Scientist at Instrumentarium Corp. Imaging Division, Finland.

1994-1999 Researcher at Helsinki University of Technology, Finland.

Selected awards and honours

2022 honorary doctorate from LUT University

2021 Knight, First Class, of the [Order of the White Rose of Finland](#).

2021 award: Erkki Laurila Prize, granted by the [Finnish Nuclear Society](#).

2020 award: Mathematics Prize 2020, granted by the Finnish Mathematical Society.

2018 award: JV Snellman Prize, for disseminating scientific knowledge to general audiences.

2015 award: The Scientific Conference Organizer of the Year (Fed. Finn. Learned Societies)

2015 award: Winner of the 8th Science SLAM Helsinki.

Selected research funding and grants:

2024-2028 (PI and Vice Director) FAME Flagship **€875000** for the Uni Helsinki team

2024-2027 (PI and site leader) DREAM doctoral pilot **€4335000** for the Uni Helsinki team

2023-2025 (PI) Cone beam X-ray tomography for human head. Business Finland **€279000**

2021-2023 (PI) EIT - a Novel Method for Improved Diagnostics of Stroke. JAES **€276261**

2019-2021 (PI) Artificial intelligence guided diagnostics in medical imaging. JAES **€123925**

2018-2025 (PI) CoE in Inverse Modelling and Imaging. Academy of Finland. **€473409**

2017-2021 (lead PI) Tomographic imaging of moving objects. Academy of Finland **€458155**

2017-2020 (lead PI) Stroke classification and monitoring using EIT. JAES **€276778**

2017-2018 (PI) New imaging method for cardiology. Finnish Technology Agency, **€117900**

2015-2017 (lead PI) Inversion for X-ray imaging. Finnish Technology Agency **€144000**

2015-2018 (PI) Automated UQ for numerical solutions of PDE. NordForsk **€69715**

2012-2017 (team leader) Finnish Centre of Excellence in Inverse Problems Research.

2014-2015 (PI) Novel services w/ open satellite image data. Finn Tech Agency **€101700**

2012-2014 (PI) Modelling and analysis of fibre networks. Academy of Finland **€245140**

2012-2013 (PI) Stroke-EIT. Health and Wellbeing SHOK **€80000**

2011-2013 (lead PI) Sparsity-inversion for tomography. Academy of Finland **€254860**

2010-2013 (lead PI) Computerized inversion for spoken language research. Acad. **€360000**

Research output

- 128 peer-reviewed articles, one monograph (siltanen-research.net/publications/),
- h-index 39, i10-index 99 (Google Scholar).
- Open code (github.com/ssiltane),
- Open data (fips.fi/category/open-datasets/),
- Data challenges (fips.fi/data-challenges).
- Eight patents.

Selected conference talks (Total of [227 talks](#) in international scientific venues)

2024 Plenary talk, 94th GAMM conference in Magdeburg, Germany.
2020 Plenary talk, Finnish Mathematical Society Mathematical Days 2020, Oulu, Finland.
2019 Plenary talk, 12th ISAAC Congress, Aveiro, Portugal.
2018 Plenary talk, 20th European Conference on Math for Industry, Budapest, Hungary.
2018 Plenary talk, Meeting on Tomography and Applications, Politecnico di Milano, Italy.
2017 Plenary talk, Applied Inverse Problems Conference, Hangzhou, China.
2016 Plenary talk, Discrete tomography and applications, Politecnico di Milano, Italy.
2015 Plenary talk, South-East Asian Mathematical Society Meeting, Yogyakarta, Indonesia.
2014 Plenary talk, Annual meeting of JSIAM, Tokyo, Japan.
2013 Plenary talk, International Workshop on Inverse Problems and Regularization Theory, Fudan University, Shanghai, China.
2013 Plenary talk, Shanghai International Workshop on Recent Advances in Inverse Problems and Imaging Science, Jiao Tong University, Shanghai, China.
2012 Plenary talk, Workshop on Computational Inverse Problems, Vienna, Austria.
2012 Plenary talk, Inverse problems & numerical methods, Bremen, Germany.
2011 Plenary talk, Fields-MITACS Conf. on Mathematics of Medical Imaging, Toronto.
2009 Plenary talk, 3rd Finnish-Estonian Mathematical Colloquium, Tartu, Estonia.

Research supervision and leadership experience

Supervisor of 16 PhD theses. Currently supervising 12 PhD theses. Period 2012-present: team leader in Center of Excellence, supervised 7 postdocs, lead PI of 5 research consortia, Vice Director of FAME Flagship of Advanced Mathematics for Sensing, Imaging and Modelling

Selected conference organization activities (full list available [here](#))

2025 Scientific committee member of Applied Inverse Problems Conference, Rio de Janeiro.
2024 Co-chair of [SIAM Conference on Imaging Science](#), Atlanta, Georgia, USA.
2024 [Finland-Japan Workshop in Industrial and Applied Mathematics](#), Helsinki, Finland.
2023 [RIMS Workshop](#) on Inverse Problems & Medical Imaging, Kyoto, Japan.
2017 Member of organizing committee of [SIAM Annual meeting](#).
2015 Applied Inverse Problems Conference ([AIP2015](#)), Helsinki, Finland.
2002 First Mummy Range Workshop on Electrical Impedance Imaging, Colorado, USA.
A total of 30 minisymposia in international conferences organized in 2002-2024.

Professional long-term visits (1 month or longer)

2024 Visiting Professor at Colorado State University (1 month)
2024 Guest Researcher at the Flatiron Institute, New York (1 month)
2011 Visiting Fellow of the Isaac Newton Institute, Cambridge, UK (1 month)
2010 Research Member of MSRI Berkeley, USA (3 months)
2006 Visiting professor at Tsukuba University, Japan (1 month)

Teaching merits

Taught 8 different courses, 7 of them from scratch. Developed 3 MOOC courses, included lab measurements to inverse problems courses. Open lecture videos available at [YouTube channel Professor Sam](#). Delivered 16 minicourses in 11 countries, including
2023 [Advanced methods for mathematical image analysis](#), Bologna, Italy
2022 [Inverse Problems on Medical Imaging and Small Scales](#), RICAM, Linz, Austria.
2022 [Mathematical Methods in Data Analysis](#), Tirana, Albania.
2018 [Computational Methods for Inverse Problems in Imaging](#), Como, Italy
2017 IMPA, Rio de Janeiro, Brazil
2017 [Geometry and inverse problems](#), Sendai, Japan
2016 Universidad Autónoma de Madrid, Spain
2016 Tokyo University of Science, Japan
2015 Summer Pre-School on Inverse Problems, CIRM, France
2013 Franco-German Summer School, Bremen, Germany
2012 17th Intensive Course on Complex Analysis, Aveiro, Portugal

Other key academic merits (see also <https://siltanen-research.net/cv/>)

Treasurer of [European Mathematical Society](#)
President of [Finnish Inverse Problems Society](#)
Board member of [Science Center Heureka](#), Finland
Vice Director (outreach) of [FAME Flagship](#)
Vice Chair of the Board of [Finnish Nuclear Society](#)
Member: Finnish Academy of Science and Letters & Finnish Academy of Technical Sciences
Editor-in-Chief of the journal [Applied Mathematics For Modern Challenges](#)
Editor for Inverse Problems and Imaging
Pre-examiner/opponent for 28 PhD theses
Expert evaluator in 11 recruitments (USA, Sweden, Norway, Denmark, Germany, UK)
Peer review of 10 funding applications for DFG, EPSRC, ERC, FWF, NOW

Scientific and societal impact

YouTube channel [Samun tiedekanaava](#) with 9,600 subscribers and 500,000 views.
Regular science expert in national TV (including 29 live broadcasts) and radio
60 school visits, and hosting a total of 527 visiting school children in my lab
Book “Step into the world of mathematics”, Finnish 2019, English translation Springer 2021
[Popular talk](#) in “Math Encounters” series of New York Museum of Mathematics 2023
Producer of popular-science games [Mineraalivaltti](#), [Molekyylivaltti](#), [Pelastaja](#)
Dozens of popular-science talks for general audiences in Finland, Denmark, USA, UK