**Curriculum vitae 1.9.2024:** 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 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**

- 121 peer-reviewed articles, one academic monograph, '
- h-index 38, i10-index 92 (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 220 talks in international scientific conferences)
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 Conference on Mathematics of Medical Imaging,
    Toronto, Canada.
2009 Plenary talk, 3rd Finnish-Estonian Mathematical Colloquium, Tartu, Estonia.

**Research supervision and leadership experience**
Supervisor of 14 PhD theses. Currently supervising 14 PhD theses. Period 2012-present: team
leader in Center of Excellence, supervised 7 postdocs, lead PI of 5 research consortia.

**Selected conference organization activities**
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 Visiting Scholar 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 member 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 tiedekanava with 9,258 subscribers, 457,339 views.
Regular science expert in national TV (including 26 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 two popular-science card games Mineraalivaltti and Molekyylivaltti
Dozens of popular-science talks for general audiences in Finland, Denmark, USA, UK