

1. Personal Details

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 Date of the CV: February 2, 2024

2. Degrees

2016	<i>Doctor of Science (Technology)</i> , Faculty of Computing and Electrical Engineering at Tampere University of Technology
2003	<i>Master of Science</i> , Department of Electric Engineering (with distinction) at Tampere University of Technology Major: Signal Processing, Subsidiary: Digital Transmission
1997	<i>Finnish Matriculation Examination</i> , Kaarila Senior Secondary School

3. Language skills

- Finnish: native
- English: fluent
- Swedish: basics
- German: basics
- French: basics

4. Work experience

September 4, 2023 – October 24, 2023	<i>AI Scientist</i> , Silo AI – Machine learning research and implementation
January 1, 2019 – June 30, 2022	<i>Postdoctoral Research Fellow</i> , Faculty of Information Technology and Communication Sciences, Tampere University – Independent research work
January 1, 2013 – December 31, 2018	<i>Researcher</i> , Department of Signal Processing, Tampere University of Technology – Independent research work
February 1, 2007 – December 31, 2012	<i>Teaching Associate</i> , Department of Signal Processing, Tampere University of Technology – Post-graduate studies – Independent research work – Teaching at courses related to signal processing
August 1, 2006 – February 16, 2007	<i>Software Designer</i> , Elektrobit Ltd., – Research and development – Algorithm analysis and development – Preparing specifications from mobile technology standards such as Long Term Evolution (LTE) using Matlab © for C++ programmers
May 7, 2003 – April 30, 2006	<i>Researcher</i> , Department of Signal Processing, Tampere University of Technology – Post-graduate studies – Independent research work – Teaching at courses related to signal processing
March 6, 2000 – May 6, 2003	<i>Research Assistant</i> , Department of Signal Processing, Tampere University of Technology – Master's Thesis – Support duties in audio signal processing research projects
1997 – 2000	<i>Technical Assistant in live broadcasting</i> , YLE (Finnish Broadcasting Company)

5. Research output

- 18 peer-review articles consisting of conference paper and journal articles (A list of publications available in Section 9. and at <https://scholar.google.fi/citations?hl=en&pli=1&user=0PUmhVYAAAAJ>).
- Software implementations developed during the research (programming languages include Matlab, Python, and Bash)
- Custom design/build of equipment for data collection, actual data recording, and releasing of datasets

6. Research supervision and leadership experience

- Arjun Venkatakrishnan MSc thesis supervision, co-supervisor Dr. Tech Pasi Pertilä, <http://urn.fi/URN:NBN:fi:tuni-201909203436>
- Currently supervising a doctoral student.

7. Teaching merits

- YPP1a Yliopisto-opetuksen ja -oppimisen teoreettiset perusteet (pedagogical studies), 5 cp, Tampere University of Technology
- Corresponding teaching SGN-1650 Signaalinkäsittelyn työkurssi / SGN-1656 Signal Processing Laboratory. The target audience consisting of MSc and doctoral degree students (2007 – 2012).
- Design and implementation of practical exercises in Tampere University of Technology (2007 – 2012):
 - SGN-2500 Johdatus hahmontunnistukseen (BSc and MSc students)
 - SGN-2506 Introduction to pattern recognition (BSc and MSc students)
 - SGN-2806 Neural Computation (MSc and doctoral students)
 - SGN-2556 Pattern recognition (MSc and doctoral students)

8. Other key academic merits

- Reviewer of conference and journal articles (publishers include, e.g., IEEE and MDPI)
- Invited speaker at indoor navigation seminar (INTO) 2016 seminar
- System administrator of Linux servers and workstations of a research group
- Quality management in research projects

9. List of Publications

- [1] A. Venkatakrishnan, P. Pertilä, and M. Parviainen, “Tampere university rotated circular array impulse response dataset,” in *29th European Signal Processing Conference, EUSIPCO 2021*, 2021.
- [2] M. Parviainen and P. Pertilä, “Time difference of arrival estimation of multiple simultaneous speakers using deep clustering neural networks,” *IEEE MMSP 2021 - 23rd Workshop on Multimedia Signal Processing*, 2021.
- [3] P. Pertilä and M. Parviainen, “Time difference of arrival estimation of speech signals using deep neural networks with integrated time-frequency masking,” in *ICASSP 2019 - 2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 436–440, May 2019.
- [4] M. Parviainen, “Two-channel separation of speech using direction-of-arrival estimation and sinusoids plus transients modeling,” in *International Symposium on Intelligent Signal Processing and Communications (ISPACS)*, IEEE, 2003.
- [5] V. Peltonen, A. Eronen, M. Parviainen, and A. Klapuri, “Recognition of everyday auditory scenes: Potential, latencies and cues,” in *110th AES Convention*, 2001.
- [6] P. Pertilä, M. Parviainen, T. Korhonen, and A. Visa, “A spatiotemporal approach to passive sound source localization,” in *International Symposium on Communications and Information Technologies 2004 (ISCIT 2004)*, 2004.
- [7] M. Parviainen, P. Pertilä, T. Korhonen, and A. Visa, “A spatiotemporal approach for passive sound source localization — real-world experiments,” in *International Workshop on Nonlinear Signal and Image Processing (NSIP2005)*, 2005.
- [8] M. Parviainen, T. Pirinen, and P. Pertilä, “A speaker localization system for lecture room environment,” in *3rd Joint Workshop on Multimodal Interaction and Related Machine Learning Algorithms*, 2006.
- [9] P. Pertilä, M. Parviainen, T. Korhonen, and A. Visa, “Moving sound source localization in large areas,” in *2005 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2005)*, December 2005.
- [10] P. Pertilä, T. Korhonen, T. Pirinen, and M. Parviainen, “TUT acoustic source tracking system 2006,” in *CLEAR’06 Evaluation Campaign and Workshop*, 2006.
- [11] P. Pertilä, T. Korhonen, T. Pirinen, and M. Parviainen, “Robust speaker localization in meeting room domain,” in *The 32nd International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2007.
- [12] T. Pirinen, P. Pertilä, and M. Parviainen, “The TUT 2005 source localization system,” in *“Rich Transcription 2005 Spring Meeting Recognition Evaluation”, July 13, 2005, Royal College of Physicians, Edinburgh, UK*, 2005.
- [13] M. Parviainen, “Robust self-localization solution for meeting room environments,” in *13th International Symposium on Consumer Electronics*, (Kyoto, Japan), 5 2009.
- [14] M. Parviainen, P. Pertilä, and M. Hämäläinen, “Self-localization of wireless acoustic sensors in meeting rooms,” in *Hands-free Speech Communication and Microphone Arrays (HSCMA), 2014 4th Joint Workshop on*, pp. 152–156, May 2014.
- [15] M. Parviainen and P. Pertilä, “Self-localization of dynamic user-worn microphones from observed speech,” *Applied Acoustics*, vol. 117, pp. 76–85, 2017.
- [16] M. Parviainen and P. Pertilä, “Obtaining an optimal set of head-related transfer functions with a small amount of measurements,” in *The IEEE International Workshop on Signal Processing Systems*, 2017.
- [17] M. Parviainen, P. Pertilä, T. Virtanen, and P. Grosche, “Time-frequency masking strategies for single-channel low-latency speech enhancement using neural networks,” in *16th International Workshop on Acoustic Signal Enhancement (IWAENC)*, 2018.
- [18] M. Parviainen, *Self-localization in Ad Hoc Indoor Acoustic Networks*. PhD thesis, 10 2016.