1. Personal Details

Name: Mikko Pekka Parviainen
Born: July 1, 1978 – Tampere, Finland
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some github repos: https://github.com/mikkopparviainen/
https://scholar.google.com/citations?user=0PUmhVYAAAAJ
Date of the CV: December 23, 2023

2. Degrees

2016 *Doctor of Science (Technology)*, Faculty of Computing and Electrical Engineering at Tampere University of Technology

2003 *Master of Science*, Department of Electric Engineering (with distinction) at Tampere University of Technology
Major: Signal Processing, Subsidiary: Digital Transmission

1997 *Finnish Matriculation Examination*, 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 *AI Scientist*, Silo AI
- Machine learning research and implementation

January 1, 2019– June 30, 2022 *Postdoctoral Research Fellow*, Faculty of Information Technology and Communication Sciences, Tampere University
– Independent research work

January 1, 2013 – December 31, 2018 *Researcher*, Department of Signal Processing, Tampere University of Technology
– Independent research work

February 1, 2007 – December 31, 2012 *Teaching Associate*, 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 *Software Designer*, 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 *Researcher*, 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 *Research Assistant*, Department of Signal Processing, Tampere University of Technology
– Master's Thesis
– Support duties in audio signal processing research projects

1997 – 2000 *Technical Assistant in live broadcasting*, 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 pratical 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.