Saana Elina Katariina Seppälä

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Summary

I am an MSc. (Tech.) in Biotechnology and Biomedical Engineering, located in Tampere, Finland. I am currently working at Tampere University as a researcher in the Computational Neuroscience group and as a part-time teacher in the Faculty of Medicine and Health Technology. I am highly motivated towards learning and improving my skills, and eager to do my part to advance the biomedical field in research and academic teaching.

Degrees and Education

Tampere University, Tampere, Finland

MSc. (Tech.) in Biotechnology and Biomedical Engineering, 22.11.2022

08/2020 — 11/2022

- Advanced Studies in Health Technology and Informatics
- Advanced Studies in Biomedical Micro- and Nanodevices as Free Choice Studies

BSc. (Tech.) in Biotechnology, 10.06.2020

08/2017 — 06/2020

- Major: Biomedical Engineering
- Minor: Biomeasurements

Language skills

Finnish ..... native proficiency
English ..... professional proficiency, C2
Swedish ..... limited working proficiency, B2

Current employment

Tampere University, Tampere, Finland

Faculty of Medicine and Health Technology

Researcher, Computational Neuroscience Group

01/03/2023 — 30/04/2023

- Part-time researcher with a 60 % contract
- Research on glutamate transportation mechanisms
- Currently writing an article on glutamate transporters

Part-time teacher

01/03/2023 — 30/04/2023

- Laboratory instructor at BBT.HTI.506 Measurements of Physiological Systems -course
- 24 teaching hours, 48 preparation hours

Place and date Tampere, Finland 27.04.2023

Signature 

Previous relevant work experience

Tampere University, Tampere, Finland

Faculty of Medicine and Health Technology

Researcher, Computational Neuroscience Group

01/01/2023 — 28/02/2023

- Research on glutamate transportation mechanisms

Research Assistant, Computational Neuroscience Group

02/05/2022 — 31/12/2022

- Research and simulations on neuronal and glial cells, and glutamate transporters
- 11/2022 — 12/2022 with an 80% contract
- Master's thesis, 5/2023 — 11/2023, computational modeling of neurons and astrocytes

Part-time teacher

31/10/2022 — 11/12/2022 and 01/11/2021 — 08/12/2021

- Part-time teacher at BBT.029 Biomedical Engineering Principles -course
- 37 teaching hours during the 2022 execution, 28 teaching hours during the 2021 execution

Research Assistant

01/08/2021 — 31/08/2021

- Research assistant with a 50 % contract for a project-based, study-related work
- Testing and evaluating teaching equipment and software

Fimlab, Tampere, Finland

Laboratory worker, sample processing

27/10/2020 — 25/04/2022

- Sample handler in covid analytics in the central laboratory of Fimlab, Tampere
- Casual job in short-term contracts over the presented time period
- Preparation of the covid samples for analysis

Laboratory worker, assistant in sampling

11/08/2020 — 28/08/2020

- Short-term additional assistant in covid sampling at Fimlab office in Tays Hatanpää Hospital
- Assisting tasks and customer reception

Publications and theses

- Seppälä, Ylihärsilä, Manninen, Linne. Modeling of Glutamate Uptake in Neuronal and Glial Cells: Evaluation and Comparison of Models. Manuscript in preparation.
- Master's thesis in Technology (2022): Developing Glutamate Uptake Model for Neuron-Astrocyte Synapse. Accepted with the best grade (5/5).
- Bachelor's thesis in Technology (2020): Utilizing Cells as Sensors. Literature review, in Finnish.

Awards

- Finnish Society for Medical Physics and Medical Engineering (LFTY): Poster competition for best Master's theses of 2022. **First prize for best poster.** LFT Day. Oulu, Finland, 9.2.2023.

Summer schools

- Baltic-Nordic Summer School on Neuroinformatics (BNNI), 4.–8.7. 2022 (remote). Students were selected based on the applications.

Attendance in Conferences

- Medical Physics and Engineering -day (LTF Day) organized by Finnish Society for Medical Physics and Medical Engineering (LFTY). Oulu, Finland, 9.2.2023.

Academic projects

Computational Modeling and Simulation of Microglia-mediated Neuroinflammation (5cr)

09/2021 – 12/2021

- Supervision from the Computational Neuroscience group at Tampere University

Vagus nerve stimulator system design (5cr)

01/2021 – 05/2021

- Course group project for BBT.MND.711 Bioelectronics course

IT skills

- Advanced working skills in MS Office Software and Python
- Fluent working skills in MATLAB and LaTeX
- Basic working skills in C++, Comsol, SPSS and R

Assosiation work

01/2021 – 12/2021

- Study officer of the Subject Association of Environmental and Energy Engineering, 2021

Summary of Expertise

- Master of Science level expertise in biomedical engineering and signal processing.
- Computational modeling of neuronal and glial cells.
- Modeling of neural circuits and network from the perspective of machine learning and computational neuroscience.
- Advanced computational skills, including Python

Place and date Tampere, Finland 27.04.2023

Signature