

**Mikko Juho-Matti Majamaa**  
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CV

May 2023



## EDUCATION

Aug. 2022 –

### Ph.D. (Tech.), University of Jyväskylä

*“Enhancing Communication Performance in 5G and Beyond Non-Terrestrial Networks”*

- Supervisors: Prof. Timo Hämäläinen, Dr. Jani Puttonen.

Sep. 2020 – May 2022

### Master of Science, LUT University

*Computational Engineering and Technical Physics*

- Technical mathematics as a major, data science and engineering as a minor
- Grade: 4.22/5.0.

Sep. 2020 – July 2021

### Exchange studies, Instituto Superior Técnico

*Mathematics and Applications*

- Courses in applied mathematics and performing minor in data science and engineering.

Sep. 2017 – May 2020

### Bachelor of Science, LUT University

*Computational Engineering and Data Analytics*

- Technical mathematics as a major, IT as a minor
- Grade: 4.36/5.0.

## WORK EXPERIENCE

June 2022 –

### Researcher, Magister Solutions Oy

- Satellite communications research.

Jan. 2021 – June 2022,

Jan. 2020 – Aug. 2020

### Software developer, Magister Solutions Oy

- Did R&D of satellite communication simulators (ns-3, C++, Python, CUDA)
- Developed a SaaS product (MEAN stack)
- Participated in research projects that included publication of scientific papers in the field of satellite communications.

May 2019 – Dec. 2019

### Software developer, Silmu Software Oy

- Developed web and mobile software (Ruby, JS)
- Worked with the company's own SaaS products and as a consultant in customer projects, also working at the customer interface.

Jan. 2019 – May 2019

### Software developer trainee, Silmu Software Oy

- Developed web and mobile software (Ruby, JS).

## PUBLICATIONS

- M. Majamaa**, H. Martikainen, and J. Puttonen., “Satellite-Assisted Multi-Connectivity in Beyond 5G,” 2023 IEEE 24th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2023
- H. Martikainen, **M. Majamaa**, and J. Puttonen., “Coordinated Dynamic Spectrum Sharing Between Terrestrial and Non-Terrestrial Networks in 5G and Beyond,” 2023 IEEE 24th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2023
- M. Majamaa**, H. Martikainen, L. Sormunen, and J. Puttonen, "Multi-Connectivity in 5G and Beyond Non-Terrestrial Networks," in Journal of Communications Software and Systems, vol. 18, no. 4, pp. 350-358, December 2022, doi: 10.24138/jcomss-2022-0155
- M. Majamaa**, H. Martikainen, L. Sormunen, and J. Puttonen, "Multi-Connectivity for User Throughput Enhancement in 5G Non-Terrestrial Networks," 2022 18th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), 2022, pp. 412-418, doi: 10.1109/WiMob55322.2022.9941510
- M. Majamaa**, H. Martikainen, L. Sormunen, and J. Puttonen, "Adaptive Multi-Connectivity Activation for Throughput Enhancement in 5G and Beyond Non-Terrestrial Networks," 2022 International Conference on Software, Telecommunications and

Computer Networks (SoftCOM), 2022, pp. 1-5, doi: 10.23919/SoftCOM55329.2022.9911400

- **M. Majamaa**, J. Kurjenniemi, L. Sormunen, and J. Puttonen, "Usage of GPGPU Computing in LEO Satellite Network Simulations", Ka and Broadband Communications Conference, 2021
- A. Masri, J. Kurjenniemi, J. Puttonen, T. Varjus, and **M. Majamaa**, "Capacity Level Simulator for NGSO Satellite Constellations", Ka and Broadband Communications Conference, 2021.

## PUBLICATIONS UNDER PROGRESS

- **M. Majamaa**, H. Martikainen, and J. Puttonen., "On Enhancing Reliability in B5G NTN with Packet Duplication via Multi-Connectivity," 2023
- **M. Majamaa**, "Multi-Connectivity in Beyond 5G Non-Terrestrial Networks: Challenges and Insights," IEEE Wireless Magazine, special issue on non-terrestrial networks, 2023. (Submitted)

## LANGUAGE SKILLS

- Finnish C2 (native)
- English C1
- Portuguese B2
- Swedish A1

## TEACHING EXPERIENCE

- Was an assistant in a university course focused on numerical methods

## AWARDS AND HONOURS

Nov. 2022	<b>Young Scholar Recognition, Communications, Space &amp; Technology of Saudi Arabia</b> <ul style="list-style-type: none"><li>• Awarded for the article "Adaptive Multi-Connectivity Activation for Throughput Enhancement in 5G and Beyond Non-Terrestrial Networks".</li></ul>
May 2022	<b>Stipend for graduating in the target time, LUT University</b>
June 2020	<b>Stipend for good performance in undergraduate studies (average grade 4.36/5.0), LUT University</b>
Nov. 2019	<b>Stipend for good performance in studies (1000 €), Research Foundation of Lappeenranta University of Technology</b>
April 2018	<b>First place (as a group) in a competition of collecting credits for first-year university students, LUT University</b>

## OTHER

April 2022 –	<b>Deputy workers' representative, Magister Solutions Ltd.</b>
Jan. 2019 – Dec. 2019	<b>Sports manager, Lateksii Ry</b> <ul style="list-style-type: none"><li>• Volunteered as a sports manager in the guild for students of computational engineering.</li></ul>

## IT SKILLS

- IT skills include but are not limited to C++, C, CUDA, Java, JavaScript (e.g., React, Vue, Angular, ExpressJS, NodeJS, Ionic...), Python, Ruby, HTML, SQL, MongoDB, Git, MATLAB, R, and Linux.