

Mikko Juho-Matti Majamaa
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Jan. 2024

EDUCATION

- Aug. 2022 – **Doctor of Philosophy (Tech.), University of Jyväskylä**
“Enhancing the Performance of Non-Terrestrial Networks in 5G and Beyond”
- Supervisors: Prof. Timo Hämäläinen, Dr. Jani Puttonen.
- Sept. 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.
- Sept. 2020 – July 20021 **Exchange studies, Instituto Superior Técnico**
Mathematics and Applications
- Performed courses in applied mathematics and minor in data science and engineering.
- Sept. 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

- Jan. 2024 – April 2024 **Visiting researcher, Signal Processing and Communications (SIGCOM) research group, University of Luxembourg**
- Satellite communications and machine learning/artificial intelligence research.
- Oct. 2023 – **Senior researcher, Magister Solutions Oy**
- Satellite communications research, consultancy, and increased responsibility on the project management side.
- June 2022 – Sept. 2023 **Researcher, Magister Solutions Oy**
- Did satellite communications research
 - Worked as a consultant on projects related to wireless communication.
- 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 et al.**, “Can 3GPP NR NTN Meet the IMT-2020 Requirements for Satellite Radio Interface Technology?”, TBD, 2024.
- M. Majamaa**, "Toward Multi-Connectivity in Beyond 5G Non-Terrestrial Networks: Challenges and Possible Solutions," in IEEE Communications Magazine, 2024, doi: 10.1109/MCOM.001.2300581.
- M. Majamaa**, H. Martikainen, J. Puttonen and T. Hämäläinen, "On Enhancing Reliability in B5G NTN with Packet Duplication via Multi-Connectivity," 2023 IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE), Aveiro, Portugal, 2023, pp. 154-158, doi: 10.1109/WiSEE58383.2023.10289158.
- M. Majamaa**, H. Martikainen, J. Puttonen and T. Hämäläinen, "Satellite-Assisted Multi-Connectivity in Beyond 5G," 2023 IEEE 24th International Symposium on a World of

Wireless, Mobile and Multimedia Networks (WoWMoM), Boston, MA, USA, 2023, pp. 413-418, doi: 10.1109/WoWMoM57956.2023.00073.

- 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), Boston, MA, USA, 2023, pp. 419-424, doi: 10.1109/WoWMoM57956.2023.00074.
- **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), Thessaloniki, Greece, 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), Split, Croatia, 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, Arlington, USA, 2021.
- A. Masri, J. Kurjenniemi, J. Puttonen, T. Varjus and **M. Majamaa**, "Capacity Level Simulator for NGSO Satellite Constellations", Ka and Broadband Communications Conference, Arlington, USA, 2021.

LANGUAGE SKILLS

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

TEACHING EXPERIENCE

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

SELECTED AWARDS, HONOURS, AND GRANTS

Oct. 2023

Nokia Scholarship, Nokia Foundation

- Intended to encourage efficient, fast-progressing doctoral studies and research.

Oct. 2023

Grant for a 3-month research visit at the University of Luxembourg, Wihuri Foundation

June 2023

Grant for internationalization, Riitta and Jorma J. Takanen Foundation

Nov. 2022

Young Scholar Recognition, Communications, Space & Technology of Saudi Arabia

- Awarded for the article "Adaptive Multi-Connectivity Activation for Throughput Enhancement in 5G and Beyond Non-Terrestrial Networks".

Nov. 2019

Stipend for good performance in studies, Research Foundation of LUT University

OTHER

Jan. 2024 –

Workers' representative, Magister Solutions Oy

- Was elected by the employees to represent them on the Health and Safety Committee.

April 2022 – Dec. 2023

Deputy workers' representative, Magister Solutions Oy

Jan. 2019 – Dec. 2019

Sports manager, Lateksii Ry

- Volunteered as a sports manager in the guild for students of computational engineering.

IT SKILLS

- IT skills include but are not limited to C++, ns-3, Python, C, CUDA, Java, JavaScript (e.g., React, Vue, Angular, ExpressJS, NodeJS, Ionic...), Ruby, HTML, SQL, MongoDB, Git, MATLAB, R, and Linux.