

## EDUCATION

- Aug. 2022 – **Doctor of Philosophy (Tech.), University of Jyväskylä**  
*“Advances in satellite integration into 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

- Aug. 2024 – **Senior Research Specialist, Nokia Oyj**
- 6G standardization research.
- Jan. 2024 – April 2024 **Visiting researcher, Signal Processing and Communications (SIGCOM) research group, University of Luxembourg**
- Did datellite communications and machine learning/artificial intelligence research.
- Oct. 2023 – July 2024 **Senior researcher, Magister Solutions Oy**
- Did satellite communications research through developing system-level simulators, 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, Matlab)
  - 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.

## PUBLICATIONS

- **M. Majamaa**, E. Lagunas, A. Adam, F. Ortiz, L. Sormunen, T. Hämäläinen, and S. Chatzinotas, “5G-NR Resource Management in Multi-Orbit Non-Terrestrial Systems with Multi-Connectivity”, IEEE Globecom Wkshps, 2024 (submitted).
- **M. Majamaa**, L. Sormunen, V. Rönty, H. Martikainen, J. Puttonen, and T. Hämäläinen, “Can 3GPP NR NTN Meet the IMT-2020 Requirements for Satellite Radio Interface Technology?”, IEEE Globecom, 2024 (accepted).
- **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 NTNs with Packet Duplication via Multi-Connectivity," 2023 IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE), 2023, 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), 2023, 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), 2023, 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, 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, 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, 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.

## LANGUAGE SKILLS

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

## SELECTED AWARDS, HONOURS, AND GRANTS

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|------------|--|
| May 2024   | <b>Encouragement grant, Electrical Engineers' Research Foundation</b>  |
|            | • A grant supporting my doctoral research.   |
| March 2024 | <b>Encouragement grant, HPY Research Foundation</b>  |
|            | • A grant supporting my doctoral research.   |
| Oct. 2023  | <b>Nokia Scholarship, Nokia Foundation</b>   |
|            | • Intended to encourage efficient, fast-progressing doctoral studies and research.   |
| Oct. 2023  | <b>Grant for a 3-month research visit at the University of Luxembourg, Wihuri Foundation</b>   |
| June 2023  | <b>Grant for internationalization, Riitta and Jorma J. Takanen Foundation</b>  |
| Nov. 2022  | <b>Young Scholar Recognition, Communications, Space &amp; Technology of Saudi Arabia</b>   |
|            | • Awarded for the article "Adaptive Multi-Connectivity Activation for Throughput Enhancement in 5G and Beyond Non-Terrestrial Networks". |
| Nov. 2019  | <b>Stipend for good performance in studies, Research Foundation of LUT University</b>  |

## OTHER

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|------------------------|---|
| April 2022 – July 2024 | <b>Deputy and actual workers' representative, Magister Solutions Oy</b>                   |
|                        | • Was elected by the employees to represent them on the Health and Safety Committee.      |
| Jan. 2019 – Dec. 2019  | <b>Sports manager, Lateksii Ry</b>  |
|                        | • Volunteered as a sports manager in the guild for students of computational engineering. |
| 2018                   | <b>LUT University</b>   |
|                        | • Was an assistant in a university course focused on numerical methods.                   |

## 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.