

RUIBO WANG

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Education

King Abdullah University of Science and Technology (KAUST)

Advisor: Prof. Mohamed-Slim Alouini

May. 2022 – Now

Ph.D. of Electrical Engineering

King Abdullah University of Science and Technology (KAUST)

GPA: 4.00/4.00 Advisor: Prof. Mohamed-Slim Alouini

Jan. 2021 – May. 2022

Master of Electrical Engineering

Thesis: Stochastic Geometry-Based Spherical Routing in Massive LEO Satellite Constellations

University of Electronic Science and Technology of China (UESTC)

GPA: 3.94/4.00 985 & 211 University Subject ranking A⁺

Sep. 2016 – June 2020

Bachelor of Communication Engineering

Publications

- 1: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Ultra-dense LEO satellite-based communication systems: A novel modeling technique." IEEE Communications Magazine 60.4 (2022): 25-31.
- 2: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Stochastic Geometry-Based Low Latency Routing in Massive LEO Satellite Networks." Accepted by IEEE Transactions on Aerospace and Electronic Systems.
- 3: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Evaluating the Accuracy of Stochastic Geometry Based Models for LEO Satellite Networks Analysis." IEEE Communications Letters (2022).
- 4: **Ruibo Wang**, Anna Talgat, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Conditional Contact Angle Distribution in LEO Satellite-Relayed Transmission." IEEE Communications Letters (2022).
- 5: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Resident Population Density-inspired Deployment of K-tier Aerial Cellular Network." Accepted by IEEE Transactions on Wireless Communications.
- 6: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Reliability Analysis of Multi-hop Routing in Multi-tier LEO Satellite Networks." Submitted to IEEE Transactions on Wireless Communications.
- 7: Zhengying Lou, **Ruibo Wang**, Baha Eddine Youcef Belmekki, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Terrain-Based UAV Deployment: Providing Coverage for Outdoor Users." Submitted to IEEE Transactions on Wireless Communications.
- 8: Maurilio Matraccia, Aniq Ur Rahman, **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Bridging the Digital Divide." Submitted.
- 9: **Ruibo Wang**, Zhengying Lou, Mustafa A. Kishk, Baha Eddine Youcef Belmekki, and Mohamed-Slim Alouini. "Terrain-Based Outdoor UAV Positioning: Tractable Models and Information Processing Methods." Submitted to IEEE Vehicular Technology Magazine.
- 10: **Ruibo Wang**, Zhengying Lou, Lijie Hu, Di Wang, and Mohamed-Slim Alouini. "How Stochastic Geometry and Machine Learning Coexist in Wireless Networks: Collaboration or Competition?" Submitted to IEEE Network Magazine.
- 11: **Ruibo Wang**, Washim Uddin Mondal, Mustafa A. Kishk, Vaneet Aggarwal, and Mohamed-Slim Alouini. "Terrain-based Coverage Manifold Estimation: Machine Learning, Stochastic Geometry, or Simulation?" Submitted to IEEE Transactions on Wireless Communications.
- 12: Zhengying Lou, Qi Huang, **Ruibo Wang**, Ahmed Eltawil, and Mohamed-Slim Alouini. "Towards Biosensor Enabled Human Healthcare Monitoring: State-of-the-art, Performance, Future, and Challenge." In progress.
- 13: **Ruibo Wang**, Mustafa A. Kishk, and Mohamed-Slim Alouini. "Ultra Reliable Low Latency Routing in LEO Satellite Constellation: A Stochastic Geometry Approach." In progress.
- 14: **Ruibo Wang**, Mustafa A. Kishk, Howard H. Yang, and Mohamed-Slim Alouini. "Performance Evaluation of LEO Satellite Communication Configurations: A Stochastic Geometry Approach." In progress.

Conferences/Presentations

- 1: IEEE Special Interest Group (SIG) on Satellite Mega-Constellations | 10-12 May 2022 | Virtual
- 2: The European Conference on Networks and Communications (EuCNC) | 7-10 June 2022 | Grenoble, France
- 3: IEEE INGR Workshop: Advanced Solutions for 6G Satellite Systems | 19-21 July 2022 | Virtual
- 4: IEEE Communication Theory Workshop (CTW) | 2-5 Oct. 2022 | Marbella, Spain
- 5: 6G Summit on Connecting the Unconnected | 30 Jan. - 1 Feb. 2023 | Jeddah, Saudi Arabia
- 6: Wireless World Research Forum (WWRF) Meeting 49 | 28-30 Mar. 2023 | Poznan, Poland

Work Experience

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|---|------------------------|
| • 1: Internship in China Telecom, network operation department | July 2018 - Aug. 2018 |
| • 2: Research assistant in Future Network of Intelligence Institute, CUHKSZ | Oct. 2019 - June 2020 |
| • 3: Research assistant in Center for Future Media, UESTC | June. 2020 - Oct. 2020 |
| • 4: Research assistant in Communication Theory Lab, KAUST | Oct. 2020 - Jan. 2021 |
| • 5: Teaching assistant of UESTC & KAUST summer course | June 2022 - July 2022 |
| • 6: Travelling scholar of KAUST/ Zhejiang University (ZJU) | April 2023 - July 2023 |

Peer Review

- 2022 IEEE Network Magazine
- 2022 IEEE Transactions on Wireless Communications
- 2022 IEEE Global Communications Conference (GLOBECOM)
- 2023 IEEE Transactions on Aerospace and Electronic Systems
- 2023 IEEE Transactions on Communications
- 2023 IEEE Transactions on Vehicular Technology
- 2023 IEEE Wireless Communications Letters

Collaborator

- 1: Mustafa A. Kishk, Assistant Professor, Maynooth University
- 2: Howard Hao Yang, Assistant Professor, Zhejiang University
- 3: Di Wang, Assistant Professor, KAUST
- 4: Vaneet Aggarwal, Associate Professor, Purdue University