

Dingjia Lin

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🔗 <https://dingjia-lin.github.io/> in Dingjia Lin 📄 Dingjia Lin 📺 Dingjia Lin

Education

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|-------------|---|-------------------|
| PhD | University of Manchester, UK <ul style="list-style-type: none">Supervisor: Prof. Zhiguo Ding (FIEEE) 📄Department of Electrical and Electronic Engineering | 03/2021 – 01/2025 |
| MSC | University of Southampton, UK <ul style="list-style-type: none">School of Electronics and Computer ScienceMobile Communication and Smart Networking | 09/2019 – 12/2020 |
| MSC | University of Sheffield, UK <ul style="list-style-type: none">Department of Electronic and Electrical EngineeringWireless Communication System | 09/2017 – 12/2018 |
| BEng | Chongqing University of Posts and Telecommunications, China <ul style="list-style-type: none">College of Communication and Information EngineeringCommunication Engineering | 09/2013 – 06/2017 |

Experience

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| King's College London , Research Associate | London, UK |
| <ul style="list-style-type: none">Research on the optimization process edge computing in the cell-free and massive MIMO networks. (Supervisor: Prof. Toktam Mahmoodi 📄) | Nov. 2024 – Mar. 2025 |

Research Interests

Non-Orthogonal Multiple Access (NOMA), Backscatter Communication (BackCom), Convex Optimization, Non-Convex Optimization, Matching Theory, Cognitive Radio, Fluid Antenna System (FAS), Cell-Free, Massive MIMO, Edge Computing, Visible Light Communication (VLC)

Publications

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|---|----------|
| [J4] EE Maximization with Imperfect CSI at Transmitter in BackCom NOMA System Dingjia Lin , Suhaib M. Al-Basit, Kaidi Wang, Zhiguo Ding <i>in IEEE Transactions on Vehicular Technology (Early Access)</i> doi: 10.1109/TVT.2025.3557244 📄 | Apr 2025 |
| [J3] Energy-Efficiency Maximization in Backscatter Communication Based Non-Orthogonal Multiple Access System: Dinkelbach and Successive Convex Approximation Approaches Dingjia Lin , Tianqi Wang, Kaidi Wang, Zhiguo Ding <i>in IET Signal Processing</i> , 2024, 4107801, 12 pages doi: 10.1049/2024/4107801 📄 | Aug 2024 |
| [C1] Uplink Data Rate Maximization with Channel Uncertainties in BackCom NOMA System Dingjia Lin , Suhaib M. Al-Basit, Kaidi Wang, Zhiguo Ding <i>2024 International Symposium on Wireless Communication Systems (ISWCS), Rio de Janeiro, Brazil, 2024, pp. 1-6</i> doi: 10.1109/ISWCS61526.2024.10639114 📄 | Jul 2024 |

[J2] Uplink Data Rate Maximization in Multi-Cell BackCom NOMA Systems

Jan 2024

Dingjia Lin, Kaidi Wang, Tianqi Wang, Zhiguo Ding

in *IEEE Open Journal of the Communications Society*, vol. 5, pp. 526-539, 2024

doi: [10.1109/OJCOMS.2023.3349277](https://doi.org/10.1109/OJCOMS.2023.3349277) 

[J1] Beamforming Design for BackCom Assisted NOMA Systems

May 2023

Dingjia Lin, Kanapathippillai Cumanan, Zhiguo Ding

in *IEEE Wireless Communications Letters*, vol. 12, no. 9, pp. 1494-1498, Sept. 2023

doi: [10.1109/LWC.2023.3279668](https://doi.org/10.1109/LWC.2023.3279668) 

Publications (Submitted and in Preparation)

[P1] Power Minimization in FAS Assisted NOMA Networks

in Preparation

Dingjia Lin, Kaidi Wang, Tianqi Wang, Zhiguo Ding

[P2] Cell-Free Networks Versus Massive MIMO: Optimizing Power Efficiency and Task Offloading

in Preparation

Dingjia Lin, Stefano Buzzi, Toktam Mahmoodi

Additional Skills

IT Skills: Python, MATLAB, \LaTeX , MS Office, Photoshop, Lightroom.

Languages: English – fluent, Chinese – native.

Interests: Photography; Reading; Astronomical Observation; Writing

Referee

Prof. Toktam Mahmoodi: Department of Engineering, Faculty of Natural, Mathematical & Engineering Sciences, King's College London, London, WC2R 2LS, UK. Email: toktam.mahmoodi@kcl.ac.uk

Prof. Zhiguo Ding: School of Electrical and Electronic Engineering, The University of Manchester, Manchester, M13 9PL, UK. Email: zhiguo.ding@manchester.ac.uk

Prof. Mohammed El-Hajjar: School of Electronics and Computer Science, Faculty of Engineering and Physical Sciences, University of Southampton, Southampton, SO17 1BJ, UK. Email: meh@ecs.soton.ac.uk