# Andrew Ferguson

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## EDUCATION

### ▶ PhD, University of Edinburgh

(2022 - ongoing)

- PhD in Networked Systems, under the supervision of Professor Mahesh Marina.
- Focusing on the development and operation of next-generation mobile networks, and their intersection with cloud computing.

### ▶ Master of Informatics (MInf), University of Edinburgh

(2017 - 2022)

- Computer Science (5-year integrated MInf with Honours). Degree classification: First Class.
- Masters project focused on the intersection of mobile core networks and cloud computing.
- Achieved 1st Honours Class in all modules taken, including networking, security, databases, operating systems, compilers and computer architecture.

## SELECTED PUBLICATIONS

- ▶ Ujjwal Pawar, Andrew E. Ferguson, Yuto Takano, Jon Larrea, Xenofon Foukas, Mahesh K. Marina, and Bozidar Radunovic, "Towards Scalable and Cost-Effective RAN Emulation Leveraging the Public Cloud", in HotMobile'25, Feb 2025.
- ▶ Nitinder Mohan\*, **Andrew E. Ferguson\***, Hendrik Cech\*, Rohan Bose, Prakita Rayyan Renatin, Mahesh K. Marina, and Jörg Ott, "A Multifaceted Look at Starlink Performance", in ACM TheWebConf, May 2024. IRTF Applied Networking Research Prize 2025.
- ▶ Andrew E. Ferguson\*, Jon Larrea\* and Mahesh K. Marina, "CoreKube: An Efficient, Autoscaling and Resilient Mobile Core System", in ACM MobiCom'23, Oct 2023. Best Artifact Award.

(\*) Co-primary authors.

## EXPERIENCE

## ► Teaching Assistant and Marker — University of Edinburgh

(2022-2025)

- (2022-2025) Marked and provided feedback for a practical coursework in the Communications and Networks course. Both written answers and practical solutions (code) were marked.
- (2024) Responsible for the delivery of a coursework for the Communications and Networks course, including coursework preparation / publication, tutorial sessions, and the collection and distribution of marks.

#### ► Research Assistant — University of Edinburgh

(2024,2025)

- Led efforts to deploy a 5G private network (20 radios, O-RAN compliant) across a university campus.
- Responsibilities included hardware selection, the backbone network, the compute platform supporting the virtualised network functions, and monitoring / logging.

## lacktriangledown Research Internship — Telefonica Research

(Sept 2024 - Dec 2024)

- Researched systems to achieve a global mobile network operator, through the use of cloud-based distributed data planes.
- Architected components to the above goal, whilst constraining the design to meet business goals.

#### ► Communications Team Lead — Asteria Space and Satellite Development (Feb 2020 - May 2023)

- Developed the technical communications strategy for a satellite.
- Worked on the choice of communications hardware and ground stations, as well as the mission suitability of the chosen hardware and its integration with the other subsystems.
- Responsible for regulatory compliance and spectrum licensing for the desired communication frequencies.

#### ▶ Junior Research Assistant — University of Edinburgh

(Summer 2022)

• Co-authored a paper expanding upon the research work undertaken as part of my master's degree, relating to the design and evaluation of a cloud-native, scalable and resource efficient mobile core network.

#### ▶ EPSRC Research Intern — University of Edinburgh

(Summer 2021)

• Assisted with a study of mobile networks in a realistic environment, collecting measurements for different scenarios around Edinburgh.