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

- **Andrew E. Ferguson**, Ujjwal Pawar, Tianxin Wang, and Mahesh K. Marina, "*Campus5G: A Campus Scale Private 5G Open RAN Testbed*", in SIGCOMM CCR (accepted, upcoming).
- 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.
- **Research Internship — Telefonica Research** (Sept 2024 - Dec 2024)
  - Researched systems to achieve a global mobile network operator through the use of a cloud-based distributed data plane.
  - Developed and architected components to the above goal, whilst tailoring the design to meet business requirements and constraints.

Experience (continued)

- **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.

Awards

- **Best Demo Award, Mobicom'25** (2025)
  - Awarded Best Demo Award at Mobicom'25 for "*A Campus Scale Private 5G Open RAN Testbed*" (with Ujjwal Pawar, Tianxin Wang, and Mahesh K. Marina).
- **IRTF Applied Networking Research Prize** (2025)
  - Awarded IRTF Applied Networking Research Prize for the paper "*A Multifaceted Look at Starlink Performance*" (with Nitinder Mohan, Hendrik Cech, Rohan Bose, Prakita Rayyan Renatin, Mahesh K. Marina, and Jörg Ott).
  - The award recognises the best recent results in applied networking and interesting new research ideas of potential relevance to the Internet standards community.
- **2nd Place: The RIPE Labs Article Competition** (2025)
  - Awarded 2nd Place in the RIPE Labs Article Competition (with Nitinder Mohan) for the article adaptation of the paper "*A Multifaceted Look at Starlink Performance*".
  - The award recognises articles of particular interest to those who help operate the Internet.
- **2nd Place: MobiUK Best Presentation Award** (2025)
  - Awarded 2nd Place for my presentation "*On Deploying a Campus Scale Private 5G Open RAN Testbed*" at MobiUK'25.
- **Best Artifact Award, Mobicom'23** (2023)
  - Awarded Best Artifact Award at Mobicom'23 for the artifact accompanying the paper "*CoreKube: An Efficient, Autoscaling and Resilient Mobile Core System*" (with Jon Larrea, Mahesh K. Marina and Yuto Takano).

Professional Service

- **External Reviewer** (2023 - 2025)
  - Served as an external reviewer for for INFOCOM'25, IEEE Internet Computing 2024, LEO-NET'23.
  - Invited to serve as an external reviewer for multiple venues and conferences. Focused on works related to my current area of research (5G networked systems, non-terrestrial networks).
- **IMC'25 Shadow Program Committee** (2025)
  - Served on the shadow program committee for IMC'25. Reviewed papers, discussed with other reviewers and led the discussion of one paper at the (shadow) TPC meeting.
- **Artifact Evaluation Committees** (2025)
  - Served on the artifact evaluation committee for Mobicom'25, CoNEXT'25.
  - Served on the artifact evaluation committees for multiple conferences. Reviewed the artifacts (code, scripts to generate figures, etc.) to judge their suitability to meeting the artifact badges (functional, reusable, results replicated, etc.).