Amirmohammad Farzaneh

amirmohammad.farzaneh@kcl.ac.uk |amirmohammad.farzaneh@oriel.ox.ac.uk
London, United Kingdom

LINKS

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SUMMARY

- Accomplished academic with a doctorate in Engineering Science and a strong background in mathematics, as evidenced by numerous prestigious awards and achievements.
- Demonstrated expertise in conducting independent and innovative research, supported by a robust portfolio of significant publications and presentations.
- Experienced in university-level lecturing and teaching, with a commitment to academic excellence and interdisciplinary collaboration.
- Proven leadership in academic governance as the MCR President at Mansfield College for two consecutive years.

LANGUAGES

English
Persian
French

RESEARCH INTERESTS

- Information Theory
- Graph Theory
- Artificial Intelligence
- Wireless Communications

VISA STATUS

Global Talent visa (no sponsorship required)

EMPLOYMENT

King's College London
Research Associate | since Jun 2024 | London, UK

Oriel College, University of Oxford
Non-stipendiary Lecturer | since Oct 2023 | Oxford, UK

EDUCATION

University of Oxford
PhD in Engineering Science | Oct 2020 - Nov 2024 | Oxford, UK
Academic supervisor: Professor Justin P. Coon

Sharif University of Technology
BSc in Electrical Engineering | grad. Aug 2020 | Tehran, Iran
Cum. GPA: 19.25/20

National Organization of Development of Exceptional Talents (NODET) - Allameh Helli 3 high school
diploma of mathematics and physics | grad. 2016 | Tehran, Iran
Cum. GPA: 19.95/20

SELECT AWARDS AND ACHIEVEMENTS

Oxford University Three Minute Thesis Runner-up
University of Oxford | 2023-2024 academic year

Associate Fellow of the Higher Education Academy (AFHEA)
Recognition against the UK Professional Standards Framework.
Fellowship ref: PR269226.
Advance HE | July 2023

Mansfield College student of the year
University of Oxford | 2021-2022 academic year

The top-ranking student of the Electrical Engineering program
Sharif University of Technology | Class of 2020

Ranked 2nd in Iran's national university entrance exam (Konkour)
Summer 2016

RESEARCH EXPERIENCE

King's Communication, Learning and Information Processing Lab| King's College London
June 2024 - present | London, United Kingdom

Information and Network Science Lab| University of Oxford
October 2020 - June 2024 | Oxford, United Kingdom

Software-defined networking lab | Sharif University of Technology
December 2019 - March 2020 | Tehran, Iran

Photomedicine Labs | University of Waterloo
July 2019 - December 2019 | Waterloo, Canada

Bachelor Thesis: RNA Tracking | Sharif University of Technology
April 2019 - April 2020 | Tehran, Iran

Augmented Intelligence Research (AIR) Lab
Jun 2018 – Mar 2019 | Tehran, Iran

SELECT PUBLICATIONS

1. Amirmohammad Farzaneh and Osvaldo Simeone. Multi-objective hyperparameter selection via hypothesis testing on reliability graphs. arXiv preprint arXiv:2501.13018, 2025. Accepted for presentation at NeurIPS 2025.
2. Amirmohammad Farzaneh, Matteo Zecchin, and Osvaldo Simeone. Synthetic counterfactual labels for efficient conformal counterfactual inference. arXiv preprint arXiv:2509.04112, 2025
3. Amirmohammad Farzaneh and Osvaldo Simeone. Context-aware online conformal anomaly detection with prediction-powered data acquisition. arXiv preprint arXiv:2505.01783, 2025
4. Amirmohammad Farzaneh and Osvaldo Simeone. Ensuring reliability via hyperparameter selection: Review and advances. In 2025 Eurpoean Signal Processing Conference (EUSIPCO), 2025
5. Idris Cinemre, Toktam Mahmoodi, and Amirmohammad Farzaneh. xapp conflict mitigation with scheduler. arXiv preprint arXiv:2504.06867, 2025
6. Amirmohammad Farzaneh and Osvaldo Simeone. Statistically valid information bottleneck via multiple hypothesis testing. In 2025 IEEE International Symposium on Information Theory (ISIT), pages 1–5. IEEE, 2025
7. Amirmohammad Farzaneh. An information-theoretic analysis of temporal GNNs. In 2024 IEEE Information Theory Workshop (ITW), pages 301–306. IEEE, 2024
8. Amirmohammad Farzaneh, Sangwoo Park, and Osvaldo Simeone. Quantile learn-then-test: Quantile-based risk control for hyperparameter optimization. IEEE Signal Processing Letters, 31:3044–3048, 2024
9. Amirmohammad Farzaneh, Mihai-Alin Badiu, and Justin P. Coon. Practical random tree generation: Information-theoretic analysis and applications to iot. In 2023 IEEE Conference on Standards for Communications and Networking (CSCN), pages 312–317, 2023
10. Amirmohammad Farzaneh, Mihai-Alin Badiu, and Justin P. Coon. On random tree structures, their entropy, and compression, 2023. Submitted to IEEE transactions on Network Science and Engineering.
11. Amirmohammad Farzaneh. An information-theoretic analysis on temporal graph evolution. In Temporal Graph Learning Workshop@ NeurIPS 2023, 2023
12. Amirmohammad Farzaneh and Justin P Coon. Practical random tree generation using spanning trees: Entropy and compression. ICML 2023 Neural Compression Workshop, 2023
13. Amirmohammad Farzaneh, Mihai-Alin Badiu, and Justin P Coon. Treeexplorer: a coding algorithm for rooted trees with application to wireless and ad hoc routing. In 2022 IEEE 96th Vehicular Technology Conference (VTC2022-Fall), pages 1–5. IEEE, 2022
14. Amirmohammad Farzaneh and Justin P Coon. An information theory approach to network evolution models. Journal of Complex Networks, 10(3), 06 2022. cnac020
15. Amirmohammad Farzaneh, Justin P Coon, and Mihai-Alin Badiu. Kolmogorov basic graphs and their application in network complexity analysis. Entropy, 23(12):1604, 2021
16. Amirmohammad Farzaneh, Mihai-Alin Badiu, and Justin P Coon. Least: a low-energy adaptive scalable tree-based routing protocol for wireless sensor networks. arXiv preprint arXiv:2211.09443, 2022
17. Amirmohammad Farzaneh, Mihai-Alin Badiu, and Justin P Coon. BernoulliZip: a compression algorithm for Bernoulli processes and Erdos-Renyi graphs. arXiv preprint arXiv:2105.06708, 2021
18. Benjamin R Ecclestone, Amirmohammad Farzaneh, Kevan Bell, and Parsin H Reza. Deep optical resolution photoacoustic remote sensing microscopy (conference presentation). In Photons Plus Ultrasound: Imaging and Sensing 2020, volume 11240, page 1124013. International Society for Optics and Photonics, 2020

SELECT TEACHING EXPERIENCE

2023-present	Non-Stipendiary Lecturer in Engineering Science | Oriel College, University of Oxford
2023-2024	Lead tutor of Information Engineering course (B14)| Department of Engineering Science, University of Oxford
2022-2023	Lead tutor of Information Engineering course (B14)| Department of Engineering Science, University of Oxford
2022-2023	A2 paper tutor | Oriel College, University of Oxford
2022-2023	B13 paper tutor | Department of Engineering Science, University of Oxford
2022-2023	Maths and Computer Science tutor | Mansfield College, University of Oxford
Summer 2022	Computer Science tutor | Immerse Summer School, Oxford
2021-2022	Lead tutor of Information Engineering course (B14)| Department of Engineering Science, University of Oxford
Fall 2019	Statistical learning problem designer | Sharif University of Technology
2018-2019	Head of Calculus Group | Ghalamchi Educational Complex

PRESENTED TUTORIALS

FROM TUNING TO GUARANTEES: STATISTICALLY VALID HYPERPARAMETER SELECTION

Tutorial presentation at NeurIPS 2025 | December 2025

VOLUNTEER ENGAGEMENTS

2022- 2023	President of Mansfield College MCR
2022- 2023	Oxford University 2023 Global Leadership Initiative participant
2021- 2022	President of Mansfield College MCR
2020-2021	Vice-President of Mansfield College MCR
2018-2019	Scientific president of Resana student club | EE Department, Sharif University
Summer 2018	Guide manager at the 29th International Biology Olympiad (IBO)
Summer 2017	Team guide for the 29th International Olympiad in Informatics (IOI)