

AI for Connectivity

INTELLIGENT FUTURE NETWORKS: HASC PROJECT SPOTLIGHT

PROJECT TITLE:

Signal Processing And Machine Learning For RF Transmission & Propagation Engineering

CORE CHALLENGE:

Connectivity



CHALLENGE:

As 6G networks evolve, they must connect far more devices than ever, using limited spectrum.

Current systems struggle to manage interference, energy efficiency and adaptability in complex real-world environments.



INNOVATION:

We're developing new multiple access and beamforming methods.

We're using rate-splitting, reconfigurable intelligent surfaces (RIS), unlimited sampling and machine learning (ML) to optimise wireless signals, even without detailed channel data.



IMPACT:

This research supports UK-born 6G technologies entering international standards and delivers patentable energy-efficient architectures.



This project enables rapid commercial adoption through new start-ups and collaborations with industry partners.

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With thanks to...

LEAD UNIVERSITY:

Imperial College London

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