



PAWR Project Office

Hakan Gulec - POWDER

My research focuses on low-latency communication systems, initially using the POWDER wireless testbed and OpenAirInterface (OAI) to investigate latency and performance in the Radio Access Network (RAN). This work involves conducting both simulated RF and over-the-air experiments on POWDER, experimenting with configurable cellular network components in the context of O-RAN, analyzing end-to-end latency, and identifying opportunities to reduce network queueing delay under different operating conditions. Building on this RAN-focused work, I am extending my research toward the wireline domain, with the broader goal of understanding and optimizing latency across both wireless and wired segments of end-to-end communication networks using L4S, network slicing, and active queue management mechanisms.