



UNSW
SYDNEY



Wireless Communications Lab

Wireless Communications Lab (WCL) conducts innovative and cutting-edge research in wireless communications; specialising in ultra-reliable M2M and IoT communication technologies for 5G and industrial applications.

Competitive advantage

- Extensive experience in research, design and development of ultra-reliable, dense multi-user communication systems, M2M communication transceiver technologies and communication protocols
- Extensive research collaboration experience with leading telecoms companies and organisations

Impact

- Faster and more reliable wireless communications

Successful applications

- Massive multiple-input, multiple-output technique for 5G wireless networks
- Massive connectivity and low latency machine-to-machine communications for 5G
- Enhanced decoding algorithms for 5G LDPC codes
- Efficient and sustainable wireless-powered communication networks
- Design and analysis of delayed bit interleaved coded modulation
- Efficient cross-layer coding techniques for wireless networks

Capabilities and facilities

- Wireless communication system design and test facilities—microwave chamber, spectrum analysers, vector signal generators, FPGA development platforms and software-defined radio platforms
- High performance computing clusters for ultra-reliable system error performance evaluation

More Information

Professor Jinhong Yuan

School of Electrical Engineering and Telecommunications

T: +61 (0) 2 9385 4244

E: j.yuan@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008