

**Title:** Machine Learning for 5G RAN

**Abstract:**

Machine Learning based algorithms can be applied to 5G RAN for different applications/use cases such as value-added services and RAN optimization. Exploiting ML for the RAN requires a holistic approach with suitable hardware acceleration, algorithms, toolkits, platforms/middleware and APIs. Successful use cases for ML in 5G RAN would be ones that provide performance and/or computational benefits and are likely to emerge from problem areas where there are no good known solutions or conventional solutions are too complex to implement. We are systematically studying different use cases to identify the ones which are most likely to bear fruit and designing best-in-class algorithms exploiting diverse ML techniques, simulations, real network data and proof-of-concepts.