**Workshop description**

This workshop is intended to highlight the current status and future strategic challenges for studies, techniques and regulation to enable shared and efficient access to spectrum and further develop dynamic spectrum access paradigm with appreciation of regulatory needs and technological enablers, as well as underlying research challenges.

The 5G and future 6G ecosystems blur the traditional boundaries between wired and wireless, terrestrial and satellite, as well as between the use of licensed and unlicensed frequency bands, under different authorisation regimes. As a result, efficient use of spectrum is becoming a major regulatory challenge in the 21st C., which calls for future-proof strategies and rules to allow more rapid access to airwaves and to promote innovation. Spectrum sharing is the key enabler to maximise efficiency of spectrum resources, to deliver digital services in the coming decades and to provide more flexibility in spectrum management for the verticals.

Emerging technologies such as cognitive radio, geolocation databases and the use of higher frequencies bring new opportunities for sharing, but also pose new technical and regulatory challenges. Balanced access to spectrum is required, allowing new users while granting protection to incumbents. Coexistence should be assessed through simulations, emulations and measurements under proper assumptions derived from the best available information. In this context, Machine Learning and Artificial Intelligence can play a significant role to enhance spectrum sharing opportunities.

The workshop will describe key aspects for the application of artificial intelligence to dynamic spectrum management. It will explore experimental evaluation of AI techniques and approaches through open testbeds and scalable platforms for spectrum sharing, which can be used for academic research and regulatory studies alike.

The workshop will put together a visionary team of leading researchers, spectrum regulators and industry players to explore a forward-looking roadmap towards a flexible spectrum management strategy in Europe.