Contribution ID: **6** Type: **not specified**

Integrating Quantum Machine Learning into Earth Observation Analytics: The Journey from the Clouds to the Soil

Wednesday 19 November 2025 12:00 (30 minutes)

Satellite imagery is growing faster than our ability to analyze it. While artificial intelligence (AI) keeps advancing, Earth Observation (EO) still faces practical barriers tied to massive, high-dimensional data. In this talk, we discuss the practical challenges involved in processing EO data and building AI models for EO applications. We then explore how Quantum Machine Learning (QML) can fit into the broader landscape of EO data analytics, sharing our experience applying QML to real EO use cases, the lessons learned, and the intuition guiding the development of new QML methods for tasks such as feature (band) selection in hyperspectral data.

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Session Classification: Morning session