Ultrashort Pulse Characterization

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**Intended Audience:**
This course is intended for scientists and engineers, from academia, industry or other sectors, interested in learning about how to measure ultrashort laser pulses, with theoretical background and practical perspectives.

**Benefits and learning objectives:**
Upon completion of this course, the student should have an understanding of:

- Physical and mathematical description of ultrashort laser pulses
- Fundamental principles and challenges in ultrashort pulse characterization
- The idea of autocorrelation, its application and limitations
- How does methods like FROG and SPIDER extract the intensity and phase information
- Computational methods accompanying characterization techniques
- Recent trends in pertinent fields
- How to develop diagnostics in certain practical cases such multi-photon microscopy and singe-cycle pulse generation