



Les Houches School of Physics,
Chamonix Mont-Blanc valley, France

April 22-26 2019

High Precision Physics using an Optical Fibre Link and Optical Frequency Combs

an **SFO** thematic school

organized by

Anne **Amy-Klein** (France, LPL-
université Paris 13 and CNRS)

Caroline **Chamenois** (France, PIIM-
Aix-Marseille université and CNRS)

Confirmed **lecturers** :

Cecilia Clivati (Italie, INRIM)

Pacôme Delva (France, Syrte-Observatoire de Paris)

Michael Drewsen (Danemark, Aarhus university)

Frédéric Du Burck (France, LPL-université Paris 13)

Kjeld Eikema (Nederland, LaserLaB - VU university Amsterdam)

Jochen Kronjaeger (UK, NPL)

Helen Margolis (UK, NPL)

Paul-Éric Pottie (France, Syrte-Observatoire de Paris)

Nathalie Picqué (Germany, MPQ)

Fritz Riehle (Germany, formerly at PTB)

After more than 15 years of development, optical fiber links and optical frequency combs are now sufficiently mature to be spread and shared outside the time/frequency metrological institutes. The school follows on from the international development of optical fiber links and its objective is thus to broadcast among a wide community of physicist the possibilities of high precision measurement thanks to the optical fiber transfer of an optical frequency reference, coupled to a frequency comb. These setup enable any laboratory to access an ultrastable and accurate reference frequency which opens the way to high-precision experiments in a wide range of physical domain.

We intend to make this school a good opportunity for end-users and physicists interested in high-precision measurements to meet specialists in the field of frequency measurements and transfer.

The attendants will learn both the basics, performance and limitations of these two tools and how to take advantage of them for high-precision measurements. The applications in sight concern for instance tests of fundamental physics, atomic and molecular high-resolution spectroscopy using either stabilized lasers or new spectroscopic methods, frequency transfer for radio astronomy and geodesy and novel applications concerning Earth observation.

Attending a thematic school is a unique opportunity to learn, share and connect with top leaders in the field. The School is open to all researchers, ingeniers, and PhD students without restriction of age, status or nationality.

Application deadline (short motivation letter + abstract for a poster) : February 22nd, 2019.



For more information : <https://www.sfoptique.org/pages/ecoles-thematiques/fiber-links-and-frequency-combs/>

