Pricing

Rate type	To April 26	Apr 27 on	Applies to
Regular	1200€	1300 €	Profit-making business
Academic	800€	900 €	Universities, non-profit, Gov/Int'l Labs
Student	400€	500 €	True full-time PhD & MS students only
20% TAX may apply, depending on your Country			

French Companies and OPCA. Nous contacter pour les frais de dossier pour la prise en charge de la formation par l'OPCA.

A limited number of places will be available, determined by the hand-on laboratory sessions. First arrived, first served.

A small number of attendees in excess can be allowed on a reduced version of the seminar (Full lectures, and 4 H labs instead of 12 H). Contact us for availability and rate.

All prices include classes, labs, visits, learning material, lunches, events, and social dinner.

Accommodations, breakfast, and regular dinners are not included.

Nearby low-rate lodging will be proposed, and regular hotels as well.

REGISTRATION

Early birds: on/before April 25, 2016
Regular: April 26 to June 11, 2017

frequency-time-seminar@femto-st.fr

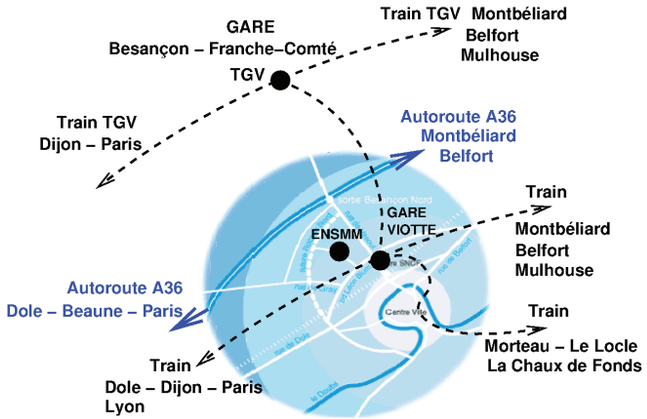
FEMTO-ST / DTF / ENSMM

Aryanne Hicks and Joel Petetin

http://efts.eu

26, Rue de l'Épitaphe, CS 51813
F-25030 BESANÇON cedex FRANCE

Venue



Besançon is the capital and main town of the Franche-Comté area in the east of France. Located close to the France-Swiss border, it is the capital of time mechanisms and microtechnics.

The event will be held at The National Engineering Institute in Mechanics and Microtechnics :

ENSMM, 26, Rue de l'Épitaphe, CS 51813
F-25030 Besançon cedex - FRANCE

Several bus lines link the campus and downtown city.

Coming by plane :
The four airports closest to Besançon are :
- Euroairport Basel-Mulhouse (then about 2h drive)
- Geneva airport (then about 2h30 drive)
- Lyon Saint Exupery airport (then drive about 2h30 or take the train to Lyon then to Besançon)
- Paris Charles de Gaulle airport (then take the train to Paris - Gare de Lyon (about 1 h), then the high speed train (TGV) to Besancon (2h30)).

Coming by train :
Besançon can be accessed by train from Paris ("Gare de Lyon") - Besançon Viotte / Besançon-Franche-Comté -TGV : 2h30 to 3h - *9 high-speed trains per day*
Lyon - Besançon Viotte: 3h
Strasbourg - Besançon Viotte: 2h30 to 3h - *5 high-speed trains per day*

Coming by car from:
Basel-Mulhouse airport: about 2h
Lyon Saint Exupery airport: about 2h30
Geneva airport: about 2h30

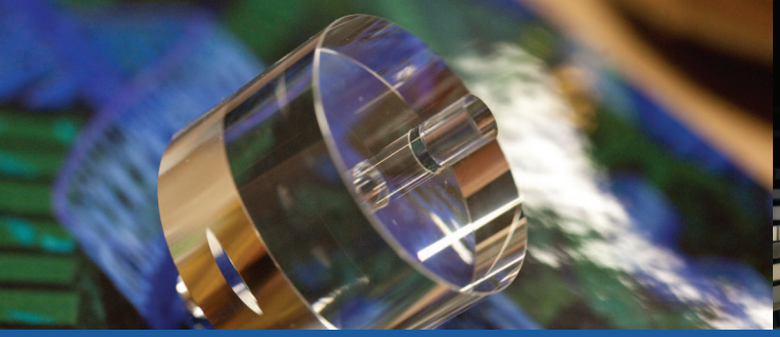
European Frequency and Time Seminar

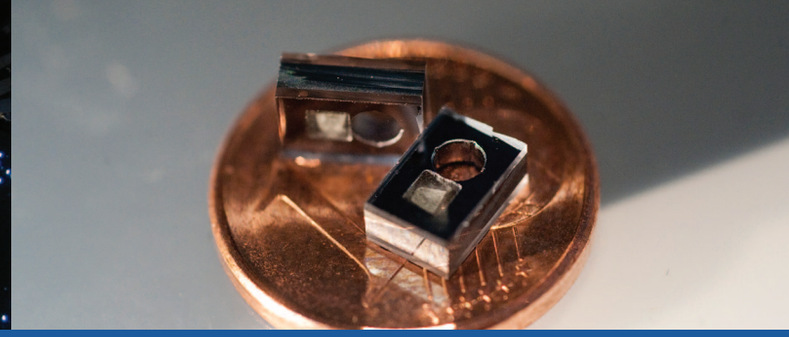
EFTS 2018

Besançon, France
June 25th - June 29th, 2017

FEMTO-ST Institute
Frequency & Time Department

http://efts.eu





2018 European Frequency and Time Seminar (EFTS)

June 25th - June 29th, 2018

The EFTS is intended to provide education and training, including laboratory practice in a full-week seminar, and targets the broadest audience: Engineers, Ph.D. students, postdocs, young scientists, newcomers, etc.

This seminar is original in the following:

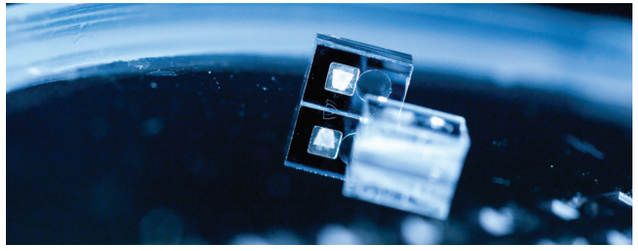
- Broad spectrum of topics related to time and frequency
- Broad target audience, yet keeping high level education
- Balance between academic and applied issues
- Laboratory sessions (not only demos, the attendees are expected to practice on a wide range of instruments made available)

Scientific committee

Anne Amy-Klein, LPL, Villetaneuse, France
Jean-Pierre Aubry, consultant, France - Switzerland
Andreas Bauch, PTB, Braunschweig, Germany
Jean-Paul Berthet, CNRS/MRCT, Meudon, France
Emmanuel Bigler, FEMTO-ST Institute, Besançon, France
Charles Cayron, LNE, Paris, France
Pascale Defraigne, ROB, Brussels, Belgium
Noel Dimarcq, SYRTE, Paris, France
Jochen Kronjaeger, NPL, Teddington, United Kingdom
Gaetano Mileti, LTF / University of Neuchâtel, Switzerland
Gérard Petit, BIPM, International
Enrico Rubiola, FEMTO-ST Institute, Besançon, France
Francois Vernotte, Observatory of Besançon, France

Program

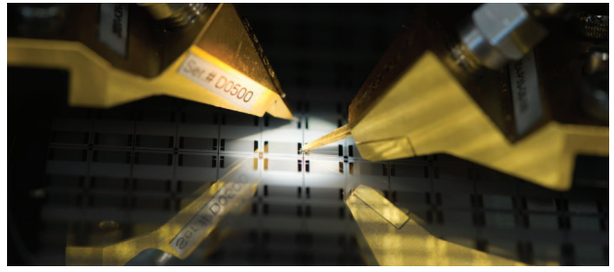
- Introduction to TF - Basic concepts and vocabulary (quality, certification, traceability etc.), and technical issues (oscillators, frequency standards, accuracy, stability, phase noise, jitter, physical environment, etc.).
- Measurement methods and experimental techniques - Spectra (phase noise and L(f), amplitude noise), variances, frequency measurement and comparison.
- Atomic clocks - Physics, traditional clocks (atomic beam, vapor cell, and maser), cold atoms, optical clocks, small-size clocks.
- Oscillators - RF/microwave, cavity-stabilized lasers, optical frequency combs.
- Timing and applications - Time scales, navigation, frequency transfer and synchronization.
- Physics, applications, and trends.



Hands-on laboratory

Laboratory sessions

Frequency stability and AM/PM noise, resonators and oscillators, timing and synchronization, vapor cell clocks, cold atoms, etc. Every day, the attendees will do real experiments and measurements.



Social Events

Mon. June 25th	Visit of Besançon's Observatory
Tues. June 26th	Night session at the Observatory (depending on weather)
Wed. June 27th	Visit of Besançon's Museum of Time
Thu. June 28th	Social dinner
Fri. June 29th	Visit of FEMTO-ST