2011 JOINT IEEE INTERNATIONAL FREQUENCY CONTROL SYMPOSIUM (IFCS) 
AND EUROPEAN FREQUENCY AND TIME FORUM (EFTF) CALL FOR PAPERS

The joint IFCS / EFTF meeting will be held in San Francisco, May 2011. This conference will be the 5th in a series of successful joint meetings between the EFTF and IFCS that started in 1999.

- Tutorials: 1 May 2011
- Symposium: 2-5 May 2011

- The Hyatt Regency Hotel
- San Francisco, California, USA

On Monday, May 2nd, the conference will open with a plenary presentation on the emerging field of quantum information processing, which has applications ranging from cryptology to the most accurate atomic clocks in the world.

**Plenary Presentation**

**Quantum Information Processing and Atomic Clocks**
Dr. David J. Wineland, NIST Fellow

**General Co-Chairs:** Clark Nguyen and Giorgio Santarelli

**Joint Program Co-Chairs:** Eric Burt and Patrick Gill

**Abstract Submission Deadline:** Monday, December 20, 2010.


**Conference Topics**

**Group 1: Materials, Resonators, & Resonator Circuits**

A. Fundamental Properties of Materials
B. Micro- and Macro-Fabrication Technology for Resonators and Filters
C. Theory, Design, and Performance of Resonators and Filters, including BAW, FBAR, MEMS, NEMS, SAW, and others
D. Reconfigurable Frequency Control Circuits, e.g., Arrays, Channelizers
Group 2: Oscillators, Synthesizers, Noise, & Circuit Techniques

A. Oscillators - BAW, MEMS, and SAW
B. Oscillators - Microwave to Optical
C. Heterogeneously Integrated Miniature Oscillators, e.g., Single-Chip
D. Synthesizers, Multi-Resonator Oscillators, and Other Circuitry
E. Noise Phenomena and Aging
F. Measurements and Specifications
G. Timing Error in Digital Systems and Applications

Group 3: Microwave Frequency Standards

A. Microwave Atomic Frequency Standards
B. Atomic Clocks for Space Applications
C. Miniature and Chip Scale Atomic Clocks and other instrumentation
D. Fundamental Physics, Fundamental Constants, & Other Applications

Group 4: Sensors & Transducers

A. Resonant Chemical Sensors
B. Resonant Physical Sensors
C. Vibratory and Atomic Gyroscopes & Magnetometers
D. BAW, SAW, FBAR, and MEMS Sensors
E. Transducers
F. Sensor Instrumentation

Group 5: Timekeeping, Time and Frequency Transfer, GNSS Applications

A. TAI and Time Scales, Time and Frequency Transfer, and Algorithms
B. Satellite Navigation (Galileo, GPS, …)
C. Telecommunications Network Synchronization, RF Fiber Frequency Distribution
D. All-optical fiber frequency transfer
E. Optical free-space frequency transfer
F. Frequency and Time Distribution and Calibration Services

Group 6: Optical Frequency Standards and Applications

A. Optical Ion and Neutral Atom Clocks
B. Optical Frequency Combs and Frequency Measurements
C. Ultrastable Laser Sources and Optical Frequency Distribution
D. Ultrastable Optical to Microwave Conversion
E. Fundamental Physics, Fundamental Constants, and Other Applications
Student Paper Competition

Students submitting abstracts for presentation are invited to participate in a student paper competition. To participate, the student must be the lead author and present the paper. If the paper is selected for oral presentation, the student must also provide a poster to participate in the competition. Winners will receive an award and a certificate. Further information is on the conference web site. Student authors selected for the Student Paper Competition will be given preference for travel support. A request to be considered for the student paper competition must be made at the time of abstract submission.

Tutorials

On Sunday, 1 May 2011, there will be a series of tutorials covering a wide range of related topics. The tutorials include both the fundamental topics of frequency and timing at a level suitable for practitioners new to the field, and more advanced and specialized topics related to specific areas. As such, the tutorials aim to provide useful knowledge to the beginners in the community, as well as those with extensive experience. Additional information and topics will follow. The list of tutorials presented at the last joint IFCS/EFTF conference can be found at: http://www.eftf-ifcs-2009.com/tutorials.html

Exhibition

A technical exhibition will be held during the conference. Detailed information can be found on the conference web site: http://www.ifcs-efft2011.org/