

# EFTF-2014 STUDENT POSTER FINALISTS

The following papers were selected as finalists by the EFTF-2014 Scientific Committee for the EFTF 2014 Student Poster Competition.

**This year, the Student poster awards were sponsored by the Swiss Space Office**

**Session code:** A3P-J  
**Location:** Cafeteria Entrance, University of Neuchâtel  
**Date & Time:** Tuesday, June 24, 14:00 - 15:40  
The poster will remain during the whole conference  
**Chair:** Gaetano Mileti, University of Neuchatel

## **7164 Quartz-Based Vibrating MEMS on Structured Silicon Using Wafer Bonding Technology**

Sebastien Grousset, CEA-Leti; Rachid Taïbi, Office National d'Etudes et Recherches Aéronautiques; Lamine Benaissa, CEA-Leti; Emmanuel Augendre, CEA-Leti; Thomas Signamarcheix, CEA-Leti; Olivier Le Traon, Office National d'Etudes et Recherches Aéronautiques; Sylvain Ballandras, frc|n|sys SAS

## **7176 Assessment of the Acoustic Shear Velocity in SiO<sub>2</sub> and Mo for Acoustic Reflectors**

Mario DeMiguel-Ramos, Universidad Politécnica de Madrid; T. Mirea, Universidad Politécnica de Madrid; J. Olivares, Universidad Politécnica de Madrid; M. Clement, Universidad Politécnica de Madrid; J. Sangrador, Universidad Politécnica de Madrid; E. Iborra, Universidad Politécnica de Madrid

## **7276 Effects of a Plasma Etching Process on a Longitudinally Coupled Resonator Filter**

Loïc Braun, AR Electronique SAS; E. Courjon, frc|n|sys SAS; O. Franquet, AR Electronique SAS; W. Daniau, FEMTO-ST Institute; T. Baron, FEMTO-ST Institute; S. Ballandras, frc|n|sys SAS

## **7284 Active Electronic Cancellation of Nonlinearity in a High-Q Longitudinal-Mode Silicon Resonator by Current Biasing**

Haoshen Zhu, City University of Hong Kong; Cheng Tu, City University of Hong Kong; Libor Rufer, TIMA Laboratory; Joshua Lee, City University of Hong Kong

## **7230 Photodiode Nonlinear Modeling and its Impact on Optical Links Phase Noise**

Zeina Abdallah, LAAS-CNRS / Centre National d'Etudes Spatiales; A. Rumeau, LAAS-CNRS; J. Maxin, LAAS-CNRS / Thales Research and Technology; A. Fernandez, LAAS-CNRS; G. Pillet, Thales Research and Technology; L. Morvan, Thales Research and Technology; O. Llopis, LAAS-CNRS; G. Cibiel, Centre National d'Etudes Spatiales

## **7301 Compact Low Phase Noise 3.8GHz Oscillator**

Pratik D. Deshpande, University of York; Jeremy Everard, University of York

## **7069 High-Purity Microwave Signal from a Dual-Frequency Semiconductor Laser for CPT Atomic Clocks**

Paul Dumont, Laboratoire Charles Fabry, Institut d'Optique; J.-M. Danet, Observatoire de Paris; F.A. Camargo, Laboratoire Charles Fabry, Institut d'Optique; D. Holleville, Observatoire de Paris; S. Guerandel, Observatoire de Paris; G. Baili, Thales Research and Technology; L. Morvan, Thales Research and Technology; G. Pillet, Thales Research and Technology; D. Dolfi, Thales Research and Technology; I. Gozhyk, Laboratoire Charles Fabry, Institut d'Optique / Laboratoire de Photoniques et de Nanostructures; G. Beaudoin, Laboratoire de Photoniques et de Nanostructures; I. Sagnes, Laboratoire de Photoniques et de Nanostructures; P. Georges, Laboratoire Charles Fabry, Institut d'Optique; G. Lucas-Leclin, Laboratoire Charles Fabry, Institut d'Optique

## **7196 Experimental and Numerical Study of the Microwave Field Distribution in a Compact Magnetron-Type Microwave Cavity**

Anton Ivanov, École Polytechnique Fédérale de Lausanne; Thejesh Bandi, Université de Neuchâtel; Guan- Xiang Du, Universität Basel; Andrew Horsley, Universität Basel; Christoph Affolderbach, Université de Neuchâtel; Anja K. Skrivervik, École Polytechnique Fédérale de Lausanne; Philipp Treutlein, Universität Basel; Gaetano Mileti, Université de Neuchâtel

## **7212 Mitigation of Frequency Shifts in a Cold-Atom Coherent Population Trapping Clock**

Eric Blanshan, National Institute of Standards and Technology; F.-X. Esnault, National Institute of Standards and Technology; J. Kitching, National Institute of Standards and Technology; E.A. Donley, National Institute of Standards and Technology

## **7242 Imaging Rb-Wall Interactions and Microwave Fields in Vapor Cells**

Andrew Horsley, Universität Basel; Guan-Xiang Du, Universität Basel; Matthieu Pellaton, Université de Neuchâtel; Christoph Affolderbach, Université de Neuchâtel; Gaetano Mileti, Université de Neuchâtel; Philipp Treutlein, Universität Basel

- 7034 Miniature Optical Fiber Cavity for a Trapped Atom Clock**  
Ramon Szmuk, Observatoire de Paris; Konstantin Ott, Observatoire de Paris / École Normale Supérieure; Ralf Kohlhaas, Observatoire de Paris; Jakob Reichel, École Normale Supérieure; Peter Rosenbusch, Observatoire de Paris
- 7293 Electromagnetic Induction Readout Silicon-on-Insulator MEMS Resonant Magnetometer**  
Weiguan Zhang, City University of Hong Kong; Joshua E.-Y. Lee, City University of Hong Kong
- 7307 Studying Particulate Adsorption by Drying Droplets on a Microfabricated Electro-Acoustic Resonator**  
Abhinav Prasad, University of Cambridge; Arthur T. Zielinski, University of Cambridge; Markus Kalberer, University of Cambridge; Roderic L. Jones, University of Cambridge; Ashwin A. Seshia, University of Cambridge
- 7150 Time Transfer Over Delay-Stabilized Fibre Links Using an Optical Pulse Train**  
Maurice Lessing, National Physical Laboratory / University of St. Andrews; Giuseppe Marra, National Physical Laboratory
- 7201 A Detection Algorithm of Atomic Clock Frequency Jumps with the Prediction Wiener Filter**  
Xinming Huang, National University of Defense Technology
- 7203 In-Line Extraction of an Ultra-Stable Frequency Signal Over an Optical Fiber Link**  
Anthony Bercy, Université Paris 13 / Observatoire de Paris; S. Guellati-Khelifa, Université Pierre et Marie Curie; F. Stefani, Université Paris 13 / Observatoire de Paris; G. Santarelli, Université de Bordeaux 1; C. Chardonnet, Université Paris 13; P.-E. Pottie, Observatoire de Paris; O. Lopez, Université Paris 13; A. Amy-Klein, Université Paris 13
- 7288 A Method of Satellite Autonomous on-Board Clock Monitoring Using High-Stability Crystal Oscillator**  
Gangqiang Guan, National University of Defense Technology
- 7052 On the Prospects of Building Optical Atomic Clocks Using Er I or Er III**  
Alexander Kozlov, University of New South Wales; Vladimir Dzuba, University of New South Wales; Victor Flambaum, University of New South Wales
- 7112 Laser Stabilization System for Space Applications Based on Hydroxide-Catalysis Bonding**  
Yingxin Luo, Huazhong University of Science and Technology; Hongyin Li, Huazhong University of Science and Technology; Huizong Duan, Huazhong University of Science and Technology; Hsien-Chi Yeh, Huazhong University of Science and Technology
- 7165 An Ultra-Low Frequency Noise Laser Based on a 48 cm Long ULE Cavity for a Sr Lattice Clock**  
Sebastian Häfner, Physikalisch-Technische Bundesanstalt; S. Vogt, Physikalisch-Technische Bundesanstalt; A. Al-Masoudi, Physikalisch-Technische Bundesanstalt; St. Falke, Physikalisch-Technische Bundesanstalt; C. Grebing, Physikalisch-Technische Bundesanstalt; M. Merimaa, Centre for Metrology and Accreditation; Th. Legero, Physikalisch-Technische Bundesanstalt; Ch. Lisdat, Physikalisch-Technische Bundesanstalt; Uwe Sterr, Physikalisch-Technische Bundesanstalt
- 7179 Thin Disk Lasers Enable High-Power Frequency Combs**  
Florian Emaury, ETH Zurich; Alexander Klenner, ETH Zurich; Andreas Diebold, ETH Zurich; Cinia Schriber, ETH Zurich; Clara J. Saraceno, ETH Zurich / Université de Neuchâtel; Stéphane Schilt, Université de Neuchâtel; Ursula Keller, ETH Zurich; Thomas Südmeyer, Université de Neuchâtel