2010 International Frequency Control Symposium

Student Competition Finalists:

Group 1:

Support Loss-Free Micro/Nano-Mechanical Resonators Using Phononic Crystal Slabs (Paper ID: 6130)
Saeed Mohammadi, Georgia Institute of Technology

Electrostatically Transduced Face-Shear Mode Silicon Microresonator
(Paper ID: 6150)
Angel Tsu-Hui Lin, University of Cambridge

Single-Ended-to-Differential and Differential-to-Differential Channel-Select Filters Based on Piezoelectric AIN Contour-Mode MEMS Resonators
(Paper ID: 6071)
Chengjie Zuo, University of Pennsylvania

Intrinsic Temperature Compensation of Highly Resistive High-Q Silicon Microresonators via Charge Carrier
(Paper ID: 6216)
Ashwin Samarao, Georgia Institute of Technology

Group 2:

Low Jitter Thin-Film Piezoelectric-on-Substrate Oscillators
(Paper ID: 6206)
Mohsen Shahmohammadi, Oklahoma State University

Phase Noise Modeling of Opto-Mechanical Oscillators
(Paper ID: 6168)
Siddharth Tallur, Cornell University

Frequency Stability and Phase Noise Characteristics of a Cryogenic Sapphire Oscillator Based on an Ultralow Vibration Custom Designed
(Paper ID: 6002)
Nitin Nand, University of Western Australia

High Stability Cryocooled 10 GHz Oscillator for the European Space Agency
(Paper ID: 6044)
Serge Grop, FEMTO-ST Institute

Group 3:

Progress of Active Optical Frequency Standard Based on Thermal Ca Atomic Beam
(Paper ID: 6086)
Wei Zhuang, Peking University

Millimeter Atomic Clock in Buffered, Coated, and Vacuum Cells
(Paper ID: 6012)
Andrey Litvinov, Saint-Petersburg State Polytechnic University

Two-Dimensional Optical Lattice Clock
(Paper ID: 6202)
Nathan Lemke, NIST

Group 4:

Wireless Wideband SAW Sensor - Antenna Design
(Paper ID: 6100)
Mark Gallagher, University of Central Florida

Ultrasensitive Mode-Localized Micromechanical Electrometer
(Paper ID: 6176)
Pradyumna Thiruvenkatanathan, University of Cambridge

50nm Thick AlN Resonant Micro-Cantilever for Gas Sensing Application
(Paper ID: 6126)
Paul Ivaldi, CEA/Leti-MINATEC

Rapid Detection of Organophosphates in Aqueous Solution Using a Hybrid Organic/Inorganic Coating on Sh-SAW Devices
(Paper ID: 6198)
Arnold Mensah-Brown, Marquette University