

Workshop
November 16-17, 2017

MicroPhononics and applications

Microphonics for
RF telecommunication systems
MEMS
Sensors
Microfluidics

FEMTO-ST INSTITUTE, Besançon (France)
<http://events.femto-st.fr/microphonics2017/en>



Labex **Xaction**
Integrated smart systems

femto-st
SCIENTIFIC & TECHNOLOGICAL



MicroPhonics and applications

Thursday 16 November 2017

TIME	SESSION
08:30	Participant welcoming
09:30	Opening session
09:40-10:20	Invited talk: Jonathan Cooper, University of Glasgow, UK Controlling Fluidic Flows using Microphonics: applications in Diagnostics and Therapeutics
10:20-10:35	Thérèse Leblois, FEMTO-ST Institute, FR Acousto-fluidic interactions for biomedical applications
10:35-11:00	Short coffee break
11:00-11:40	Invited talk: Farrokh Ayazi, Georgia Tech, USA Integrated Gyroscopic Resonators with Ultra Low Dissipation
11:40-11:55	Abdelkrim Talbi, Ecole Centrale de Lille, FR Theoretical and experimental investigation of guided elastic waves propagation in micro/nano structured piezo-magnetic multilayers structures
11:55-12:35	Invited talk: Dana Weinstein, Purdue University, USA Title tbc
12:35-13:50	Lunch and Poster session
13:50-14:20	Invited talk: Johan Christensen, Universidad Carlos III de Madrid, ES Parity-Time Synthetic Phononic Media and non-Hermitian Valley Transport
14:20-14:35	Wei Wang, Institut de Nanosciences de Paris, FR Double-negative Pillar-type Elastic Metamaterials
14:35-14:50	Muamer Kadic, FEMTO-ST Institute, FR Chiral Micropolar Elastic Metamaterials
14:50-16:00	Group photo, poster Session and coffee break
16:00-16:40	Invited talk: Tuomas Pensala, VTT Technical Research Centre, FI Microacoustics and Piezo-MEMS at VTT - technology platforms and applications
16:40-16:55	Bertrand Dubus, Institut d'Electronique, de Microélectronique et de Nanotechnologie, FR Electrical Control of Piezoelectric Phononic Crystals Applied to Tunable Radio-Frequency Components
16:55-17:35	Invited talk: Victor Plessky, Resonant Inc, USA What MicroPhoNics can learn from TCSAW and I.H.P. SAW
17:35-17:50	Thomas Baron, FEMTO-ST Institute, FR HBAR: High-Q, Low TCF, Low phase noise and low-g oscillators
17:50-18:05	Marianne Sagnard, frecln sys, FR Hygrometry measurement thanks to the use of a single SAW resonator
18:05	Closing session



Friday 17 November 2017

TIME	SESSION
08:20-09:00	Guided tour (limited to 20 participants) MIMENTO Clean room (microfabrication for mechanics, nanosciences, thermics and optics)
09:00-09:40	Invited talk: Paulo Santos, Paul-Drude-Institut für Festkörperelektronik, DE Control of semiconductor excitations using acoustic fields
09:40-09:55	Alexander Korovin, Institut d'Electronique, de Microélectronique et de Nanotechnologie, FR Strong coupling of phononic cavity modes in corrugated nanobeams in view of optomechanic applications
09:55-10:10	Alaee Rasoul, Max Planck Institute for the Science of Light, DE Optical pulling and pushing forces in parity-time symmetric structures
10:10-10:25	Vincent Laude, FEMTO-ST Institute, FR Doubly-resonant metal ridge array for enhanced acousto-optical modulation
10:25-11:00	Coffee break and Poster session
11:00-12:10	Industrial talks
11:00-11:40	Afshin Ziaei, Thales Research & Technology, FR (title tbc)
11:40-12:10	François Gégot, SENSEOR, FR SAW sensors: current and future needs
12:10-12:30	Closing session
12:30	Lunch and Poster session

▼ <http://events.femto-st.fr/microphonics2017/en>

Venue

The MicroPhononics Workshop will take place at the FEMTO-ST Institute headquarters
15B Avenue des Montboucons 25030 Besançon cedex - France

Organisers



GDR Metamateriaux Acoustiques pour l'Ingénierie

Created in January 2016 by the CNRS (French National Scientific Research Center), the GDR META «METamatériaux Acoustiques pour l'ingénierie» (research group on Acoustic Metamaterials) aims at structuring the French community working on this topic for the next 5 years through a set of workshops and collaborations between academic and industrial partners.
<http://events.femto-st.fr/GdR-META/> (french only)



FEMTO-ST (France)

Created in 2004, the FEMTO-ST Institute is a joint research unit affiliated with the CNRS and the University of Bourgogne-Franche-Comté (UBFC). Its objective is to master micro and nanotechnologies, to develop new devices and systems, to optimize their performance, to provide them with new functions and make them “smart”.

www.femto-st.fr



LABEX ACTION (France)

The LABoratory of EXcellence ACTION is a long-term scientific program (2012-2019) managed by FEMTO-ST and two other french research labs which aims to become an international reference in the field of the design and the demonstration of integrated smart systems.

www.labex-action.fr/en

Local Organizing Committee

- Sarah Benchabane, CNRS, FEMTO-ST Institute
- Abdelkrim Khelif, CNRS, FEMTO-ST Institute
- Alexandre Reinhardt, CEA-Leti
- Claudia Laou-Huen and Sandrine Chatrenet, Labex ACTION Smart systems embedded into matter

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