

## Call for Papers

Abstracts submitted to IWSSENT 2018 will be reviewed by the International Scientific Committee and, upon acceptance, will be presented either as a contributed talk or as a poster. Industrial sessions are also scheduled.

**Deadline for abstract submission  
June 30<sup>th</sup>, 2018**

## Registration

	<b>Early bird</b> From July 27 <sup>th</sup> to Sept. 21 <sup>st</sup>	<b>Late registration</b> after Sept. 21 <sup>st</sup>
<b>Regular</b>	<b>250 €</b>	<b>350 €</b>
<b>Student</b>	<b>200 €</b>	<b>300 €</b>

## Workshop Venue

The workshop will take place in the lecture hall of ADEIT – University-Business Foundation of the University of Valencia.

Address: Plaza Virgen de la Paz 3, 46001 Valencia



**Valencia** is a charming historical city by the Mediterranean Sea. After its foundation by the Romans in 138 B.C., Valencia quickly became a confluence point for the different civilizations that left their fingerprints on this land over the centuries. Valencia is currently the third most populous Spanish city with about 800,000 inhabitants, presenting a unique combination of the Old Town buildings of the medieval Valencian Golden Age, such as the Silk Exchange or the Cathedral, with contemporary architecture, such as the new Harbor or the City of Arts and Sciences. Moreover, its outstanding cuisine is the birthplace of paella: the world-famous rice dish, which can be enjoyed together with other specialties in many restaurants. The city also holds 'las Fallas' festival, part of UNESCO's intangible cultural heritage of humanity.



SAWtrain network PHENOMEN



# International Workshop on Sound-enabled Nanotechnologies (IWSSENT2018)

**November 26<sup>th</sup> to 29<sup>th</sup>, 2018  
Valencia, Spain**

<http://iwsent.sawtrain.eu>  
mail to [iwsent@sawtrain.eu](mailto:iwsent@sawtrain.eu)

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

## Workshop Scope

IWSENT is a joint effort by the European-funded projects SAWtrain and PHENOMEN aiming at gathering leading scientists from all over the world working in the emerging field of high frequency vibrations in semiconductor and related materials, with special focus on surface acoustic waves (SAWs), opto-mechanics, high-frequency phonons, and their applications. The dynamic modulation of semiconductor structures by high frequency vibrations provides a powerful tool for the control of the materials properties required for novel functionalities in nanophotonics, nanoelectronics, and quantum information processing. Of special interest are SAWs: these vibrations with GHz frequencies and micrometer-size wavelengths can be generated on a semiconductor chip with standard integrated circuit technology. The combination of SAWs with nanostructures has developed into new interdisciplinary fields ranging from the control of chemical reactions to advanced acousto-optical structures and to GHz quantum acoustics. Moreover, the potential of combined phononics, photonics and radio-frequency (RF) electronic signals allows one to lay the foundations of a new information technology. In particular, the controlled propagation of phonons could lead to low power components, with phonons as information tokens, by themselves or coupled to photons. IWSENT constitutes an excellent opportunity to start the discussion on phonon-based circuits as well as SAW-based technologies, seeking to explore synergies and to boost the research in the field in the near future.

## Scientific Topics

- 1.SAW technology and new materials
- 2.SAW sensors and fluidics
- 3.SAW-based quantum transport
- 4.SAW-driven single-photon sources
- 5.Acousto-optics
- 6.SAW-induced polaritons
- 7.Phonon lasers
- 8.Phonon detection
- 9.Micro- and nano-scale optomechanical cavities
- 10.Electro-mechanical excitation and opto-mechanical readout of phonon signals
- 11.Coherent phonon control for signal processing and synchronization
- 12.Opto-mechanics in the quantum regime

## Workshop Chairs

- Mauricio M. de Lima, Jr. (Univ. de Valencia, Spain)
- Jorge Pedrós (Univ. Politécnica de Madrid, Spain)
- Davide Mencarelli (Univ. Politecnica delle Marche, Italy)

## Important Dates

Abstract submission deadline: June 30<sup>th</sup>  
Acceptance notification: July 27<sup>th</sup>  
Early registration deadline: Sept. 21<sup>st</sup>  
Workshop starts on Nov. 26<sup>th</sup> 2018

## International Scientific Committee

- Jouni Ahopelto (VTT, Finland)
- Andrés Cantarero (Univ. de Valencia, Spain)
- Fernando Calle (Univ. Politécnica de Madrid, Spain)
- Bahram Djafari Rouhani (Univ. of Lille, France)
- Tony Kent (Univ. of Nottingham, UK)
- Hubert Krenner (Univ. Augsburg, Germany)
- Alejandro Martínez (Univ. Polytechnic of Valencia, Spain)
- Paulo Santos (Paul Drude Institute, Germany)
- Clivia Sotomayor (ICN2, Spain)
- Eva Weig (Univ. of Konstanz, Germany)

## Plenary Speakers

- Ken-ya Hashimoto (Chiba Univ., Japan)
- Tony Jun Huang (Duke Univ., USA)
- Tobias Kippenberg (EPFL, Switzerland)
- Florian Marquardt (MPI-SL, Germany)
- Baile Zhang (Nanyang Tech. Univ., Singapore)

## Invited Speakers

- Ausrine Bartasyte (Institut FEMTO-ST, France)
- Mircea Dragoman (IMT, Romania)
- Ivan Favero (CNRS, France)
- Francisco Guinea (IMDEA Nanoscience, Spain)
- Vincent Laude (Institut FEMTO-ST, France)
- Mo Li (Univ. of Minnesota, USA)
- Daniel Navarro (ICN2, Spain)
- Leopoldo Martín (Univ. Politécnica de Valencia, Spain)
- Mamoru Matsuo (Tokohu Univ., Japan)
- Oliver Wright (Hokkaido Univ., Japan)