First IFSA Frequency & Time Conference (IFTC' 2019)

23-25 October 2019 ● Barcelona, Spain

http://sensorsportal.com

About the Event











The 1st IFSA Frequency and Time Conference (IFTC' 2019) is organized by International Frequency Sensor Association (IFSA) – a professional association, which will celebrate its 20th year's anniversary in 2019.

IFSA was founded on 23 August 1999 with the aim to encourage the research and development in the area of sensors with frequency, time interval, duty-cycle and digital output, including multifunction, multifrequency transducers, the usage of new physical effects and principles. IFSA reports on current research in this field worldwide through its media: Sensors Web Portal, IFSA Newsletter, Sensors & Transducers journal, e-Digest (magazine) and related conferences. Today IFSA has more that 700 members from academia and industry worldwide.

Today, there are only a few conferences, which are devoted to several aspects of frequency/time measurements and appropriate sensors. The scientific and technical problems related to frequency output sensors and transducers were presented only on some events devoted to sensors and measurements.

In 1961 professor P. V. Novitskiy wrote: "... In the future we can expect, that a class of frequency output sensors will get such development, that the number of now known frequency output sensors will exceed the number of now known amplitude sensors..." It was also predicted in a technology forecast in 1971: "Many basic measurements will be related to or measured by time/frequency techniques. This situation will occur because of the increasing facility and accuracy provided through time frequency measurements... Frequency and computing counters can be expected to become smaller, lighter and cheaper, provide direct frequency readout and will be more universally used... Progress will continue in the field of time and frequency during the next five years and will contribute materially to the state of the art in electronics".

Despite the fact that this forecast was not fully justified till now, it is really the situation when "the future glimmers long before it comes to be". Today, the next big challenge has come from microelectronics. So, in 2010 professor Staphan Henzler did write: "Below the 100 nm technology node the design of analog and mixed-signal circuits becomes perceptibly more difficult. This is particularly true for low supply voltage near 1 V or below. The result is not only an increased design effort but also a growing power consumption. ... However, digital circuits become faster, smaller, and less power hungry".

Frequency/time domain signal processing and so time-to-digital converters (TDC) and frequency-to-digital (FDC) converters are well suitable for high volume microelectronics in order to circumvent analog impairments in nanometer-scale CMOS technologies. Hence, the TDC and FDC concepts are promising that have the ability to exploit fully the advantage of digital circuits. The FDC will be a trend-setting technology for ultimately scaled CMOS technologies in the nearest future, and can be used for many applications such as smart digital sensors, IoT and Industry 4.0. No any doubt that now we are living in time, when the old prediction becomes true !

On the basis of the mentioned above and Industry 4.0 and IoT 2.0 challenges it has been decided to start a new annual international conference, which will cover both: methods of measurements of frequency-time parameters of signals, and devices including appropriate sensors, transducers and converters to frequency, and frequency to digital. Sure, the conference can not ignore the other related areas connected with frequency and time, namely: generation, transfer, various oscillators and resonators, standards and references, etc.

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The topics of interest include (but not limited):

- Methods for Frequency, Time and Phase Measurements
- Measurements of Frequency-Time Parameters of Signals
- Frequency-to-Digital Converters (FDC)
- Time-to-Digital Converters (TDC)
- Voltage-to-Frequency Converters (VFC)
- Current-to-Frequency Converters
- ADC based on Voltage-to-Frequency Converters
- Capacitance-to-Frequency Converters
- Resistance-to-Frequency Converters
- Resistive Bridge-to-Frequency Converters
- Inductance-to-Frequency Converters
- Impedance-to-Frequency Converters
- Counters, Phasemeters and Tachometers
- Frequency Generators and Synthesizers
- Frequency, period, duty-cycle, time interval, pulse width modulation and pulse number output sensors and transducers
- Surface Acoustic Wave (SAW) sensors
- Bulk Acoustic Wave (BAW) sensors
- Quartz Crystal Microbalance (QCM) sensors
- Ultrasonic Sensors • Oscillators, Resonators, Timers, Resonator Circuits and Filters
- Voltage-controlled Oscillators
- Atomic and Optical Frequency Standards
- Frequency References
- Frequency Control, Timing and Time Distribution
- Time and Frequency Transfer
- Ferroelectric, Piezoelectric, and Piezomagnetic Materials
- Applications, trends and markets

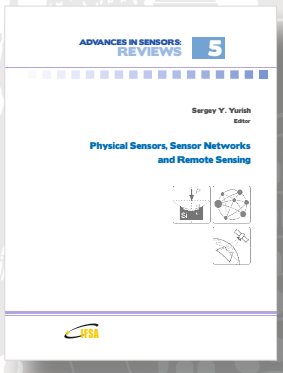
One Event - Three Publications!

1. All registered abstracts will be published in the conference proceedings (Flash drive edition of published Proceedings with the ISBN).

2. Authors will be invited to submit full-page extended papers to the special issue of Sensors & Transducers journal (ISSN 2306-8515, e-ISSN 1726-5479) by IFSA Publishing, which is published in both formats: print and electronic.

3. The limited number of full-page papers published in the Sensors & Transducers journal will be selected by the Editorial Board to extend for open access book's chapters for the Book Series on 'Advances in Sensors: Reviews', Vol. 8, which will be published by IFSA Publishing in 2020.





IFSA Publishing

Contribution Types:

- Keynote presentations
- Invited talks
- Industrial presentations
- Regular papers
- Posters
- Panel discussion
- Exhibition

Deadlines:

Submission (2-page abstract):	10 June 2019
Notification of acceptance:	30 June 2019
Registration:	30 July 2019
Camera ready (4-6 pages paper):	10 September 2019

Special Sessions and Tutorials

Authors are welcome to propose and manage special sessions or give a half-day pre-conference tutorial during the IFTC' 2019. Each special session will contain 4-6 papers in a related field as specified above.

Session organizers will get:
- Certificate of Appreciation
- Free Registration
- Special Publishing Theme within Conference Proceedings

Committee

Chairman
Prof., Dr. Sergey Y. Yurish (IFSA, Spain)

Advisory Chairmen
(coming soon)

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Sponsors, Organizers & Media Partner

The IFTC' 2019 conference is organized by International Frequency Sensor Association (IFSA), which celebrates its 20th anniversary in this year. IFSA has more than 700 members from academy and industry worldwide.

Information for Sponsors

The conference organizers are looking for sponsors from industry and academia to support various activities, such as invited, keynote speakers, gala dinner, coffee breaks, post- and pre-conferences tours and other social events. The organizers offer different sponsorship and associated benefits. For more information on sponsoring, please contact Dr. Sergey Y. Yurish by e-mail: SYurish@sensorsportal.com

http://iftc-conference.com