Vertical and Topical Tracks Program

(WEDST – Western European Daylight Savings Time, Local Time in Aveiro)

San Francisco	New York	Aveiro	Rome	New Delhi	Beijing
00:30h-02:30h PDST	03:30h-05:30h EDST	08:30h-10:30h WEDST	09:30h-11:30h CEST	13:00h-15:00h IST	15:30h-17:30h CST
03:00h-05:00h PDST	06:00h-08:00h EDST	11:00h-13:00h WEDST	12:00h-14:00h CEST	17:30h-19:30h IST	20:00h-22:00h CST
06:00h-08:00h PDST	09:00h-11:00h EDT	14:00h-16:00h WEDST	15:00h-17:00h CEST	20:30h-22:30h IST	23:00h-01:00h CST (Next Day)
08:00h-10:00h PDST	11:30h-13:30h EDST	16:00h-18:00h WEDST	17:00h-19:00h CEST	22:30h-00:30h IST (Next Day)	01:00h-03:00h CST (Next Day)

Key to Vertical and Topical Tracks (details)

Special Sessions	Subject	Workshops	Subject
Vert-01	Space	Topi-01	Sensors and Devices
Vert-02	Maritime	Topi-02	Communications and Networking
Vert-03	Agriculture and Aquaculture	Topi-03	Security, Privacy, and Trust
Vert-04	Smart Cities and Mobility	Topi-04	Artificial Intelligence and Machine Learning
Vert-05	Energy, Built Environment, and Sustainability	Topi-05	Computing and Data Processing
Vert-06	Industry and Manufacturing		

	Vertical and Topical Track Program Chairs • **Damir Filipovic**, Alliance for IoT and Edge Computing Innovation (AOTI), Brussels, Belgium • **Heiner Stüttgen**, IEEE Communications Society & NEC Laboratories Europe (retired), Heidelberg, Germany
Topi-01	*"Sensors and Devices"*

	Chairs	• **João Goes**, Universidade Nova de Lisboa, Lisbon, Portugal • **Elfed Lewis,** University of Limerick, Limerick, Ireland • **Rafael Rosales,** Intel Labs, Unterhaching, Bavaria, Germany
	Topi-01 - Session 1 **Monday October 23rd 14:00-16:00 WEDST Virtual**	**Session 1***: "Physical and virtual sensors."* **Moderator: Elfed Lewis,** University of Limerick, Limerick, Ireland *Talk 1 (Presentation 1449): "Fiber Optic Sensors for industrial applications.",* **Tania Grandal**, *AIMEN Centro Tecnológico, Smart Systems and Smart Manufacturing, Porrino, Spain.* *Talk 2 (Presentation 1479): "Observing the deep oceans using submarine optical fiber cables.",* **Miguel González-Herráez**. Department of Electronics, University of Alcalá, Madrid, Spain *Talk 3 (Presentation 1482): "Fiber Optic Sensing for Submarine Cable Integrity.",* **J. Andres Chavarria,** *Technical Director, Luna OptaSense, Los Angeles, California, USA.*
	Topi-01 - Session 2 **Tuesday October 24th 14:00-16:00 WEDST Virtual**	**Session 2***: "Applications and regulations."* **Moderator: Elfed Lewis,** University of Limerick, Limerick, Ireland *Talk 1: "Towards Software Defined Hardware for Flexible, Reconfigurable and Heterogeneous IoT Systems within the Context of Vertical Applications".* **João Pedro Oliveira,** *Department of Electrical and Computer Engineering, Universidade Nova de Lisboa, Lisbon, Portugal.* *Talk 2: "Enhancing Therapy Sessions for Students with Special Education Needs Using an IoT-Enabled AI System",* **Frederic C.Y. Wong**, *Imperial College, London, UK, and* **Anthony Wong**, *Alphotonics Ltd., Hong Kong.* *Talk 3: "OceanRINGS+: Smart Technologies for Subsea Operations.",* **Edin Omerdic**, *Department of Electronic and Computer Engineering, University of Limerick, Limerick, Ireland.*
	Topi-01 - Session 3 **Wednesday October 25th 14:00-16:00 WEDST Virtual**	**Session 3***: "System level aspects."* **Moderator: Rafael Rosales,** Intel Labs, Unterhaching, Bavaria, Germany *Talk 1 (Presentation 1259): "Mobile AR Streaming through Virtualized Edge Intelligence.",* **Fotis Foukalas**, *Cogninn, Athens, Attiki, Greece.*

		Talk 2 (Presentation 1260): *"Efficient Semi-supervised Defect Detection and Segmentation at the Edge."*, **Omesh Tickoo**, *Intel Labs, Portland, Oregon, USA.* *Talk 3 (Presentation 1261):* *"Enabling Native Localization & Sensing Support in Future Mobile Networks – Requirements, Use Cases and Approaches."*, **Sebastian Robitzsch**, *Senior Member of Technical Staff at InterDigital, Inc., London, UK.* *Talk 4 (Presentation 1262):* *"Dense 3D Perception from Wi-Fi."*, **Dong Huang**, *Carnegie Mellon University, Pittsburgh, Pennsylvania, USA.*
	Topi-01 - Session 4 **Thursday October 26th 14:00-16:00 WEDST Virtual**	**Session 4***: "Sensor and Actuator Interfaces."* **Moderator: João Goes**, Universidade Nova de Lisboa, Lisbon, Portugal *Talk 1: "Sensor-to-Digital Interfaces using Delta-Sigma Modulation Techniques."*, **Nuno Paulino**, *Universidade Nova de Lisboa (UNINOVA), Lisbon, Portugal* *Talk 2: "Design of a Low-resolution C-2C Asynchronous Local-Quantizer SAR-ADC."*, **João Pedro Gouveia Xavier**, *CEMOP/CENIMAT-I3N, Universidade Nova de Lisboa (UNINOVA), Lisbon, Portugal.* *Talk 3: "Design of Asynchronous SAR-ADCs with Oxide TFTs."*, **Hugo Filipe Matias Viana**, *CEMOP/CENIMAT-I3N, Universidade Nova de Lisboa (UNINOVA), Lisbon, Portugal.* *Talk 4: "CMOS Self-Biased Ring Oscillator for Intrinsically Robust PVT TRNGs for Cryptographic Applications."*, **Hugo Serra**, *Universidade Nova de Lisboa (UNINOVA) & KOALA TECH, Lisbon, Portugal*
	Topi-01 - Session 5 **Friday October 27th 14:00-16:00 WEDST Virtual**	**Session 5***: "Auxiliary Circuits for Sensor and Actuator Interfaces."* **Moderator: João Goes**, Universidade Nova de Lisboa, Lisbon, Portugal *Talk 1: "CMOS Self-Biased Ring Oscillator for Intrinsically Robust PVT TRNGs for Cryptographic Applications."*, **Luís Bica Oliveira & João Cabacinho**, *Universidade Nova de Lisboa (UNINOVA), Lisbon, Portugal* *Talk 2: "Radiation detectors based on Silicon photomultipliers for High-energy Physics and PET medical imaging systems."*, **Edgar Albuquerque**, *PETSYS Electronics, Lisbon, Portugal.* *Talk 3: "A Skew Insensitive Frontend for Time-Interleaved ADCs using a Switched Source-Follower."*, **David Leonardo**, *Universidade Nova de Lisboa (UNINOVA), Lisbon, Portugal.*

		Talk 4: "High-Speed Residue Amplifiers for ADC.", **Diogo André Silvares Dias**, *TU-Delft, Delft, the Netherlands.* *Talk 5: "mm-Wave Circuit Design in the Context of 5G IoT and its Applications.",* **Fábio Passos**, *Instituto de Telecomunicações - LISBOA (IT-Lisbon), Lisbon, Portugal.*