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, Build 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-05	*"**Computing and Data Processing**"*

	Chairs	- **João Carlos Ferreira**, ISCTE, Lisbon, Portugal - **Tao Zhang**, NIST, Gaithersburg, Maryland, USA - **Preeti Chauhan**, Google, Redwood City, California, USA
	Topi-05 - Session 1 **Tuesday October 17th 11:00-13:00 WEDST Hybrid** (In person in Aveiro and Virtual Live Online)	**Session 1*: "Cloud Computing."*** **Moderator: João Carlos Ferreira**, ISCTE, Lisbon, Portugal *Talk 1: "Internet of Robotic Things: Architecture, Examples, and Future Wareabouts.",* **Anand Nayyar**, *Duy Tan University, Da Nang, Vietnam.* *Talk 2: "DIVINE: An Agriculture Data Spaces Ecosystem",* **Soumya Kanti Datta**, *Digiotouch, Tallinn, Estonia.* *Talk 3: "Energy Savings in Smart Buildings",* **Bruno Miguel Gonçalves Mataloto**, *Instituto Universitár io de Lisboa, Lisbon, Portugal.* *Talk 4: "An on-farm experimentation IoT infrastructure for urban farmers.",* **Sejun Song**, *University of Missouri, Kansas City, Missouri, USA.* *Talk 5: "REDLedger - REdactable Distributed Ledger",* **Joanna DeFranco**, *Secure Systems and Applications Group, NIST, Gaithersburg, Maryland, USA.*
	Topi-05 - Session 2 **Wednesday October 25th 16:00-18:00 WEDST Virtual**	**Session 2*: "Edge Computing and Edge AI."*** **Moderator: Preeti Chauhan**, Google, Redwood City, California, USA *Talk 1: "Integrating Blockchain Technology and Federated Learning: Enhancing Privacy and Trust in Decentralized Machine Learning.",* **Rajesh Hegde**, *IIT Kanpur, Kanpur, Uttar Pradesh, India* *Talk 2: "Enhanced Federated Learning with Server Learning: Benefits and Limitations.",* **Richard J. La**, *University of Maryland, College Park, Maryland, USA.* *Talk 3: "Applied Cases of IoT project between a University and Industry.",* **Joao Carlos Ferreira**, *ISCTE-IUL and INOV, Instituto Universitário de Lisboa, Lisbon, Portugal.* *Talk 4 (Paper 1189): "A Framework to Support Collection, Processing and Analysis of Smart Vehicles Data.",* **Mariana Azevedo**[1], *Thais Medeiros*[1], *Morsinaldo Medeiros*[1], *Carlos Viegas*[1], *Marianne Silva*[1], *Ivanovitch Silva*[1], *and Daniel G. Costa*[2]; *(1) Federal University of Rio Grande do Norte, Natal, Brazil; and*

		(2) INEGI, Faculty of Engineering, University of Porto, Porto, Portugal.
	Topi-05 - Session 3 **Wednesday October 18th 16:30-18:30 WEDST Hybrid** (In person in Aveiro and Virtual Live Online)	**Session 3***: "2.5/3D Packaging and Hardware for Cloud Computing."* **Moderator: Preeti Chauhan**, Google, Redwood City, California, USA *Talk 1: "EMIB and substrate technologies"*, **Gang Duan**, *INTEL, Chandler, Arizona, USA.* *Talk 2: "GPU and Memory Packaging Technologies for Cloud Computing"*, **Amr Helmy**, *University of Toronto, Toronto, Ontario, Canada.* *Talk 3: "Packaging Innovations for AI/ML"*, **Preeti Chauhan**, *Google, Redwood City, California, USA.* *Talk 4: "Overview of 2.5D/3D Advanced Package Technologies"*, **Jason Zhang**, *Intel, Chandler, Arizona, USA.*
	Topi-05 - Session 4 **Wednesday October 25th 14:00-16:00 WEDST Virtual**	**Session 4***: "Networking for Cloud Computing."* **Moderators: Preeti Chauhan**, Google, Redwood City, California, USA, and **João Carlos Ferreira**, ISCTE, Lisbon, Portugal *Talk 1: "Human Sensing, Processing and Networking for 3D Remote Communication."*, **Hirozumi Yamaguchi**, *Osaka University, Osaka, Japan.* *Talk 2: "The Integration of Internet of Things (IoT) and Machine Learning (ML): An Essential Component in Experimental Testbeds"*, **Abdellah Chehri**, *Royal Military College of Canada, Ottawa, Canada.* *Talk 3: "How access networks assure reliable networking for edge and embedded compute"*, **Jason Rupe**, *Cablelabs, Boulder, Colorado, USA* *Talk 4: "Networking for Cloud computing"*, **Roger Garcia**, *Sr. TPM- Manager Datacenter Quality & NPI, Santa Cruz, California, USA*
	Topi-05 - Session 5	**Session 5***: "Embedded Computing."* **Moderator: Preeti Chauhan**, Google, Redwood City, California, USA

	Thursday October 26th 16:00-18:00 WEDST Virtual	*Talk 1: "Intelligent Agents on IoT Systems"*, **Moharram Challenger**, *University of Antwerp, Antwerp, Belgium.* *Talk 2: "Hybrid Quantum-Classical AI Engineering on the IoT Cloud and Edge"*, **Armin Moin**, *University of Colorado Colorado Springs, Colorado, USA.* *Talk 3: "Where's the Edge? – APIs to simplify access to edge resources"*, **Randy Levensalor**, *Cablelabs, Boulder, Colorado, USA.* *Talk 4 (Paper 1393): "Development of Cloud-based Weather Monitoring System using Distributed Weather Stations"*, **Corin Gelamay Nisperos Villegas**, Rodney V. Golpe, John Richard Hizo, Isabel Austria, Paul Jason Co, Jaybie De Guzman, and **Marc Rosales**, *University of the Philippines, Diliman, Quezon City, Philippines.*