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
Vert-06	"Industry and Manufacturing"

Chairs	 Pedro Malo, Unparallel Innovation, Lda. and Universidade Nova de Lisboa, Lisbon, Portugal Bruce Hecht, VG2PLAY, Cambridge, Massachusetts, USA Andreas Müller, Bosch and 5G-ACIA, Stuttgart, Baden-Württemberg, Germany
	 Track Theme: Towards the Industrial Metaverse The Industrial Metaverse merges the physical and digital worlds an unprecedented manner by creating a shared digital space when humans, machines and data interact seamlessly to significantly improve productivity, efficiency, and flexibility of industrial operations. The Industrial Metaverse leverages on advanced digital technolog such as 5G/6G/private networks, edge computing, digital twins, A positioning systems, and/or augmented/virtual/mixed reality (AR/VR/XR), to enable seamless connectivity, real-time data processing, intelligent automation, precise asset tracking, immers simulations, and interactive digital interfaces within the virtual industrial environment. This track highlights novel methodologies, practical implementations, and theoretical frameworks exploring the Industrial Metaverse's profound impact on Industry 4.0
Vert-06 - Session 1	Session 1: "Next-Generation Connectivity: 5G and 6G Networks for the Industrial Metaverse."
	The potential of 5G and 6G networks in enabling seamless communication, data-intensive applications, and immersive experiences within the Industrial Metaverse Moderator: Andreas Müller, Bosch and 5G-ACIA, Stuttgart, Baden
Monday October 23rd 14:00-16:00 WEDST Virtual	Württemberg, Germany Talk 1 (Presentation 1502): "Industrial 5G - 2 steps forward - n step back.", Linus Thrybom, Manager Industrial Networks & Control, Corporate Research, ABB, Västerås, Sweden.
	Talk 2 (Presentation 1537): "Towards Open Campus Networks for t Industries enabled by the German CampusOS Initiative.", Thomas Magedanz, University Professor at TU Berlin, Head of Department a Fraunhofer FOKUS, Berlin, Berlin, Germany.
	Talk 3(Presentation 1492): "IoT performance in private 5G NR networks.", Meik Kottkamp, Technology Manager at Rohde &

Vert-06 - Session 2	Session 2: "Enabling Immersive Experiences: Augmented, Virtual, and Mixed Reality in the Industrial Metaverse."
	Applications of augmented reality (AR), virtual reality (VR), and mixed reality (MR) technologies within the Industrial Metaverse
	Moderator: Pedro Malo, Unparallel Innovation, Lda. and Universidade Nova de Lisboa, Lisbon, Portugal
Tuesday October 24th 14:00-16:00 WEDST Virtual	Talk 1: "VIROO: VR for Workforce Training?", Asier Cobanera Jauregui, EMEA Account Manager, Virtualware, Bilbao-Bilbo, Basque Country, Spain
	Talk 2: "XR5.0: Human-Centric AI-Enabled Extended Reality Applications for the Industry 5.0 Era.", Pedro Maló, Director and Chief Science Officer, Unparallel Innovation, Lda., Lisbon, Portugal.
Vert-06 - Session 3	Session 3: "Secure and Resilient ICT Infrastructure for the Industrial Metaverse."
Wednesday October 25th 14:00-16:00 WEDST	Challenges and opportunities in building a secure and resilient ICT infrastructure to support the Industrial Metaverse
Virtual	Moderator: Pedro Malo, Unparallel Innovation, Lda. and Universidade Nova de Lisboa, Lisbon, Portugal
	Talk 1: "A New Industrial Blueprint: Integration of Infrastructure-as-Code, Synthetic Data generation in Metaverse and Big Data Innovations.", Giovanni Di Orio, Senior Researcher, UNINOVA, Lisbon, Portugal.
	Talk 2: "Building a Secure Foundation: Leveraging Data Mesh for the Industrial Metaverse.", Reinhard Mayr, Business Development & Co-Founder, Meshmakers GmbH, Salzburg, Austria.
Vert-06 - Session 4	Session 4: "Digital Twins: Simulations and Analytics in the Industrial Metaverse."
	Utilization of digital twins within the Industrial Metaverse
	Moderator: Pedro Malo, Unparallel Innovation, Lda. and Universidade Nova de Lisboa, Lisbon, Portugal
Thursday October 26th 14:00-16:00 WEDST Virtual	Talk 1: "The role of Digital Twin Networks in connected industrial systems.", Jeroen Hoebeke, Professor, imec, IDLab, Ghent University, Ghent, Belgium.
	Talk 2: "Digital Twin for Manufacturing Quality Control Via Remote Operator Technology.", Ander García Gangoiti, Senior Researcher on

	Data Intelligence for Energy and Industrial Processes, Vicomtech, Pamplona, Spain Talk 3: "Utilizing AAS in the Industrial Metaverse for Real-time Oversight: An application in the Agrifood Sector.", André Lourenço, Engineer at_Flowake, Lisbon, Portugal. Talk 4: "Digital models (workers, machines) for Metaverse (based on sensor data).", Nenad Stojanovic, CEO, Nissatech Innovation Center, Niš, Serbia
Vert-06 - Sess Friday Octob 14:00-16:00 V Virtual	 Metaverse." er 27th Integration of artificial intelligence (AI) technologies within the