



## 1<sup>st</sup> edition of Human-Centric and Tactile IoT Workshop

jointly held with IEEE GLOBECOM 2021

Madrid, Spain, December 7-11, 2021

IoT technologies and applications are bringing fundamental changes to all sectors of society and economy, and constitute an essential element of the Next Generation Internet, which encompasses a number of enabling technologies, such as 5G, cyber-security, distributed computing, artificial intelligence (AI), Virtual, Augmented and Mixed Reality. Recently, the term Internet of Senses has been coined, as one of the main drivers for the sixth generation (6G) of wireless communications systems, leveraging the Tactile Internet to a whole new level, ensuring end-user trust, adequate security and privacy by design, and making it human-centric.

This Workshop aims at investigating human-centricity and Tactile Internet, as key enablers for the next-generation Internet of Things (IoT). We are welcoming contributions providing innovative research, as well as technical contributions, providing solutions to interoperability, integration, and interconnection of heterogeneous IoT systems, at any specific level (device, networking, middleware, application services, data and semantics), and at global platform level that are related to human-centric tactile IoT.

### Topics of Interest

- Next generation IoT architectures with a focus on user-aware, self-aware and semi-autonomous IoT systems.
- New real-time capable solutions, which solve performance challenges such as streaming and filtering at the edge, latency and network constraints.
- New distributed AI, address security, privacy and trust requirements by design and allow for new decentralised topologies and governance.
- Interoperability mechanisms coping with the increased complexity of connecting vast numbers of heterogeneous devices with escalating demands for data sharing
- Techniques for privacy protection, data monetization and contractual arrangements (e.g. blockchains/DLTs) for ensuring secure and trusted interaction.
- Intelligent IoT devices including resource-aware hardware/software concepts, low power processor platforms integrating computing, networking, storage and acceleration elements.
- New communication schemes and topologies that range from the cloud continuum towards mesh and securing computing and communication at device level with constrained resources.
- Contextual IoT based on human-centric sensing/actuating, augmented/virtual reality and new IoT service capabilities
- Integration solutions with parallel and opportunistic computing capabilities, neuromorphic and contextual computing.
- Time-sensitive and ultra-low latency networking like 5G and beyond (6G) networks, Time Sensitive Networking (TSN) and different mesh networks with low latency capabilities.

### Workshop Chairs

Carlos E. Palau, DCOM-UPV (Spain)

David Gomez-Barquero, iTEAM-UPV (Spain)

### Invited Speaker

Oscar Lazaro, Innovia (Spain), supporting the workshop from [5GROWTH](#) project community.

### Publicity Chairs

Vaios Koumaras, INFOLYSIS (Greece)

Erin Seder, Nextworks (Italy)

### Web Site

<http://www.satrd.upv.es/events/HCT-IoT2021/>

### International Program Committee (TBC)

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 Raffaele Gravina, University of Calabria (Italy)  
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 Valerio Frascolla, Intel (Germany)  
 Fotini Setaki, COSMOTE (Greece)  
 Dionysia Triantafyllopoulou, University of Surrey(UK)  
 Wieslaw Pawlowski, University of Gdańsk (Poland)  
 Costin Badica, University of Craiova (Romania)

### Submission Guidelines

Original work must be submitted that has not been published, or is not under consideration elsewhere. All final submissions should be written in English, with a maximum paper length of six pages including figures, without incurring additional page charges (suggested length is four pages). Paper should be formatted according to the IEEE conference style:

<https://www.ieee.org/conferences/publishing/templates.html>

The submission link is on EDAS: <<coming soon>>.

### Review Process and Publication

All submitted manuscripts will be peer-reviewed. Submissions will be judged on correctness, originality, technical strength, significance, presentation, quality, interest and relevance to the scope of the workshop. Accepted and presented papers will be published in the IEEE GLOBECOM Conference Proceedings and submitted to the IEEE Xplore digital library.

### Important Dates

15 July 2021: Submission Deadline.

15 September 2021: Acceptance/Rejection Notification.

15 November 2021: Final camera-ready papers.