

Day 0 (22nd of October)

- **8:30** Registration
 - **Space:** Ceremonial Hall Cloister
- **9:00 - 13:00** 1st Workshop on Cyber-Physical Social Systems for smart cities (CPSS)
 - **Room:** Garate
- **13:00 - 14:00** Lunch
 - **Space:** Ceremonial Hall Cloister
- **14:00-18:00** Connected World/Web & Semantic Interoperability Workshop - (CWSI'19)
 - **Room:** Garate

Day 1 (23rd of October)

- **8:30** Registration
 - **Space:** Ceremonial Hall Cloister
- **9:00** - Opening Ceremony (**General and Local Chairs + University authorities + Sponsors**)
- **9:30** - 1st Keynote Talk "**The Smart Home Illusion**" (**Alexandra Deschamps-Sonsino**, Designswarn, UK)
 - Room: Ceremonial Hall
- **10:30** Morning Break (coffee)
 - **Space:** Ceremonial Hall Cloister
- **11:00 - 12:30** Track Papers (**Machine Learning - chair: Karin A. Hummel**). Room: Garate
 - Providing Fault Tolerance via Complex Event Processing and Machine Learning for IoT Systems
 - Interactive Machine Learning for the Internet of Things: A Case Study on Activity Detection
 - Energy-Accuracy Tradeoff for Efficient Noise Monitoring and Prediction in Working Environments
 - **(short)** The Makers' Beehives: Smart Beehives for Monitoring Honey-Bees' Activities
- **12:45 - 14:00** Lunch
 - **Space:** Ceremonial Hall Cloister
- **14:00 - 15:30** Track Papers (**IoT Edge and Cloud - chair: Frank A. Kraemer**). Room: Garate
 - Quality-aware Service Selection Approach for Adaptive Context Recognition in IoT
 - Simplicity is Best: Addressing the Computational Cost of Machine Learning Classifiers in Constrained Edge Devices
 - MAPO: A Multi-Objective Model for IoT Application Placement in a Fog Environment
 - **(short)** IoT fault management in cloud/fog environments
- **15:30** Afternoon Break (coffee)
 - **Space:** Ceremonial Hall Cloister

- **16:00 - 17:30** Track Papers Afternoon (**Security - chair: Fatima Z. Benhida**): Room: Garate
 - Non-interactive Certificate Update Protocol for Efficient Authentication in IoT
 - Scalable Identity and Key Management for Publish-Subscribe Protocols in the Internet-of-Things
 - Blockchain-based Data Provenance for the Internet of Things
 - **(short)**Trusted Lightweight Communication for IoT Systems Using Hardware Security
- **17:45** - Demos and Poster session. **Space:** Ceremonial Hall Cloister
 - Calibration Transfer for Food Recognition Models for E-Noses
 - Sensor Gym: Training Autonomous IoT Devices with Deep Reinforcement Learning
 - POSTER: Human-Drone Teaming: Use Case Bookshelf Inventory
 - Event-Based Single-Person 2D Human Pose Estimation in Real Time
 - Workflow-based Setup of Smart Devices in Mixed Reality
 - Creating Awareness in Embedded Systems - IoT enabled Temp-Awareness in PLCs
 - Toward a Delay Tolerant Internet of Things
 - An Interactive Interface for Bulk Software Deployment in IoT
- **19:00** - Welcome reception (toast). **Space:** Ceremonial Hall Cloister

Day 2 (24th of October)

- **9:00** Registration
 - **Space:** Ceremonial Hall Cloister
- **9:30** 2nd Keynote Talk “**Innovation Begins at Home**” (**Andy Stanford-Clark** , IBM CTO - UK and Ireland)
 - **Room:** Ceremonial Hall
- **10:30** Morning Break (coffee)
 - **Space:** Ceremonial Hall Cloister
- **11:00 - 12:30** Track Papers (**Real World / Interaction - chair: Iñaki Vazquez**). Room: Garate
 - Achieving Accurate Room-Level Indoor Location Estimation with Emerging IoT Networks
 - A Scalable Software Update Service for IoT Devices in Urban Scenarios
 - Towards Identification of Packaged Products via Computer Vision
 - **(short)** Put that Hologram there - Probing Mobile Interaction Experiences for a Vision of Mixed Material Public Spaces
- **12:45 - 14:00** Lunch
 - **Space:** Ceremonial Hall Cloister
- **14:00 - 15:30** Track Papers (**Societal Impact - chair: Paul Davidsson**). Room: Garate
 - MyAQI: Context-aware Outdoor Air Pollution Monitoring System
 - Real-time IoT Road Traffic Data Monitoring using LoRaWAN
 - Towards Somaesthetic Smarthome Designs: Exploring Potentials and Limitations of an Affective Mirror
 - **(short)** User Involvement Matters: The Side-Effects of Automated Smart Objects in Pro-environmental Behaviour

- **15:30** Afternoon Break (coffee)
 - **Space:** Ceremonial Hall Cloister
- **16:00 - 17:30** Doctoral Consortium. **Room:** Garate.
 - Network Coding for IIoT Multi-Cloud Environments
 - Achieving Robust and Reliable Wireless Communications in Hostile In-Car Environments
 - Asset-Oriented Access Control: Towards an IoT Framework
 - A Novel Semantic Complex Event Processing (SCEP) Framework for Stream Processing
- **19:30** Social Event (bus stop) → Aspaldiko Restaurant 20.15

Day 3 (25th of October)

- **8:30** Registration
 - **Space:** Ceremonial Hall Cloister
- **9:00 3rd Keynote Talk “Programming and forming objects with modular robots to enable a programmable matter”** (Benoît Piranda, Univ. Bourgogne-Franche-Comté, Institut FEMTO-ST, CNRS (France))
 - **Room:** Ceremonial Hall
- **10:00 - 11:30** Track Papers (**Industrial Applications - chair: Simon Mayer**). Room: Garate
 - Interoperable Digital Twins in IIoT Systems by Transformation of Information Models
 - How IOT and computer vision could improve the casting quality
 - Using BPM Technology to Deploy and Manage Distributed Analytics in Collaborative IoT-Driven Business Scenarios
 - **(short)** Embracing Opportunities of Livestock Big Data Integration with Privacy Constraints
- **11:30** Morning Break (brunch)
 - **Space:** Ceremonial Hall Cloister
- **12:00 - 13:20** Track Papers (**Web of Things - chair: Matthias Kovatsch**). Room: Garate
 - Enabling easyWeb of Things compatible device generation using a Model-Driven Engineering approach
 - Escaping the Streetlight Effect: Semantic Hypermedia Search Enhances Autonomous Behavior in the Web of Things
 - **(short)** WoTbench: A Benchmarking Framework for the Web of Things
 - **(short)** Privacy-Preserving IoT Cloud Data Processing Using SGX
- **13:30** - Closing Ceremony + Welcome IoT 2020
 - **Room:** Garate