# 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
- SmartWorkplace: A Privacy-based Fog Computing Approach to Boost Energy Efficiency and Wellness in Digital Workplaces
- Enabling Citizen Science in Rural Environments with IoT and Mobile Technologies
- SLA-aware Approach for IoT Workflow Activities Placement based on Collaboration between Cloud and Edge
- Preserving Privacy in Cyber-physical-social systems: An Anonymity and Access Control Approach
- Internet of Threats Introspection in Dynamic Intelligent Virtual Sensing
- The CitySPIN Platform: A CPSS Environment for City-Wide Infrastructures - The Story So Far
- Cross-CPP – An Ecosystem for Provisioning, Consolidating, and Analysing Big Data from Cyber-Physical Products
- Challenges for Air Pollution Monitoring: a Cyber-Physical Social Systems Approach

**13:00 - 14:00  Lunch**
    Space: Ceremonial Hall Cloister

**14:00-18:00  Connected World/Web & Semantic Interoperability Workshop - (CWSI'19)**
    Room: Garate
- Towards Animal Welfare in Poultry Farms through Semantic Technologies
- Citizen Science over Big Data and IoT Technology for a Sustainable Living enabling Carbon Reduction
- Theoretical assessment of existing frameworks for data usage control: Strengths and limitations with respect to current application scenarios
- A survey on Trust Management Classification and its most common Methodologies for the Internet of Things
- Semantic Web Standards and its application in the Active and Healthy Ageing Area

# 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 *(Alexander Power and Gerald Kotonya)*
- Interactive Machine Learning for the Internet of Things: A Case Study on Activity Detection *(Agnes Tegen, Paul Davidsson and Jan A. Persson)*
- Energy-Accuracy Tradeoff for Efficient Noise Monitoring and Prediction in Working Environments *(Frank Alexander Kraemer, Faiga Alawad and Ida Marie Bosch)*
- (short) The Makers' Beehives: Smart Beehives for Monitoring Honey-Bees' Activities *(Doreid Ammar, Jean Savinien and Lionel Radisson)*

**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
- Using BPM Technology to Deploy and Manage Distributed Analytics in Collaborative IoT-Driven Business Scenarios *(Tim D'Hondt, Anna Wilbik, Heiko Ludwig, Nathalie Baracaldo, Ali Anwar and Paul Grefen)*
- Simplicity is Best: Addressing the Computational Cost of Machine Learning Classifiers in Constrained Edge Devices *(Oihane Gómez-Carmona, Diego Casado-Mansilla, Javier García-Zubia and Diego López-De-Ipiña)*
- MAPO: A Multi-Objective Model for IoT Application Placement in a Fog Environment *(Narges Mehran, Dragi Kimovski and Radu Prodan)*
- (short) IoT fault management in cloud/fog environments *(Doreid Ammar, Jean Savinien and Lionel Radisson)*

**15:30  Afternoon Break (coffee)**
 Space: Ceremonial Hall Cloister

**16:00 - 17:30 Track Papers Afternoon (Security - chair: Fatima Z. Benhamida)**
Room: Garate

- Non-interactive Certificate Update Protocol for Efficient Authentication in IoT *(Li Duan, Yong Li and Lijun Liao)*
- Scalable Identity and Key Management for Publish-Subscribe Protocols in the Internet-of-Things *(Prashant Anantharaman, Kartik Palani and Sean W. Smith)*
- Blockchain-based Data Provenance for the Internet of Things *(Marten Sigwart, Michael Borkowski, Marco Peise, Stefan Schulte and Stefan Tai)*
- (short)Trusted Lightweight Communication for IoT Systems Using Hardware Security *(Arnaud Durand, Pascal Gremaud, Urs Gerber and Jacques Pasquier)*

**17:45 Demos and Poster session.**
Space: Ceremonial Hall Cloister

- Calibration Transfer for Food Recognition Models for E-Noses *(Andreas Seiderer, Chi Tai Dang and Elisabeth Andre)*
- Sensor Gym: Training Autonomous IoT Devices with Deep Reinforcement Learning *(Abdulmajid Murad, Frank Alexander Kraemer, Kerstin Bach and Gavin Taylor)*
- POSTER: Human-Drone Teaming: Use Case Bookshelf Inventory *(Alexander Freistetter and Karin Anna Hummel)*
- Workflow-based Setup of Smart Devices in Mixed Reality *(Ronny Seiger, André Kühnert and Uwe Assmann)*
- Creating Awareness in Embedded Systems - IoT enabled Temp-Awareness in PLCs *(Richard Bjetak, Amer Kajmaković and Konrad Diwold)*
- Toward a Delay Tolerant Internet of Things *(Fatima Zohra Benhamida, Chahrazad Bennani, Diego Casado-Mansilla and Diego López-De-Ipiña)*
- An Interactive Interface for Bulk Software Deployment in IoT *(Farshid Tavakolizadeh, Hanbing Zhang and Sisay Adugna Chala)*

**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 *(Jacob Biehl, Andreas Girgensohn and Mitesh Patel)*
- A Scalable Software Update Service for IoT Devices in Urban Scenarios *(Verónica Toro Betancur, José Viquez Zamora, Markku Antikainen and Mario Di Francesco)*
- Towards Identification of Packaged Products via Computer Vision *(Klaus Fuchs, Tobias Grundmann and Elgar Fleisch)*
- (short) Put that Hologram there - Probing Mobile Interaction Experiences for a Vision of Mixed Material Public Spaces *(Ilhan Aslan, Chi Tai Dang, Ruben Schlagowski, Michael Dietz, Fabian Brain and Elisabeth Andre)*

**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 (*Daniel Schürholz, Meruyert Nurgazy, Arkady Zaslavsky, Prem Prakash Jayaraman, Sylvain Kubler, Karan Mitra and Saguna Saguna)*
- Real-time IoT Road Traffic Data Monitoring using LoRaWAN*(Adel Aneiba, Mohammad Albaarini and John Hayes)*
- Towards Somaesthetic Smarthome Designs: Exploring Potentials and Limitations of an Affective Mirror *(Chi Tai Dang, Ilhan Aslan, Florian Lingenfelser, Tobias Baur and Elisabeth Andre)*
- (short) User Involvement Matters: The Side-Effects of Automated Smart Objects in Pro-environmental Behaviour *(Diego Casado-Mansilla, Pablo Garaizar and Diego López-De-Ipiña)*

**15:30  Afternoon Break (coffee)**
    Space: Ceremonial Hall Cloister

**16:00 - 17:30  Doctoral Consortium.**
Room: Garate.
- Network Coding for IIoT Multi-Cloud Environments *(Mihail Zverev, Pablo Garrido, Ramon Aguero and Josu Bilbao)*
- Achieving Robust and Reliable Wireless Communications in Hostile In-Car Environments *(Daniel Kraus, Konrad Diwold, Peter Priller and Erich Leitgeb)*
- Asset-Oriented Access Control: Towards an IoT Framework *(Thomas Cattermole, Simon Docherty, David Pym and M. Angela Sasse)*
- A Novel Semantic Complex Event Processing (SCEP) Framework for Stream Processing *(Rose Yemson, Dhavalkumar Thakker and Savas Konur)*

**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
>- Quality-aware Service Selection Approach for Adaptive Context Recognition in IoT *(Elif Eryilmaz, Frank Trollman and Sahin Albayrak)*
>- Interoperable Digital Twins in IIoT Systems by Transformation of Information Models *(Marie Platenius-Mohr, Somayeh Malakuti, Sten Grüner and Thomas Goldschmidt)*
>- How IOT and computer vision could improve the casting quality *(Iker Pastor-López, José Gaviria de La Puerta, Borja Sanz, Aitor Goti and Pablo García Bringas)*
>- (short) Embracing Opportunities of Livestock Big Data Integration with Privacy Constraints *(Franz Papst, Olga Saukh, Kay Roemer, Florian Grandl, Igor Jakovljevic, Franz Steininger, Martin Mayerhofer, Jürgen Duda and Christa Egger-Danner)*

**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 *(Markel Iglesias-Urkia, Abel Gómez, Diego Casado-Mansilla and Aitor Urbieta)*
>- Escaping the Streetlight Effect: Semantic Hypermedia Search Enhances Autonomous Behavior in the Web of Things *(Simon Bienz, Andrei Ciortea, Simon Mayer, Fabien Gandon and Olivier Corby)*
>- (short) WoTbench: A Benchmarking Framework for the Web of Things *(Raoufeh Hashemian, Niklas Carlsson, Diwakar Krishnamurthy and Martin Arlitt)*
>- (short) Privacy-Preserving IoT Cloud Data Processing Using SGX *(Pascal Gremaud, Arnaud Durand and Jacques Pasquier)*

**13:30 - Closing Ceremony + Welcome IoT 2020**
>Room: Garate