

FTAL Conference 2021

Sustainable Smart Cities and Regions

28th - 29th October 2021, Lugano – East Campus

Day schedule

Thursday, 28th October

Aula Polivalente, Room A1.02, Room D1.09

12:00 **Registration**

13:00 **Opening and Welcome address by FTAL**
Olivier Naef, President FTAL
Emanuele Carpanzano, FTAL Conference Chairman

Keynote speaker introduction
Antonios Papaemmanouil, Member of Programme Committee

Keynote: “Collaboration: Data-based trust building for people-centered smart cities”
Gesa Ziemer, HafenCity University Hamburg (HCU)

14:30 **Parallel technical sessions**
IoT & Data analysis (Aula Polivalente) Session Chair: Eckart Zitzler
Energy and Environment (Room A1.02) Session Chair: Antje Junghans

15:30 **Coffee break and Poster session**

16:30 **Parallel technical sessions**
Digital Governance (Aula Polivalente) Session Chair: Marion Czeranka
Energy and Environment (Room A1.02) Session Chair: Antonios Papaemmanouil
IoT & Data analysis (Room D1.09) Session Chair: Daniele Puccinelli

18:00 **Apéro (reception with drinks and light food)**

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Day schedule

Friday, 29th October

Aula Polivalente, Room A1.02,

- 08:00 **Registration**
- 09:00 **Plenary session**
Keynote speaker introduction
Daniele Puccinelli, Member of Programme Committee
- Keynote: “Sunlight for wireless communication”**
Marco Zuniga, Delft University of Technology (TU Delft)
- 10:00 **Coffee break**
- 10:30 **Parallel Sessions**
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| <i>IoT & Data analysis</i> (Aula Polivalente) | Session Chair: Elena Mugellini |
| <i>Digital Governance</i> (Aula Polivalente) | Session Chair: Elena Mugellini |
| <i>Energy and Environment</i> (Room A1.02) | Session Chair: Susanne Kytzia |
- 11:30 **Plenary Session**
Keynote speaker Introduction
Antje Junghans, Member of the Programme Committee
- Keynote: “Climate-neutral, inclusive, beautiful and sustainable city districts”**
Annemie Wyckmans, Norwegian University of Science and Technologies (NTNU)
- 12:30 **Wrap up and final remarks**
Elena Mugellini, Chair of the Programme Committee
- 12:45 **Networking Lunch**

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Thursday, 28th October

14:30 **Parallel technical sessions**

IoT & Data analysis (Aula Polivalente) - Session Chair: Eckart Zitzler

14:30-14:50	PreGIS: a platform for urban parking analysis and management Olivier Hüsser, Guido Bologna, Philippe Menoud, Artan Sadiku, Ludovic Pfeiffer, Denis Clément, Yassin Rekik, Michel Bénard and Noria Foukia
14:50-15:10	LiveSmart – CAMPUS: a proximity based solution for an enhanced human experience Michela Papandrea, Andrea Baldassari, Salvatore Vanini, Christian Catelli, Dennis Nasarov and Tiziano Leidi
15:10-15:30	Parcel Transportation System with 3D Image Analysis Rabia Saeed, François Tièche, Elena Mugellini and Francesco Carrino

Energy and Environment (Room A1.02) - Session Chair: Antje Junghans

14:30-14:50	Development of a Smart Connected Product- Service-System (PSS) for the Waste Management Ecosystem Linard Barth, Luciano Sarperi, Marcel Dettling, Jürg Meierhofer, Andjela Bulatovic and Lukas Schweiger
14:50-15:10	The Environmental Impact of a Higher Education Institution in the Context of COVID-19 – The Case of the University of Applied Sciences of the Grisons in Switzerland Livia Somerville, Matthias Stucki and Regula Keller
15:10-15:30	Biochar in city tree substrates - an element for closing water and nutrient cycles in cities? Andrea Gion Saluz and Andreas Schönborn

15.30 **Coffee break and Poster session**

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16.30 **Parallel technical session**

Digital Governance (Aula Polivalente) - Session chair: Marion Czeranka

16:30-16:50	Systemic innovation strategies of smart cities: governance and implementation strategies of four pioneer SC initiatives Jörg Musiolik, Leticia Müller and Vicente Carabias
16:50-17:10	Insights from the Swiss Smart City Survey on cities' priorities and needs Leticia Müller, Bernadette Sütterlin and Vicente Carabias
17:10-17:30	Co-creating a Smart City strategic roadmap for small-sized cities: insights from a Swiss case study Albedo Bettini, Francesca Cellina and Roberta Castri
17:30-17:50	Aggregated Smart City Index for Swiss Cities Philipp Arnold, Anna Kohler and Vicente Carabias

Energy and Environment (Room A1.02) - Session chair: Antonios Papaemmanouil

16:30-16:50	Opportunities for e-mobility and grid services for microgrids in the context of an industrial area in Switzerland Mary Jean Bürer, Geoffrey Orlando, Laure Deschaintre, Massimiliano Capezzali and Stéphane Thuillard
16:50-17:10	Exploration of recycling cementitious aggregates in the building field Christian Paglia
17:10-17:30	Towards climate neutrality through integrated energy planning – a cross country comparison and case study analysis of Positive Energy District concepts between Switzerland and Norway Matthias Haase and Daniela Baer
17:30-17:50	Design development of a full scale AA-CAES plant Jonathan Roncolato, Giw Zanganeh, Philipp Jenny, Martin Scholtysik, Emmanuel Jacquemoud, Andreas Haselbacher and Maurizio C. Barbato

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IoT & Data analysis (Room D1.09) - Session Chair: Daniele Puccinelli

17:10-17:30	A Low-Cost Water Flow Meter on the Edge using Machine Learning Solioz Baptiste and Pierre-André Mudry
17:30-17:50	A System for Real-Time Emotion Recognition in Smart Cities Davide Andreoletti, Felipe Cardoso, Andrea Arzillo, Luca Luceri, Achille Peternier and Silvia Giordano

Friday, 29th October

10:30 **Parallel Sessions**

Energy and Environment (Room A1.02) - Session chair: Susanne Kytzia

10:30-10:50	Smart Food Waste Management – Embedded Machine Learning vs Cloud Based Solutions Raphael Zingg, Matthias Rosenthal, Philipp Andermatt and Amin Mazlounian
10:50-11:10	Development of a lab demonstrator to test ionic liquids as phase change materials for energy storage Caitlin Blum, Roger Marti and Jacques Robadey
11:10-11:30	Flexible Scheduling of Residential Energy Loads, the Optiflex concept Marco Derboni, Matteo Salani and Andrea Emilio Rizzoli

Digital Governance (Aula Polivalente) - Session Chair: Elena Mugellini

11:10-11:30	FixMyStadtmelder: Challenges and Solutions in Civic Services for Smart Cities and Regions Josef Spillner
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IoT & Data analysis (Aula Polivalente) - Session Chair : Elena Mugellini

10:30-10:50	Linked Open Data for Smart Regions and Citizens Lorenzo Sommaruga, Nadia Catenazzi, Riccardo Mazza and Davide Bertacco
10:50-11:10	Learning Algorithms for Building Control Applied to the iHomeLab Lighting System Edgar Pestana and Andrew Paice

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Poster session

The poster session will take place on Thursday 28th October from 15h30 to 16h30. The exhibition will remain installed and be accessible during breaks.

Digital Governance

Title	Authors
Living Lab Concept for Driving Change in Real Estate	Carsten K. Druhmman and Mihaela Meslec
Smart Region Central Switzerland – Smart Region Lab	Tobias Matter, Ulrike Sturm, Philipp Meschenmoser, Halldór Janetzko, Nicole Stuber-Berries and Ivo Willimann
Social networks as a basis of agri+touristic value creation in Alpine regions	Ospelt Tanja and Werner Hediger

Energy & Environment

Title	Authors
Biodiversity-sensitive Geodesign across multiple scales	Chiara Catalano and Andrea Balducci
Green Space vs. Densification: Analysis and Implementation of Integrative Planning Methods for a Sustainable Development of the Built Environment	Bianca Baerlocher, Haris Piplas and Christiane Gebhardt
Participatory renewable energy at neighborhood level	Christopher Young, Alex Willener, Alexa Bodammer, Alina Schmuziger, Ulrike Sturm, Thomas Schluck, Daniel Bolliger and Willy Villasmil
Recycling cementitious aggregates in the building field	Christian Paglia
Towards a Sustainable Agriculture by Using Plant Electrophysiology	Cédric Camps, Lilia Castro Nicolli, Fabien Dutoit, Andrzej Kurenda, Marco Mazza, Elena Najdenovska, Carrol Plumer, Laura E. Raileanu, Silvia Schintke, Daniel Tran and Nigel Wallbridge
Empirical densification approach for settlement development (EVA)	Christine Seidler and Heiko Roelke

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IoT & Data analysis

Title	Authors
A LoRa Network for traffic monitoring in the cities of Fribourg and Bulle	Jacques Robadey and Eddy Mariéthoz
BIM+IoT for office spaces optimisation	Sebastiano Maltese, Domenico Altieri, Giovanni Branca and Dario Marvin
Towards a 3.5D Camera: Multispectral Time-of-Flight Range Imaging Provides Datasets Comprising 3 Spatial and 0.5 Spectral Dimensions	Hannes Merbold, Marc-Alexander Iten and Gion-Pol Catregn

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