2018 ftal conference

FTAL 18 : Industrial Applied Data Science

www.ftal-conference.net

October 18 and 19
Lugano Convention Center

University of Applied Sciences and Arts of Southern Switzerland
SUPSI

n|w University of Applied Sciences and Arts Northwestern Switzerland

Hes·so
Haute Ecole Spécialisée de Suisse occidentale
Fachhochschule Westschweiz
University of Applied Sciences and Arts Western Switzerland

FHO
University of Applied Sciences of Eastern Switzerland

Lucerne University of Applied Sciences and Arts
HOCHSCHULE LUZERN
FH Zentralschweiz

FH
Bern University of Applied Sciences

Zurich University of Applied Sciences
zhaw

Thursday 18 October 2018

13:00 **Opening and Welcome**
Prof. Olivier Naef, FTAL President

13:05 **Introduction**
Prof. Emanuele Carpanzano, Chairman of the Steering Committee

Special Lecture:
Making the Impossible Possible with AI
Alessandro Curioni – Director IBM Research Zurich

14:00 **Parallel sessions**

Finance, eCommerce and Blockchain

- DISCOVER – Deep-Web Knowledge Extraction and Fusion for Improved Decision Making
  Weichselbraun Albert, Kuntschik Philipp; FHO

Industry, production and logistics

- A cloud based IoT approach for food safety and quality prediction
  Ulzega Simone; ZHAW
- Machine Learning for Anomaly Detection in Time-Series Produced by Industrial Processes
  Rychener Lorenz; HES-SO

Life Science and Healthcare

- High-level activity recognition for cognitive support in older adults
  Perez-Uribe Andres; HES-SO
- Early Detection of Food Intoxication in Switzerland using Twitter
  Casas Jacky; HES-SO
- Zero-inflated meta-analysis to model rare side effects of medical interventions
  Wandel Jasmin; BFH

Energy and environment

- Estimating the Signal Strength of LoRaWAN with Regression Kriging
  Böckle Josef, Frick Klaus; FHO
- Machine learning and optimization for the design of photovoltaic installations
  Salani Matteo; SUPSI
- Big Data system for pantropical land-cover change monitoring
  Satizabal Hector-Fabio; HES-SO

15:00 **Coffee break and Poster Session**

16:30 **Introduction of Data Science @FTAL:** Luca Gambardella and UAS

17:50 **Panel: Foundation of a FTAL Research Community in Data Science**

18:30 **Aperitif**

Friday 19 October 2018

9:00 **Introduction**
Prof. Emanuele Carpanzano, Chairman of the Steering Committee

Special Lecture:
Big Data in Health – Hopes and Challenges
Prof. Dr. Christian Lovis – Division of Medical Information Sciences HUG

10:00 **Coffee break**

10:30 **Parallel Sessions**

Industry, production and logistics

- Machine Learning on Accelerometer Data for Detection of Fence Violations
  Giusti Alessandro; SUPSI
- A data-driven monitoring tool to enhance performance of industrial melting processes
  Ghorbel Hatem; HES-SO
- Reinforcement Learning in an Industrial Robotics Application
  Frick Klaus, Lutz Joel; FHO
- Predictive Quality Management with Bayesian Networks
  Corani Giorgio; SUPSI

- Developement of an Inductive Array Sensor for the Detection of Metallic Objects
  Gnos Tobias; FHO
- Endowing humanoid robots with the capability of reading and reacting to human body language
  Perez-Uribe Andres; HES-SO

- BBData, a Big Data platform for Smart Buildings
  Hennebert Jean; HES-SO
- Lessons learned from 16 applied data science (meta) case studies
  Stockinger Kurt, Stadelmann Thilo; ZHAW
- Image-based Measurement of Material Roughness
  Giusti Alessandro; SUPSI
- A Framework for Text Analytics with Visual Exploration and Machine Learning
  Metzler Linus; ZHAW

10:30 **Parallel Sessions**

Life Science and Healthcare

- Detection of Skin Affliction using Fully Convolutional Neural Networks
  Koller Thomas; HSLU
- Deep Learning for Recognizing Sleep Stages from Mobile Sensor Data
  Reimer Ulrich; FHO

- AI-based prediction of virus-bacteria interactions as a contribution to fight against antibiotic resistance
  Leite Diogo; HES-SO
- D-REX: Improving Deep Neural Networks Understanding via Rule Extraction
  Peña Carlos Andres; HES-SO
- Real-Time Detection of Micro-Expressions through New Feature Selection for Helping Doctors to Know Their Patients
  Daher Karl; HES-SO
- A Gamification Approach for Diabetes (T1DM) Management and co-morbidities prevention in Adolescents and Children
  Luceri Luca; SUPSI

Energy and Environment

- Accurate transport mode detection in Smartphone-based mobility tracking for sustainable mobility applications
  Vermes Nicola; SUPSI
- Detailed data collection and usage allow unprecedented understanding of energy supply and demand dynamics in future smart cities
  Capezzali Massimiliano; HES-SO
- Energy demand management by increased user awareness
  Rizzoli Andrea Emilio; SUPSI
- The world's first underground AA-CAES pilot plant: modelling and validation
  Roncolato Jonathan; SUPSI

12:30 **Best Student Paper Award:** Luca Maria Gambardella

12:45 **Networking Lunch**

Organisation:
FTAL - Association of Swiss Universities of Applied Sciences in Engineering, Architecture and Life Sciences
Hosted by SUPSI

Registration:
Via www.ftal-conference.net open for Master students, researchers, and professors from Swiss UAS and industrial partners

Contact: ftal-conference@hes-so.ch