

TUESDAY 24 SEP 2024

Tutorials and Workshops

13:00 – 17:30 (Coffee Break 15:00-15:30)

Room: Adonis

Towards a decentralised Federated Learning based edge-to-edge Continuum Computing framework.

Nabil Abdennadher, University of applied Sciences and Arts, Western Switzerland (HES-SO)

WEDNESDAY 25 SEP 2024

Opening Session

09:00 – 09:15

Room: Adonis

Keynote Speech

09:15 – 10:15

Room: Adonis

Chair: TBA

Valerio Schiavoni

COFFEE BREAK

10:15 – 10:45

Session-1: AI for Cloud

10:45 – 12:15

Room: Adonis

Chair: George Pallis

Domain-Aware Training for Use-Inspired Models (Full Paper)

Zichen Zhang and Christopher Stewart

AI-CRAS: AI-driven Cloud Service Requirement Analysis and Specification (Full Paper)

Alberto Cotumaccio and Emiliano Casalicchio

FogFLeET: Fog-Level Federated Transfer Learning for Adaptive Transport Mode Detection (Full Paper)

Mahdieh Kamalian, Amir Taherkordi, Amir H. Payberah and Paulo Ferreira

LUNCH

12:15 – 13:45

(at Ionian Hotel's Buffet Restaurant)

Keynote Speech

13:45 – 14:45

Room: Adonis

Chair: TBA

Omer Rana

Partitioning Machine Learning Algorithms Across the Edge-Cloud Continuum

COFFEE BREAK

14:45 – 15:15

Session-2: Serverless and Containers

15:15 – 17:00

Room: Adonis

Chair: Damiano Carra

Controller-Based Admission Control For Containers (Full Paper)

Abdullah Muslim and Stephan Recker

GreenWhisk: Energy-Aware Computing for Serverless Platform (Full Paper)

Jayden Serenari, Sreekanth Sreekumar, Kaiwen Zhao, Saurabh Sarkar and Stephen Lee

MISO: A CRDT-based Middleware for Stateful Objects in the Serverless Edge-Cloud Continuum (Full Paper)

Valentin Goronjic and Stefan Nastic

GeoFaaS: An Edge-to-Cloud FaaS Platform (Short Paper)

Mohammadreza Malekabbasi, Tobias Pfandzelter, Trever Schirmer and David Bermbach

WELCOME COCKTAIL (with Poster Session)

18:00 – 19:30

TrapShield: Enhancing Security and Privacy in Serverless Workflows using Honeypots by Robust Adversary Penalization

Surabhi Garg, Maithri Suresh, Meena Singh, Dr. Rajan M A, Pankaj Sahu, Dr. Mangesh Gharote, Manju Ramesh and Sachin Lodha

Towards Anti-Collision Coordination for UAVs with Serverless Edge Computing

Tobias Pfandzelter, David Bermbach, Robert Vilter, Ingo Friese, Sergiy Melnyk, Qiuheng Zhou and Hans D. Schotten

Storage fabric for autonomous collaborative edge devices

Pantelis Ypsilantis, Theodoros Toliopoulos and Anastasios Gounaris

Elastic Workflows in Hybrid Cloud for CAE Simulations

Srishti Dasgupta, Michael Gerndt and Babak Gholami

Automating Application Deployment - A Comprehensive CI/CD Pipeline for Kubernetes

Raju Shrestha and Akash Ray

Data center network monitoring framework

Daniel Sedlak, Michal Polak, Jan Fesl and Pavel Tvrdik

THURSDAY 26 SEP 2024

Keynote Speech

09:00 – 10:00

Room: Adonis

Chair: TBA

Demetris Zeinalipour
Sustainable Computing and the Renewable Self-Consumption Problem

COFFEE BREAK

10:00 – 10:30

Session-3: Industry Track: Session I

10:30 – 12:00

Room: Adonis

Chair: Emiliano Casalicchio

Accessing the Edge: Delay Evaluation to Distributed Edge Services in a City-Level 5G Network (Industry Track Paper – Full)

Matthias Frei, Piotr Karbownik, Reinhard German and Anatoli Djanatljev

Scalable and Cost-Effective Edge-Cloud Deployment for Multi-Object Tracking System (Industry Track Paper – Full)

Ratul Kishore Saha, Dheeraj Chahal, Rekha Singhal and Manoj Nambiar

The Development of A Large-Scale Cloud Emulator (Industry Track Paper)

Zhen Zeng, Chun-Jen Chung and Liguang Xie

LUNCH

12:00 – 13:30

(at Ionian Hotel's Buffet Restaurant)

Session-4: Cloud Performance

13:30 – 15:00

Room: Adonis

Chair: Stefan Schulte

An Online, Probabilistic Distributed Tracing System (Full Paper)

Mert Toslali, Syed Mohammad Qasim, Srinivasan Parthasarathy, Fabio Oliveira, Hai Huang, Stringhini Gianluca, Zaoxing Liu and Ayse Kivilcim Coskun

ElastiBench: Scalable Continuous Benchmarking on Cloud FaaS Platforms (Full Paper)

Trever Schirmer, Tobias Pfandzelter and David Bermbach

Increasing Efficiency and Result Reliability of Continuous Benchmarking for FaaS Applications (Short Paper)

Tim Christian Dockenfuß, Nils Japke, Sebastian Koch, Tobias Pfandzelter and David Bermbach

Can Miss Ratio Curves Predict Cache Performance? (Short Paper)

Lorenzo Marini and Damiano Carra

COFFEE BREAK

15:00 – 15:30

Session-5: Data and Cloud Platform

15:30 – 16:45

Room: Adonis

Chair: Prasad Calyam

Disaggregated RDDs: Extending and Analyzing Apache Spark for Memory Disaggregated Infrastructures (Full Paper)

Achilleas Tzenetopoulos, Michele Gazzetti, Dimosthenis Masouros, Christian Pinto, Sotirios Xydis and Dimitrios Soudris

Toward Stream Processing Elasticity in Realistic Geo-Distributed Environments (Short Paper)

Khaled Arsalane, Guillaume Pierre and Shadi Ibrahim

Towards Digital Sustainability: Involving Cloud Users as Key Players (Short Paper)

Anas Mokhtari, Baptiste Jonglez and Thomas Ledoux

TOUR & CONFERENCE DINNER

17:00 – 23:00

FRIDAY 27 SEP 2024

Session 6: Edge Cloud

09:00 – 10:30

Room: Adonis

Chair: Ivan Demydov

Are Unikernels Ready for Serverless on the Edge? (Full Paper)

Felix Moebius, Tobias Pfandzelter and David Bermbach

GeoFF: Federated Serverless Workflows with Data Pre-Fetching (Short Paper)

Valentin Carl, Trever Schirmer, Tobias Pfandzelter and David Bermbach

VECA: Reliable and Confidential Resource Clustering for Volunteer Edge-Cloud Computing (Short Paper)

Hemanth Sai Yeddulapalli, Mauro Lemus Alarcon, Upasana Roy, Roshan Lal Neupane, Durbek Gafurov, Motahare Mounesan, Saptarsh Debroy and Prasad Calyam

RightFusion: Enabling QoS driven Function Fusion in Edge-Cloud FaaS (Short Paper)

Sheshadri K R and Lakshmi J

COFFEE BREAK

10:30 – 11:00

Session-7: Industry Track: Session II

11:00 – 12:00

Room: Adonis

Chair: David Bermbach

On the Cost of Model-Serving Frameworks: An Experimental Evaluation (Industry Track Paper – Full)

Pasquale De Rosa, David Bromberg, Pascal Felber, Djob Mvondo and Valerio Schiavoni

A Framework for Executing Long Simulation Jobs Cheaply in the Cloud (Industry Track Paper – Full)

Alan Nunes, Daniel Marcondes Bougleux Sodre, Cristina Boeres, Lúcia Drummond, José Viterbo, Vinod Rebello, Luan Teylo, Felipe Portella, Paulo Estrela and Renzo Malini

LUNCH

12:00 – 13:30

(at Ionian Hotel's Buffet Restaurant)

Session-8: Edge AI

13:30 – 15:00

Room: Adonis

Chair: Mahdieh Kamalian

**Towards Low-Cost and Energy-Aware Inference for EdgeAI Services via Model Swapping
(Full Paper)**

Demetris Trihinas, Panagiotis Michael and Moysis Symeonides

**PraxiPaaS: A Decomposable Machine Learning System for Efficient Container Package
Discovery (Full Paper)**

Zongshun Zhang, Rohan Kumar, Jason Li, Lisa Korver, Anthony Byrne, Gianluca Stringhini,
Abraham Matta and Ayse Coskun

**Energy modeling of inference workloads with AI accelerators at the Edge: A
benchmarking study (Short Paper)**

Michalis Kasioulis, Moysis Symeonides, Giorgos Ioannou, George Pallis and Marios
Dikaiakos

Closing

15:00 – 15:15

Room: Adonis