OBUDA UNIVERSITY

BioTech Lab and Institute of Biomatics
John von Neumann Faculty of Informatics

Invitation

The BioTech Lab and the Institute of Biomatics (John von Neumann Faculty of Informatics, Obuda University) cordially invites you to the lecture of:

Dr. Cevat Şener

about

Public Transport Analysis

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Big Data Processing

on 25. April 2022, Monday, 16:10 – 17:00

Venue: Obuda University, lecture room: F.04 (H-1034 Budapest, Bécsi str. 96/b.)

Short bio of Dr. Cevat Şener

Cevat Şener received his Ph.D. degree in Computer Engineering at METU in 2000. He is an instructor and chair of the Computer Engineering Department. His main areas of interest include distributed, parallel, grid, cluster and cloud computing. He was a visiting researcher at Queen Mary and Westfield College in London and at the Hungarian Academy of Sciences in Budapest. He participated in several national as well as FP6, FP7 and Horizon 2020 projects. Dr. Şener played a major role in establishment of the HPC Lab and also the Big Data & Innovation Lab in METU. He is an advisory board member of the Turkish Science e-Infrastructure.

Abstract

Analyzing public transport data would be invaluable in designing urban transport and adapting to current changes. This talk will introduce a scalable public transport analysis platform named Cermoni, which was developed using the Apache Beam programming model. It can analyze smart card and vehicle location data collected in near-real-time. The analysis model was first tested on the Google Cloud Dataflow service using real-world data (around 10M rows per month in size) gathered from Konya, one of the largest metropolitan cities in Turkey. In the second phase, the model was ported onto the TRUBA HPC environment and tested with Apache Beam and Apache Spark. Its successful execution there made the detailed origin-destination analysis of individual commuters possible.

Acknowledgement: The first phase of the study was supported by the Scientific and Technological Research Council of Turkey with grant No 3180143. Its second phase was supported by the EuroCC project funded by the EuroHPC JU under grant agreement No 951732.