Munich, 19 March – 20 March 2024

Room 1713, Technical University of Munich

Deep learning Anticipated Urban Mobility peaks (DARUMA) project Meeting

DARUMA is an EIG CONCERT-Japan joint project composed of EU research team from TU Munich (TUM), Budapest University of Technology and Economics (BME) and Complutense University of Madrid (UCM) and Japan research team from Kyoto U, Nagoya U and Hitachi. The overall objective of this project is to develop a methodology to identify and predict triggers of behavioral change in the context of disruptive events. The study therefore uses data fusion and artificial intelligence to promote resilient and safe societies. Case studies will be conducted in Madrid, Budapest and Kyoto. The first main contribution and outcome of this project is therefore a framework to combine such data to jointly describe mobility patterns. A second outcome is the development of an artificial intelligence platform to learn causal relations within and between these data sets. A third outcome is then a description of how these findings can be used to facilitate a "dashboard" for city planners that show the effectiveness of different policies for mobility peak smoothing. more information can be found on https://concert-japan-daruma.github.io/.

Tuesday, 19 March (Open workshop)

Time	Presenter	Topic
13:30 – 14:10	Prof. Constantinos Antoniou, Prof. Jan-Dirk Schmöcker	Welcome and DARUMA project overview
14:10 – 14:30	Dr. Wenzhe Sun (KU)	Estimating activity participation using crowdsourced data
14:30 – 14:50	Qinglong Lu (TUM)	Transfer learning for transportation demand resilience patterns prediction using floating car data
14:50 – 15:10	Törő Olivér (BME)	Temporal correlation between activities at POIs and traffic volumes using loop detector and Google Popular Times data from Kyoto
15:10 – 15:30		Coffee break
15:30 – 15:50	Prof. Gustavo Romanillos (UCM)	Urban nightlife: Analyzing the impact and recovery of COVID-19 in Madrid and Kyoto, based on mobile phone data and Google places activity trends
15:50 – 16:10	Vineet Chaturvedi (TUM)	Assessment of transformations in vitality, vulnerability and versatility of rural towns (3VRUT project introduction)
16:10 – 17:00	All	Open discussions

Wednesday, 20 March (Internal workshop)

Time	Presenter	Topic
9:30 – 10:00		Welcome coffee
10:00 – 10:30	Prof. Gustavo Romanillos	Madrid update
10:30 – 11:00	Törő Olivér	Budapest update
11:00 – 11:30	Qinglong Lu	Munich update
11:30 – 12:00	Dr. Wenzhe Sun, Aoba Kusayama	Kyoto update
12:00 – 13:00		Lunch break
13:00 – 14:00	Prof. Jan-Dirk Schmöcker	Dissemination, papers
14:00 – 15:00	Prof. Jan-Dirk Schmöcker Prof. Constantinos Antoniou	Next steps, collaborations/proposals
15:00 – 15:30		Coffee break
15:30 – 17:00	Prof. Jan-Dirk Schmöcker	Final report, open discussion