

Special Session/Workshop VI

HARMONY: Disruptive Technologies in Transport in 2021: From the pandemic to the new mobility era



Abstract

The continuous expansion of cities and the evolution of public transport and new mobility services are posing new challenges to transport and spatial planning. HARMONY's vision is to enable metropolitan and regional authorities to lead a sustainable transition to a low-carbon new mobility era. This will be possible thanks to its harmonised spatial and multimodal transport planning tools that model the changing transport sector and spatial organization. HARMONY is a European project funded by the European Commission within the programme Horizon 2020. It is also part of the CIVITAS network of European cities committed to testing and implementing urban transport solutions for a more sustainable mobility. The workshop focuses on presenting the scope and progress of the HARMONY project; the HARMONY Model Suite and the strategic, tactical and operational simulators for spatial and transport planning; the advanced data collection tools, the automated vehicles and drone demonstrations, as well as preliminary findings for policy recommendations regarding spatial and transport planning and new mobility technologies.

Aim of the Special Session/Workshop

The aim of the HARMONY workshop is to present the HARMONY project, its vision, objectives and the main goal of developing an integrated, modular, policy-making support product which engages a series of innovative models and simulators to explore and quantify the impact of new mobility services and new technologies in the transport sector into the transport network and the urban environment as a whole. An additional, parallel aim is to present and discuss the dual challenge of HARMONY project: to explore and model the effect of these novel transport modes and services, which harbors a significant level of uncertainty combined with the additional uncertainty and disruptions brought on by the COVID-19 pandemic. Adaptations in data collection process and focus points will be discussed, as iterative sessions will generate useful insight into how policymakers, stakeholders and citizens perceive the renewed influence of novel transport technologies or other major disruptions, such as the abrupt rise of remote work, and how policymakers and society have a powerful ally into intelligent decision-making tools such as HARMONY MS. The final session of the workshop will focus on engaging participants into an iterative process which will result into useful feedback regarding the technical and non-technical requirements of the HARMONY MS as a transport policy support tool and will further demonstrate the capabilities of the model suite.

Organizers

Workshop organizer: Professor Amalia Polydoropoulou, Department of Shipping, Trade and Transport, Transportation and Decision-making lab, University of the Aegean, Professor Maria Kamargianni, MaaSLab, Bartlett School of Environment, Energy and Resources, University College London, HARMONY co-ordinator

University of the Aegean team: Dr. Ioanna Pagoni, Dr. Ioannis Tsouros, Ioannis Karakikes

University College London team: Christina Georgouli, Dimitrios Pappelis

Moby X: Dr. Athena Tsimpa

Associated project

HARMONY: Spatial and Transport planning for a new mobility era

<https://harmony-h2020.eu/>

For general questions or press demands, please send an email to info@harmony-h2020.eu

Target audience

Public authorities, local communities and citizens, transport industry stakeholders, research community and practitioners, students, policy makers, consultants.

Structure of the workshop

Workshop VI - HARMONY: Disruptive Technologies in Transport in 2021: From the pandemic to the new mobility era (HARMONY)	
11:30-13:30	
Room: Bridges	
Organizer: Professor Amalia Polydoropoulou / Department of Shipping, Trade and Transport, Transportation and Decision-making lab, University of the Aegean, polydor@aegean.gr	
Co-organizers: Professor Maria Kamargianni / MaaSLab, Bartlett School of Environment, Energy and Resources, University College London, HARMONY co-ordinator Dr. Ioanna Pagoni / University of the Aegean team Dr. Ioannis Tsouros / University of the Aegean team Ioannis Karakikes / University of the Aegean team Christina Georgouli / University College London team Dimitrios Pappelis / University College London team Dr. Athena Tsimpa / Moby X	
11:30-11:40	<i>Introduction to the HARMONY project</i>
11:40-11:55	<i>The HARMONY demonstrations: automated vehicles for passengers and freight, and drones</i>
11:55-12:10	<i>The HARMONY Model Suite: An integrated spatial and transport planning tool</i>
12:10-12:20	<i>Strategic Simulator: Land-use developments, long-term household and individual choices and the effect on transport networks</i>

12:20-12:35	<i>Tactical Passenger Simulator: Capturing the effect of novel technologies and services into daily activity and travel behaviour</i>
12:35-12:50	<i>Tactical Freight Simulator: Developing an agent-based model to capture the effect of new transport modes and policies into the freight transport sector</i>
12:50-13:00	<i>Operational Simulator: Designing and developing the supply side and the networks to simulate and integrate demand and supply</i>
13:00-13:10	<i>Advanced data collection techniques within HARMONY</i>
13:10-13:20	<i>KPIs and policy recommendations for regional spatial and transport planning and new mobility technologies</i>
13:20-13:30	<i>Iterative session on HARMONY MS</i>