



Advances in shared mobility: new models, system optimization algorithms, and smart automated solutions

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Shared mobility has emerged as a hybrid system having features of private mode of transport and public transport. It encompasses systems that are considered smart solutions to overcome mobility issues especially for big and populated cities as a step towards sustainability. The associated benefits that are already documented of such system are for example; increase in transport accessibility, decreased personal vehicle ownership, reduction in vehicle miles travel, and emissions. Carsharing, bicycle sharing, ridesharing, ride hailing, carpooling, and micro transit systems are included within shared mobility. Use of smartphones and dedicated mobile applications are key communication tools that facilitated the optimize use of transport modes included within shared mobility. Recently, shared mobility has gained a high momentum, and there are big players like Uber and Lyft continuously evolving to advance their products and solutions to maximize their shares. It is expected that shared mobility market will grow many folds, and by year 2026, the global market size will reach to USD 240 billion. With the evolution of digital technologies, such as communication networks, internet of things, artificial intelligence, and availability of big data, new developments in the shared mobility

systems are inevitable. Therefore, policies and legislation relating to shared mobility operations are of increasing relevance to the transport sector.

The purpose of this special issue is to discuss the recent advances in the Shared mobility and bring together engineers, researchers and practitioners interested in the advances and applications in the field of new mobility-based operational models, optimization algorithms, communication technology, intelligent transport system, big data, and IoT. From over 31 papers submitted to this special issue, finally, 10 high-quality articles were selected, resulting in an acceptance rate of 32.2%. Each paper was peer reviewed by two or more independent experts during the assessment process. The selected articles have exceptional diversity in terms of review articles, agent-based simulation studies, incorporation of traffic behavior in heterogenous environment (prevailing in developing countries), scheduling problems, and vehicle communication in connected environment. They represent the most recent development in both theory and practice within shared mobility.

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