

BIG DATA ANALYSIS OF SHARED E-SCOOTERS PATTERNS: CONTRIBUTION TO MOBILITY AND THE PARKING CHALLENGES

Speaker

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Abstract

The rising popularity of dockless shared e-scooters is creating opportunities for better mobility, accompanied by safety and impact concerns. To control the phenomena, municipalities test-trial operations and experiment with different policy tools, using information systems to collect data of vehicles location and state. This presents an opportunity to examine city wide impacts, if analyzed over time and space. Using the successful Tel Aviv case study, spatio-temporal analysis of data since 2020 was conducted, addressing patterns of emergence, assessing mobility contribution in relation to other transportation modes, and exploring the parking management challenges. Our main findings are that short trials may fail to capture the mode potential; depending on city particulars, e-scooters can improve mobility by complementing public-transportation shortfalls at multiple time scales; corrals are critical for proper parking management, but their design and operation can and should be improved.

Biography

Hillel Bar-Gera is a full professor at the department of Industrial Engineering and Management at Ben-Gurion University of the Negev, as well as a visiting faculty at the department of Data Science and Artificial Intelligence at the Indian Institute of Technology at Madras. His degrees are from the Hebrew University (BSc, MSc) and the University of Illinois at Chicago (PhD). His research on traffic safety and transportation systems combines quantitative methods, large scale dataset analysis, simulator studies, and field experiments. He is a member of the editorial board of Transportation Research Part B, Networks and Spatial Economics, and the International Journal of Transportation Science & Technology. Professor Bar-Gera also served as the chief scientist of the Israeli National Road Safety Authority from 2022 to 2025.



**10 December 2025
Wednesday**



10:30am - 11:30am



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