1. Title

Megacity Mobility toward Integrated Urban Transportation Development and Management

2. Abstract

World population growth and economic prosperity have given rise to ever-increasing demands on cities, people travel, and goods movement. This growth, coupled with a much slower pace of transportation capacity expansion and deteriorated facility restoration, has led to rapid changes in the transportation planning and policy environment. These stresses are particularly acute for megacities where the degradation of mobility and system mobility performance has reached alarming rates. Addressing these transportation challenges requires innovative solutions. Megacity Mobility grapples with these challenges by addressing transportation policy, planning, and facilities in a multimodal context. It discusses innovative short- and long-term solutions for meeting the current and future mobility needs for the world's most dynamic cities by addressing the influence of urban land use on mobility, 3D spiderweb multimodal transportation planning, travel demand management, multimodal transportation with flexible capacity, efficient capacity utilization driven by new technologies, innovative transportation funding and financing, performance-based budget allocation using asset management principles. It discusses emerging issues, highlights potential challenges affecting proposed solutions, and provides a road map for achieving sustainable mobility in the 21st century for policymakers, planners, and transportation professionals.

3. Bio of the Speaker

ZONGZHI LI is a professor at the Illinois Institute of Technology (IIT), Chicago, USA. He received BE (1992) from Chang'an University, Xi'an, China; MSCE (2000), MSIE (2002), and Ph.D. (2003) all from Purdue University, West Lafayette, Indiana, USA with MSCE and Ph.D. under supervision of Dr. Kumares C. Sinha, a member of U.S. National Academy of Engineering and MSIE under supervision of Dr. Thomas L. Morin, a renowned scholar in discrete optimization and multicriteria decision-making. He currently coordinates IIT Transportation Engineering Program and Infrastructure Engineering and Management Program; and serves as the Director of Sustainable Transportation and Infrastructure Research (STAIR) Center and Transportation Engineering Laboratory at IIT. He was appointed as a senior research fellow of the Reason Foundation; a member of multiple U.S. National Academies' Transportation Research Board (TRB) Committees; a member of editorial board of American Society of Civil Engineers (ASCE) Journal of Infrastructure Systems, an associate editor of Elsevier Journal of Traffic and Transportation Engineering, and a handling editor of TRB Journal of Transportation Research Record. Dr. Li's areas of expertise are in multimodal transportation infrastructure, dynamic traffic network, and user behavior/freight movement performance modeling, dynamic transportation asset management, and transportation network economics. He has served as the Principal Investigator (PI) for a vast amount of research studies at IIT totaling 4.3 million US dollars funded by U.S. Federal and state agencies and the private sector; supervised nearly 80 M.S. and Ph.D. students; published 4 books (the 3rd book on Transportation Asset Management: Methodology and Applications is the world's first graduate-level textbook in the related field), 3 book chapters, and nearly 80 referred papers; developed 2 software packages; and invented/holds 7 U.S. patents. He has received numerous awards, including ASCE Arthur M. Wellington Prize (2011), IIT Sigma Xi Award for Excellence (2011), Charley V. Wootan Award given by the U.S. Council of University Transportation Centers (2000), and International Road Federation Fellowship Award (1998).