ABSTRACT: This research examines the relationship between urban polycentric spatial structure and driving. We have identified 46 employment sub-centers in the Los Angeles Combined Statistical Area and calculated access to jobs within and beyond these sub-centers. To address potential endogeneity problems, we use access to historically important places and transportation infrastructure in the early 20th century as instrumental variables for job accessibility indices. Our Two-stage Tobit models show that access to jobs is negatively associated with household vehicle miles traveled in this region. Among various accessibility measures, access to jobs outside sub-centers has the largest elasticity (-0.155). We examine the location of places in the top quintile of access to non-centered jobs and find that those locations are often inner ring suburban development, near the core of the urban areas and not far from sub-centers, suggesting that strategies of infill development that fill in the gaps between sub-centers, rather than focusing on already accessible downtowns and large sub-centers, may be the best land use approach to reduce VMT.

SPEAKER BIO: Marlon Boarnet is Professor of Public Policy and Chair of the Department of Urban Planning and Spatial Analysis in the Sol Price School of Public Policy at the University of Southern California. His research focuses on land use and transportation, links between land use and travel behavior and associated implications for public health and greenhouse gas emissions, urban growth patterns, and the economic impacts of transportation infrastructure. He has ranked among the top twenty-five most cited U.S. planning scholars for the past three years. He is a fellow of the Weimer School of the Homer Hoyt Institute for Real Estate, and he is a fellow of the Regional Science Association International. He is vice-president and president-elect of the Association of Collegiate Schools of Planning. Boarnet has advised California state agencies on greenhouse gas emission reduction in the transport sector, the World Bank on transportation access as a poverty reduction tool, and numerous public and private entities. He has been principal investigator on over two million dollars of funded research, supported by agencies that include the U.S. and California Departments of Transportation, the U.S. Environmental Protection Agency, the California Policy Research Center, the California Air Resources Board, and the Robert Wood Johnson Foundation. Boarnet’s academic web page is at: http://priceschool.usc.edu/marlon-boarnet/.