

A Message from the Guest Editor of the Special Transit Issue of JTRF

Last year, public transportation in the United States had the highest ridership in the past 50 years (APTA). This year, ridership has increased even more. It's likely that the additional rides are at least partially due to higher fuel prices. As a result, we're seeing greater public interest in, and increased media coverage of, transit-related issues. Consequently, the timing of this special issue of JTRF devoted to public transportation may be serendipitous.

This special issue varies from the more academically oriented issue of JTRF because fewer articles than usual are lined with equations (but they do exist in this issue!). Because some of the articles are a little less technical in nature, this issue may appeal to transit industry practitioners. In fact, there are articles for nearly every transit-minded individual. There are articles on fuel pricing, emissions, software, optimal bus route design issues, transit stations, transit satisfaction in European countries, and leadership.

This special issue is also unique because it is sponsored by the American Public Transportation Association (APTA). I appreciate the assistance of APTA staff and members in reviewing the articles. Likewise, I acknowledge and thank all the reviewers who took the time to review the articles submitted for publication. Also, thank you to Sue Hendrickson, Bev Trittin and Tom Jirik for their assistance in producing this issue.

In the first article, Jeremy Mattson examines the recent trends in transit ridership and gas prices and develops an econometric model to estimate the relationship between these two variables in the article "The Effects of Gasoline Prices on Bus Ridership for Different Types of Transit Systems." The study results provide insight for transit agencies trying to survive rising fuel costs.

In "Equity Impacts of Transit Fare Proposals: A Case Study of AC Transit," the authors, Cornelius Nuworsoo, Elizabeth Deakin, and Aaron Golub, explore five possible fare policy changes using on-board survey data. This study points out the importance of considering network topography and transfer policies and their interaction with social and economic groups when considering fare changes.

Transit systems, particularly those in rural and small urban locations, often ponder the use of transit routing software. In this study, "An Evaluation of RouteMatch Software in the Billings, MT, Special Transit System," David Kack and Deepu Philip compare the use of RouteMatch Software on the MET Special Transit service. The study compares before-and-after quantitative and qualitative data for the RouteMatch Software and the Mobility Master Software. The study does not seek to "sell" a particular software package, but rather points out impacts of the software.

"Some Computational Insights on the Optimal Bus Transit Route Network Design Problem" by Wei (David) Fan, Randy B. Machemehl, and Nicholas E. Lownes may appeal more to the academic given the computational focus of this paper and the development of the multi-objective nonlinear mixed integer model. The article builds on previous research experiences and the results do show that zonal demand aggregation is necessary and combining metaheuristic algorithms to solve the problem is very promising.

Transit stations are an important interface for passengers and the transit system. In "Developing Transit Station Design Criteria with a Focus on Intermodal Connectivity," Geophrey Mbatia, Thobias Sando, and Ren Moses present a procedure to use to develop station design criteria as well as guidelines when incorporating intermodal connectivity. The process could serve as a resource to planners, engineers, and other transportation officials.

An international perspective is given in this journal with the article “Perceived Satisfaction with Public Transport Service in Nine European Cities” by Markus Felleson and Margareta Friman. The authors used data collected from 9,542 respondents in Stockholm, Barcelona, Copenhagen, Geneva, Helsinki, Vienna, Berlin, Manchester, and Oslo regarding attribute-related statements of local public transport services. The authors found and discussed differences in how public transportation is perceived in these countries.

Emissions are an important topic in public transportation and this special issue of JTRF contains two articles that address this issue. The first article, “Regulated and Non-Regulated Emissions and Fuel Economy from Conventional Diesel, Hybrid-Electric Diesel, and Natural Gas Transit Buses,” by W. Scott Wayne, Nigel N. Clark, ABM S. Khan, Mridul Gautam, Gregory J. Thompson, and Donald W. Lyons, takes a provocative look at fuel economy and emissions. In the second article, “Emissions Reduction in Transit Buses: Westchester County’s Proactive Approach,” Jairo A. Sandoval, W. Scott Wayne, Francisco Posada, John Schiavone, Edward Pigman, Michael Bluestone, Robert Rudd, Henry J. Stanton, Ray Perira, and Jerry D’Amore quantify the emissions-reducing results from actions taken by WCDOT.

“Comparative Measures for Transit Network Performance Analysis” by Young-Jae Lee introduces two measures: Degree of Competitiveness and the Degree of Circuitry to provide more direct comparison between auto and transit travel time.

In the study, “Hedonic Value of Transit Accessibility: An Empirical Analysis in a Small Urban Area,” Xinyu Cao and Jill Hough use data from about 400 apartment dwellers to develop a hedonic price model to determine implicit price of proximity to bus routes. The authors found a negative impact of bus transit on apartment rent but speculated that in a small urban area, this negative relationship could be mainly attributable to spurious relationships from other causal factors.

The transportation industry as a whole has identified the need for the next generation of transit and transportation leaders to be training and or educated to meet shortfalls. Sandy Vinci wrote an industry issue paper, “Leadership from Within: TriMet Develops Its Next Generation of Leaders through the Operations Leadership Development Program,” that provides a look into what the Tri-County Metropolitan Transportation District of Oregon (TriMet) is doing to train its next generation of leaders.

I hope you find this special issue intriguing and that it leaves you desiring to engage even more with other transit professionals: both researchers and practitioners. As well, I hope you consider writing and submitting public transportation articles to the JTRF in the future.

Jill Hough

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