The Northwestern University Transportation Center presents:

Sergio Jara-Diaz
Professor of Transport Economics
Department of Civil Engineering
Universidad de Chile

Optimal transit route structures for varying proportions of trips towards CBD and periphery

Monday – April 7, 2014
12:30-2:00 pm
Brown Bag Event – Feel free to bring your lunch

Location:
Technological Institute
Room M128
2145 Sheridan Road
Evanston, IL 60208

Abstract (from work with Antonio Gschwender and Claudia Bravo):

We analyze the best ways to provide public transport services in a simplified urban setting represented by an extended cross-shaped network, where short trips (periphery-center) and long trips (periphery-periphery) coexist. Three families of lines structures are compared: mostly direct, feeder-trunk and hub and spoke. For each structure fleet and vehicle sizes are optimized, considering both users’ and operators’ costs. The best structure is found parametrically in total passenger volume, the proportion of long trips and the value of the transfer penalty. The advantages of each dominating structure are explained in terms of factors like idle capacity, waiting or in-vehicle times and number of transfers.

About the speaker

Sergio Jara-Diaz is Professor of Transport Economics at Universidad de Chile. He holds a Ph.D. and M.Sc. from M.I.T., where he has taught during various terms. He is the author of Transport Economic Theory (Elsevier, 2007) and of more than 80 articles in journals and books. His research areas include users’ behavior and value of time, time use, multi-output cost functions, public transport and optimal pricing. He resides in Ñuñoa, Santiago with his wife and has recently become double grandfather. He has run a weekly radio show since 1991.