Operational planning of public transport in urban and regional networks

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Abstract

Cities and urban areas need good public transport networks for sustainable economic growth. We present examples from suburban rail in India and other modes in India and elsewhere to highlight the issues in operational planning of public transport services. They include the line planning problem, the timetabling problem, the vehicle scheduling or rolling stock problem and crew planning. Specific examples from Mumbai suburban rail will be discussed, together with mathematical programming models for the core issue of service planning. The concept of periodic event scheduling will also be presented in this context.

The talk presents work done by the IEOR and Electrical Engineering departments at IIT Bombay over the last 2 years.

Speaker Profile:

Narayan Rangaraj is a Professor and currently the Head of the Industrial Engineering and Operations Research Group at IIT Bombay. He has been with IIT Bombay since 1990 and works in the areas of optimization, applied operations research, public transport, logistics and supply chain management.

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