**Using Automated Data Sources to improve the performance of Public Transport Systems: a framework and applications**

Presented by [Professor Nigel Wilson](https://cee.mit.edu/people_individual/nigel-h-m-wilson/), Massachusetts Institute of Technology (MIT).

**Date:** Thursday 15th February 2018

**Time:** 11.00-12.00

**Location:** rm G0.4 [Institute for Transport Studies](http://www.its.leeds.ac.uk/map/), University of Leeds

To confirm a place please email [Zoe Clough](mailto:Z.Clough@leeds.ac.uk?subject=ITS%20Research%20Seminar%20-%20Prof%20Nigel%20Wilson%20-%2015th%20Feb%202018)

**Abstract**

Automatic data sources including automatic vehicle location systems, automatic passenger counting systems and electronic fare payment and ticketing systems are becoming ubiquitous in large public transport systems and are starting to have an impact on the quality and availability of information for both off-line and real-time functions needed for service provision. The off-line functions include service and operations planning, and performance monitoring and measurement, while the critical real-time functions include operations management and control, and customer information. While the impacts of these advances are already apparent in many systems, there is the potential for much deeper impact in the future. The power and cost-effectiveness of information technology continues to advance and will offer opportunities to develop and apply more ambitious models which should positively affect many facets of the performance of public transport systems. This talk will present a framework for assessing the various roles that automated data sources can play in public transport systems and will summarize recent applications of the resulting methods based on research at MIT for Transport for L

ondon and other transit agencies. The potential for further enhancement of critical public transport agency functions in the future making even greater use of these data sources will be discussed.

**Bio**

Nigel Wilson is a Professor Emeritus of Civil and Environmental Engineering at the Massachusetts Institute of Technology. His research and teaching focuses on urban public transport, including topics related to the operation, analysis, planning and management of transit systems. Professor Wilson has directed major long-term collaborative research programmes with urban public transport agencies including Transport for London, MTR (Hong Kong), Chicago Transit Authority and the Massachusetts Bay Transportation Authority and remains actively engaged in all these programmes. On sabbatical leaves from MIT, he has worked in public transport agencies in London, Boston and Minnesota, and has been a visiting professor at UCL, Napier, TU-Delft, the University of Minnesota and Stanford. He has written more than 100 articles and reports on the results of his research. Professor Wilson received the bachelor’s degree in civil engineering from Imperial College, London and the master’s and doctoral degrees in civil engineering and transportation systems respectively, from the Massachusetts Institute of Technology.

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