

Editorial

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Welcome to the December 2013 issue of *Transport*.

This issue provides six papers covering a diverse yet related range of topics – railways, public transport, parking and highways. As further transport challenges and opportunities emerge as the global economy heals, it is important that engineers focus attention on providing value, amenity and safety for all who use the global transportation network. In short, a sustainable form of transport development with engineers at the forefront.

The first paper, by Rogers *et al.* (2013), reviews Irish parking standards, arguing that the parking standards should encourage the idea of sustainable travel with less parking required where public transport is readily available and more parking required in areas where alternatives to the private car are fewer. The study suggests that many Irish authorities do not have coherent parking strategies in line with the argument presented.

Calvo *et al.* (2013) study current rail costs and charging systems across Europe. The study finds that many different problems can arise when applying maintenance and renewal costs to railway undertakings. The study concludes that using the parameters that best reflect the cause-and-effect relationship between wear and tear and the cost incurred is not enough to adjust charging systems to account for costs and so a system based on a differentiated approach to maintenance cost and renewal cost depreciation is proposed as a tool for track-cost processing.

Continuing the theme of asset management, Abd-allah (2013) assesses the need for the application of an automatic vehicle location system within the Cairo bus fleet. The paper proposes a staged approach based on the discriminant analysis classification method. The economic and social benefits estimated suggest a payback for the implementation of the system on defined routes within only a few years.

Burton (2013) describes the design and construction challenges faced when widening a section of one of England's busiest motorways. The need to balance all three pillars of sustainable development (economic, environmental and social) are apparent within a tight project programme.

Cho (2013) moves the issue onto shock wave theory by examining Lighthill and Whitham's original model (Lighthill and Whitham, 1955). The paper presents a new model deploying stringent speed–space relationships between two consecutive vehicles in traffic. In the new model, the shock wave in a

homogeneous speed traffic stream is identical to the ambient vehicle speed, thus overcoming the criticisms regarding the radio-wave-like shock wave within the original model.

The final paper, by Kyriakidis *et al.* (2013), discusses safety analysis and best practice for metro railways. The paper analyses the precursors, top events, injuries and deaths, and their relationships both to each other and to incidents and accidents for a set of 17 major global metro railways. The precursors analysed fall into six categories: human performance; technical failures; passenger actions; fires; malicious action; and management action. Statistical analysis indicates a positive correlation between injuries and top events as well as between injuries and precursors. Using these results, the paper proposes a number of measures to improve metro railway safety in each precursor category based on the experience of best practice observed among the metros.

As demonstrated by the papers in this issue, the transport community and, indeed, the readership of this journal are diverse and the editorial advisory panel is acutely aware of this. Throughout the year, the panel uses its best endeavours to provide a journal that is both interesting and of relevance. In this regard you may be interested to know that the most recent papers are available ahead of print at the ICE Virtual Library homepage giving you access to the latest content (<http://www.icevirtuallibrary.com/content/serial/tran>).

I hope you enjoy the issue and find the papers informative. Finally, I would like to take this opportunity to wish you and your family a very peaceful holiday with best wishes for the New Year.

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