Editorial

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The Paris Agreement of 2016 is currently facing scepticism and reluctance from major signing nations, and pondering on that, I would like to begin with an afterword to our previous issue. Dr Mujib Rahman (2017) reminded us that transportation is a major contributor of both air pollution and greenhouse gas, and yet, it provides an essential network interconnecting people, providing access to healthcare, education, work and supply, as well as transferring raw materials and goods from extraction and production sites to consumers. We must become greener if we want to sustain the development of our societies without degrading our well-being, endangering public health and likely more in the long-term. With the non-partisan, pragmatic approach of the engineer considering the cost of opportunity, I would summarise the matter in a single question: do we want to pay the high price tomorrow for something we can mitigate at a lower net cost today?

Hunting for greener transportation, energy harvesting is a way of reducing the footprint of infrastructures (Duarte and Ferreira, 2015; Franzius and Pralle, 2011). This process consists of capturing, converting and distributing small energy variations. Rail tracks are made for sustaining the load of trains. Part of these efforts could be harvested and converted, instead of being dissipated. Duarte and Ferreira (2017) studied the state of the art in this recent domain. They have categorised the different technologies and compared them in terms of power generation, implementation and readiness.

A greener society inevitably relies on the goodwill and commitment of its members. Technology is important, but the state of mind of those who use it is even more critical. Akena *et al.* (2017) evaluated the influence of driving style on fuel economy using the analytical hierarchy process (see also Felstead *et al.* (2009)). Their results show that fuel consumption is most influenced by driver awareness, before technical factors and the driver themselves.

'Safety first' is the motto of our industry. Mansourkhaki *et al.* (2017) enhance roadway accident prediction with a model based on the spatial and temporal features of accidents and incidents. Gaussian mixture models (GMM) were used for estimating the density functions of accident distributions.

Zhao *et al.* (2017) conducted research efforts on low-temperature creep properties of fibre-asphalt mixtures (see also Aksoy and Iskender (2008)). They analysed the effect of adding mineral fibres at low temperatures (−10°C to 20°C) on the bending creep of roadway asphalt mixtures. The group observed the creep rate of asphalt mixtures increased as the toughness was improved.

Bhattacharjee (2017) presents a methodology for incorporating uncertainties in flexible pavement design with the mechanistic empirical pavement design of the American Association of State Highway and Transportation Officials. The design method is reliability-based, against fatigue cracking. Fatigue cracking is modelled as a function of input design variables using the response surface method. Bhattacharjee applies his methodology to hot-mix asphalt.

Country tracks eventually become busy streets, and so there comes a time for paving gravel roads (Otto, 2017). However, bearing strength measurements can greatly vary at the same site because of the heterogeneity of the material, introducing uncertainty or even biasing pavement design. Otto and Tumwesige (2017) developed a step-by-step and practice-ready methodology for assessing the bearing strength with a higher confidence and then designed the pavement structure. The authors propose combining tests using a light falling weight deflectometer and a dynamic cone penetrometer.

Transport and its authors are eager to receive the valuable comments of their readers. You can provide discussion on the papers or send comments to journals@ice.org.uk. Authors are also welcome to submit papers online; full details can be found at www.icevirtuallibrary.com/page/authors.

On behalf of the Institution of Civil Engineers and the editorial panel of *Transport*, I would like to thank the authors for sharing their results with the transportation community, and our reviewers for contributing to ensure the quality and integrity of this peer-reviewed publication.

I wish you a pleasant summer, and enjoyable reading.

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