

Editorial 刊首语



This issue marks our entry into our second year of publication. It has been a great pleasure as editors, and encouraging for future progress of the journal, to have received such a positive response from our readers. This is especially so given the feedback from both non-English readers and engineers other than civil engineers throughout China.

We have focused our initial efforts on sourcing and publishing papers oriented to commonly encountered problems in the civil engineering profession. Papers published to date have covered topics including sustainable development, alternative energy sources, transportation, urban development and civil engineering management: issues relevant both to China and elsewhere in the world. In this issue you will find the following papers, all of which have a sustainability theme.

'Making tomorrow a better place', by past ICE President Quentin Leiper, comprises some important extracts on sustainability from his inaugural address. The paper describes how we use our knowledge and skills to influence positively the sustainability agenda and deliver increasingly sustainable engineering solutions.

'Engineering skills shortages in China — a personal view' by Geoffrey Mills reviews how the UK civil engineering industry has adapted itself to meet some of the major challenges faced in the past half century. The author emphasises the importance of continuing education in this process and highlights some important differences between western and Chinese engineering education. The next generation of engineers must learn from both countries' experiences in engineering education and training to be able to respond to the challenges of our legacy.

'GPS measurements on the London Millennium bridge' by Roberts *et al.* demonstrates how global positioning satellite (GPS) technology has been used in bridge displacement monitoring on this well-known structure. Emphasis is focused on digital signal processing techniques and the paper explains why the degree of measurement precision was influenced by disharmonious distribution of satellites. The paper highlights the disparate range of skills and access to technology required by modern engineers.

'A risk-based decision-support system for bridge management' by Flaig *et al.* presents a novel framework for an advanced bridge management system including a wide range of issues in bridge management decisions making. It provides an innovative, rational and risk-based decision-support tool.

'Safety and cost-effectiveness of clear zones in Iran' by Ayati *et al.* studies safety and cost problems on the site of a highway in rock cut. The paper aims to quantify the societal cost of rock-faced accidents and thus to allow a more rational cost/benefit analysis of this engineering solution.

We would continue to encourage our readers to both comment on the papers that we are publishing and to send us your own contributions for consideration for future issues. We would welcome the opportunity to include in future issues a debate on past papers.

We hope that you will find the current selection of papers as interesting as we have in reviewing them and we look forward to your feedback.

我们的期刊已经进入了第二个年头。我们去年的期刊能够得到读者们的首肯，并得到读者对期刊今后进展的鼓励，尤其是得到中国的非英语读者以及非土木工程领域的工程师们的反馈，这对我们编者来说是极大的欣慰。

我们曾集中刊登那些土木工程师们所共同面临的问题；迄今所登载的文章包括可持续发展、替代能源、交通、城市发展以及土木工程管理等适合于中国或世界任何地区的问题。在本期中您将找到下列诸多与可持续发展命题相关的文章：

“让明天的地球变得更美好”是我们由ICE的前主席昆廷·莱普尔在就职演讲中抽出的重要的“可持续性”部分。文中阐述了如何用我们的知识和技能去正面地影响可持续性的进程，并给出更多的可持续发展的工程解决方案。

米杰夫的文章“个人视点：中国急需技术技能”回顾了半个世纪英国土木工程界如何实行调整重组以面对严峻的挑战。作者强调继续教育在上述过程中的重要性，并简述了西方和中国工程教育的若干重要不同。下一代的工程师应学习两者工程教育的长处，并以此培养造就有能力对挑战做出反应的新一代人才，而这些挑战则是我们这代人传承下去的。

格欣·罗勃特等人的文章“伦敦千禧桥的全球定位系统测量实验”讲述了如何用GPS技术进行桥梁变形测量和监控。重点介绍数字信号处理的问题，并解释为何测量精度受卫星布置不协调影响的原因。文章简述了对现代工程师运用高精技术要求。

K.D.弗莱格等人所撰写的“基于风险的桥梁管理决策支持系统”介绍了一种先进的桥梁管理系统的新框架，它提供各类桥梁管理内容的决策支持，并为桥梁管理者提供创新的、合理的、基于风险的桥梁决策支持工具。

E.阿亚里等人的文章“伊朗公路清除区的安全性和成本效率”研究在岩石开挖地区的公路的安全和成本问题。本文旨在将岩石立面交通事故的社会成本进行量化，以便对此工程解决方法进行更合理的成本/收益分析。

我们将继续期待读者们能对本期刊过去所登载的文章提出意见，并将您的文章寄给我们，以便考虑在今后发表。我们同时欢迎大家能对过去所发表的文章进行讨论。

我们希望本期期刊所刊登的文章能如我们挑选时那样能够引起您的兴趣，我们也同时期望您的意见反馈。