



# EDITORIAL

## Introduction

Chimay J. Anumba

In this issue of IT-AEC, contributions from regular submissions to the journal are included. As with previous issues, the papers address a variety of topics that will be of interest to both industrial practitioners and researchers. Moodi's paper is concerned with an innovative approach to the integration of knowledge management and information technology in the repair of concrete structures. The approach proposed is based on total quality management concepts, and resulted in an automated system, DEMAREC, which has a knowledge-based component. It is argued that the system will facilitate knowledge sharing between specialists and non-specialists in the repair of concrete structures.

The paper by Kumaraswamy et al. discusses ICT-enhanced management support systems for optimising infrastructure procurement. They propose a Web-based Decision Support System that is intended to enable the formulation of more effective and efficient construction project procurement and delivery systems. Drawing on the authors' experience in Hong Kong, the system addresses a number of infrastructure programme management decision scenarios including multi-purpose contractor registration-prequalification, dynamic performance appraisal of contractors, and evaluating 'extension of time' entitlements.

Obonyo et al. make the case for an agent-based system for the specification and procurement of construction products. A prototype system, APRON, is presented and its key features outlined. It is argued that the system, which includes a number of intelligent agents operating within a Web Services framework, will reduce the excessive amount of time spent by specifiers and procurers of construction products in acquiring information and gaining knowledge about various products.

Improving the conceptual design of tubular space bridges is the focus of the paper by Tizani et al. The key problem being addressed is the complexity and fragmentation involved in the design and construction of concrete bridge decks made with tubular space structures, which often result in high fabrication costs. The approach proposed is based on an 'IT-enabled' design process that integrates the different facets of the design process while also enabling the practical fabrication considerations to be taken into account.

Becerik, in this issue's last paper, discusses the past, present and future of Web-based project management and collaboration tools in the US architecture, engineering

and construction (AEC) industry. Using the findings from literature reviews and interviews, this review paper discusses the reasons for the slow adoption of these collaboration tools, explores the adoption and technology development patterns and forecasts future trends in this field.

The papers are all interesting and present useful insights into the use of IT in the AEC sector.