

# Preface

We are at the start of a revolution in materials science that will more profoundly change our lives, our culture, indeed, our world than did the Industrial Revolution a century ago. Sustainable Construction Materials and Computer Engineering have hitherto been utilized predominately in the industry but for the last three decades there has been a growing awareness amongst civil/structural engineers of the importance of the unique mechanical and in-service properties of these materials together with their customized fabrication technologies. These extraordinary properties have enabled the design engineers to have greater confidence in the materials' potential and consequently to use them in the renewal of civil infrastructure ranging from the strengthening of reinforced concrete, steel, and cast iron, and the seismic retrofitting of bridges and columns to the use in replacement bridge decks and in the new bridge and building structures. Their lightness, corrosion resistance, potentially high overall durability, tailorability and high specific attributes enable them to be used in areas where the conventional construction materials might be restricted.

2013 2nd International Conference on Sustainable Construction Materials and Computer Engineering (ICSCMCE 2013) which will be held on June 1-2, 2013, Singapore is a wonderfully rich treatment of Construction Materials and Computer Engineering that will be a great value to students at any level. Education should enable and empower. This text does both, providing the student, professor, researchers, engineers and etc. with the insights and tools needed to address the tremendous challenges and opportunities in the field.

The proceeding is intended for practising civil/structural engineers who need to acquaint themselves with the principles, the recent structural design techniques and the latest research result and application. About 60 papers were selected and peer reviewed to be published. The editor divided all the papers into four chapters: chapter 1-Building Materials and Civil Engineering, chapter 2-Computer Engineering and Information Technology, chapter 3-Material Technology and Engineering, chapter 4- Mechanical Engineering and Image Processing.

The Organizers of the Conference and the Editors of the Proceedings wish to express their sincere gratitude to the Participants, the Advisors, the Co-sponsors, the Symposium Organizer., and to TTP for the success of the Conference.

With our warmest regards,

Wensong Hu

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