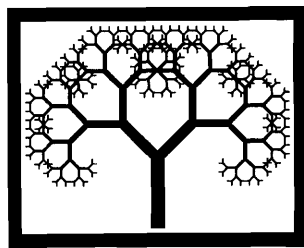


**INFORMATION REPRESENTATION
AND DELIVERY IN
CIVIL AND STRUCTURAL
ENGINEERING
DESIGN**

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*Edited by
B. Kumar and A. Retik*



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❖PREFACE❖

This volume contains some of the papers presented at the *International Conference on Information Technology in Civil & Structural Engineering Design - Taking Stock and Future Directions* held between August 14 and 16, 1996 at the University of Strathclyde, Glasgow, Scotland. This conference was part of the bi-centennial celebrations of the University of Strathclyde. We live in an information age and the use of Information Technology in Civil and Structural Engineering is expanding so rapidly that the community needs to investigate its implications much more seriously. The pace of developments in Information Technology is simply breathtaking and one of the ways one could keep up with it is by sharing the experiences of others. This conference provided one such forum for sharing experiences in both practice of and research in Information Technology for Civil and Structural Engineering Design.

All the papers presented at this conference are contained in three volumes. Other papers presented at this conference are published in:

- Information Processing in Civil and Structural Engineering Design,
B. Kumar, (Editor)
Civil-Comp Press, 1996, ISBN 0-948749-39-3
- Information Technology in Civil and Structural Engineering Design,
B. Kumar, I.A. MacLeod and A. Retik (Editors),
Inverleith Spottiswoode, 1996, ISBN 1-900957-00-0

The papers published in *Information Technology in Civil and Structural Engineering Design* are short contributions to the conference. Papers in this volume and *Information Processing in Civil & Structural Engineering Design* are long contributions and were reviewed by at least two reviewers. Over one hundred and three papers were submitted for publication in these two volumes and some forty-nine of them were finally selected for publication after the peer review process. In addition, these two volumes also include the keynote and four other invited contributions as well as Professor Steven Fenves special lecture at the conference. These volumes represent contributions from over thirty countries on various topics. The topics covered in this volume are:

- Concurrent Engineering and Collaborative Design
- Design Management
- Strategic Issues
- Integrated Design
- Information Systems
- Design Practice
- Product Modelling

We believe that the three volumes present a state-of-the-art report on Information Technology applications in Civil and Structural Engineering Design and should be a useful reference material for many researchers, students as well as practitioners in this area.

We should like to thank all the authors who submitted papers to the conference. We should also like to thank all the reviewers who took time out of their busy schedules to review papers for the conference. Special thanks go to Professor Barry Topping of Heriot-Watt University who provided the main inspiration and support for the conference.

Bimal Kumar and Arkady Retik
University of Strathclyde
Glasgow
August 1996

