PREFACE

CACSD 2000 brought together at Salford a range of international delegates to present their recent research results and to review some of the recent developments in the filed. Topics covered included the now traditional domains of algorithm architectures and tools and there was a very welcome emphasis on applications where no less than four sessions were devoted to this important aspect. Increasingly control systems design is being embedded in the wider context of systems design to provide a holistic and efficient approach to the design of products and processes and this theme is echoed in the inaugural address by Professor Pearce.

Modelling has emerged as a central issue here and industrial users require the development of modelling languages for both analyses and design and generic models and tools which can be used for system identification, optimisation and fault diagnostics. Linear lumped parameter systems of general complexity are currently well addressed by a range of commercially available packages but there is a dearth of tools suitable for the analysis and synthesis of large scale, distributed, non-linear, hybrid and stochastic systems which are increasingly a feature in modern manufacturing and process engineering.

As the scale of the problems to be addressed increases there is a need for numerically robust and efficient computational procedures linked to powerful interactive graphical interfaces which maximise the user of limited human resources and of course, standardised data bases which can be used with wide range of analysis and design procedures. There have been significant advances in the CACSD field over the last decade or so but as in computing itself the horizon of our aspirations continually moves forward and significant technical challenges remain to be addressed by a new generation of young researchers.