PREFACE

This special issue is a collection of some of the invited papers presented at the Second Japan–US Symposium on Finite Element Methods in Large-scale Computational Fluid Dynamics that was held on 14–16 March 1994 at the Surugadai Memorial Hall of Chuo University in Tokyo, Japan. A large number of the other invited papers will be published in a special issue of the *International Journal of Computational Fluid Dynamics*. This symposium was sponsored by the Chuo University Institute of Science and Engineering, and was organized by Mutsuto Kawahara, Chuo University, Tayfun Tezduyar, University of Minnesota, and Thomas Hughes, Stanford University. The three-day symposium attracted more than 140 participants, with 19 invited speakers and panel members from the US, including US Army and Army HPC Research Center speakers, and 31 from Japan. Among the topics covered at the Symposium were: novel techniques and advanced algorithms in finite element computation of compressible and incompressible flows with applications in high Reynolds number flows; flows with moving boundaries and interfaces; fluid–structure interactions; high-pressure, nearly incompressible flows with moving mechanical components; impact dynamics; free-surface flows; shallow water modelling; optimal control; and materials processing and manufacturing. Many of the applications presented involved three-dimensional computations. Also covered were mesh generation, adaptive methods, iterative solution strategies, and parallel computing.

I thank the authors for their effort in preparing contributions and for meeting the deadline. I also thank those who I asked for their help in reviewing these papers.

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