

CONTENTS

Homily to R.H. Gallagher	by O.C. Zienkiewicz	ix
Acknowledgment		xi
List of Contributors		xiii
Contents		xv
Preface	by H. Kardestuncer	xvii
CHAPTER 1	Interactive Color Graphical Postprocessing as a Unifying Influence in Numerical Analysis Research <i>J.F. Abel, A.R. Ingraffea, W. McGuire and D.P. Greenberg (Cornell University)</i>	1
CHAPTER 2	Implementing FEA and CAD on Personal Computers and Workstations <i>J.E. Akin (Rice University)</i>	19
CHAPTER 3	The ADINA System in Engineering Practice <i>K.-J. Bathe (MIT) and G. Larsson (ADINA-Sweden)</i>	41
CHAPTER 4	Unification of Electromagnetic and Thermal Analyses to Determine Losses and Temperature Distribution in a Slot-Embedded Conductor <i>M.V.K. Chari, G. Bedrosian, J. Roeth and A. Konrad (General Electric Co.)</i>	61
CHAPTER 5	The Finite Element Machine: An Assessment of the Impact of Parallel Computing on Future Finite Element Computations <i>R.E. Fulton (George Washington University)</i>	83
CHAPTER 6	Computation and Its Role in the Unification of Design <i>R.H. Gallagher (Worcester Polytechnic Institute)</i>	99
CHAPTER 7	Some Issues Associated with the Validation of Finite Element Analysis <i>H.D. Hibbitt and G.R. Bhashyam (Hibbitt, Karlsson & Sorensen, Inc.)</i>	119
CHAPTER 8	CAD/CAM, Robotics and Automated Manufacturing and the Connection to FEM <i>N. Perrone (CASA-GIFTS)</i>	125
CHAPTER 9	Toward Automated Finite Element Modeling for the Unification of Engineering Design and Analysis <i>M.S. Shephard and M.A. Yerry (Rensselaer Polytechnic Institute)</i>	143
CHAPTER 10	Interactive Finite Element Modeling at Ford Motor Company <i>D.V. Snedecor, Jr. (Ford Motor Company)</i>	161
CHAPTER 11	Implementation of a Finite Element Software System with h and p Extension Capabilities <i>B.A. Szabo (Washington University)</i>	177
CHAPTER 12	CADS – A Computer Aided Design System for Unification of Finite Element Programs <i>V.B. Venkayya, V.A. Tischler and E.M. Copenhaver (Wright-Patterson Air Force Base)</i>	195
CHAPTER 13	EISI-EAL: A General Engineering Analysis and Design Language <i>W.D. Whetstone (Engineering Information Systems, Inc.)</i>	219
SUBJECT INDEX		237