PREFACE

The Twelfth Solid Freeform Fabrication (SFF) Symposium, held at The University of Texas in Austin on August 6-8, 2001, was attended by over 130 national and international researchers. Papers addressed SFF issues in computer software, machine design, materials synthesis and processing, and integrated manufacturing. The diverse domestic and foreign attendees included industrial users, SFF machine manufacturers, university researchers and representatives from the government. The Symposium organizers look forward to its being a continuing forum for technical exchange among the expanding body of researchers involved in SFF.

A special plenary session on the state of SFF was organized to present overview talks on various aspects of the field. Invited speakers were Joseph Beaman (University of Texas) who gave a historical perspective, Emanuel Sachs (MIT) who related SFF to manufacturing, Phill Dickens (DeMontfort University) who gave a presentation on the role of SFF in design, Kevin Lyons (NIST) who spoke on software developments and Fritz Prinz (Stanford) who discussed the future of SFF.

The Symposium was again organized in a manner to allow the multi-disciplinary nature of the SFF research to be presented coherently, with various sessions emphasizing modeling, process development, and materials. We believe that documenting the changing state of SFF art as represented by these Proceedings will serve both those presently involved in this fruitful technical area as well as new researchers and users entering the field.

The papers are stored individually on the CD in pdf format by primary author last name, and Adobe® Acrobat® Reader™ installers for the Macintosh (OS 9.x) and PC (Windows 2000) are included which may be used to view and search the pdf files. The Table of Contents file has links to all the papers. We have sequentially numbered the pages of the papers to facilitate citation. Some versions of Reader™ do not have search capabilities which are necessary to keyword search the SFF Symposium Proceedings. If you have problems with searching, you might consider installing the version of Reader™ from the CD. The Adobe website (http://www.adobe.com/) also has versions of Acrobat Reader which may be downloaded free of charge.

The editors would like to extend a warm “Thank You” to Rosalie Foster for her detailed handling of the logistics of the meeting and the Proceedings, as well as her excellent performance as registrar and problem solver during the meeting. We would like to thank the Organizing Committee, the session chairs, the attendees for their enthusiastic contributions, and the speakers both for their significant contribution to the meeting and for the relatively prompt delivery of the manuscripts comprising this volume. We look forward to the continued close cooperation of the SFF community in organizing the Symposium. We also want to thank the Office of Naval Research (N00014-01-1-0637) and the National Science Foundation (DMI-0117072) for supporting this meeting financially. The meeting was co-organized by the University of Connecticut at Storrs, and the Mechanical Engineering Department, Laboratory for Freeform Fabrication and the Texas Materials Institute at The University of Texas at Austin.

The editors.