

PREFACE

The Nineteenth Annual International Solid Freeform Fabrication (SFF) Symposium, held at The University of Texas in Austin on August 4-6, 2008, was attended by almost 120 national and international researchers from 13 countries. 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.

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 process development, design tools, modeling and control, process parameter optimization, applications 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 special theme for this year's conference was education. A special session on this topic was held Monday morning at the meeting and included talks spanning from associates programs to undergraduate and graduate education to the public at large.

This year's best oral presentation was given by Kamran Mumtaz of Loughborough University. Selection is based on the overall quality of the paper, the presentation and discussion at the meeting, the significance of the work and the manuscript submitted to the proceedings. The paper title was, "Selective Laser Melting of Inconel 625 using Pulse Shaping" by K.A. Mumtaz and N. Hopkinson. Selected from 66 oral presentations, his presentation appears on Page 165 of this Proceedings. The best poster presentation selected from 20 posters was given by Kaushik Alayavalli of The University of Texas at Austin (co-author David Bourell). The paper title was, "Fabrication of Electrically Conductive, Fluid impermeable Direct Methanol Fuel Cell (DMFC) Graphite Bipolar Plates by Indirect Selective Laser Sintering (SLS)", and the paper starts on Page 186.

The proceedings papers are stored individually on the CD in pdf format by primary author last name, and Adobe® Acrobat® Reader™ installers for the Macintosh (OS 10.x) and PC (Windows XP) 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 also has other versions of Acrobat Reader which may be downloaded free of charge (<http://www.adobe.com/>).

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 are grateful to John Hall and his staff at the Cockrell School of Engineering Print Services for the final production of the Proceedings. 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 (N00014-08-1-0666) and the National Science Foundation (CMMI-0820114) for supporting this meeting financially. The meeting was co-organized by the University of Connecticut at Storrs, and the Mechanical Engineering Department, Advanced Manufacturing Center, and Laboratory for Freeform Fabrication at The University of Texas at Austin.

The editors.