PREFACE

The Thirty-fourth Annual International Solid Freeform Fabrication (SFF) Symposium – An Additive Manufacturing Conference, was held from August 14-16, 2023. There were 589 registrants from 9 countries. The total number of scheduled oral and poster presentations was 513. The meeting consisted of a Monday morning plenary, 56 parallel technical sessions and a poster session. The plenary session included an excellent mixture of presentations from Industry, US National Laboratories, and Universities. The Plenary Session also included presentations from the recipients of the 2023 International Outstanding Young Researcher in Freeform and Additive Manufacturing Award **Dr. Niocholas Meisel**, from Penn State University and **Anthony Rollett** from Carnegie Mellon University who won the International Freeform and Additive Manufacturing Excellence (FAME) Award.

Two special events took place. First was a panel discussion on AM Research – Reflections, Best Practices and Future Directions Lunch Panel. This Panel was organized by Dr. Guhaprasanna from Penn State. The panel consisted of experienced AM researchers from federal agencies, industry, laboratories, and academia. The Panel consisted of Dr. Khershed Cooper from the National Science Foundation, Dr. Andelle Kuszal from the Office of Naval Research, Dr. David Leigh, former CTO from 3D Systems, Dr. Amy Elliot from Oak Ridge National Laboratory, and Dr. Denis Cornier from Rochester Institute of Technology. The discussion focused on (1) a short overview of the panel members AM journey, (2) best practices in AM research for early-career AM researchers, (3) future directions in AM research for senior researchers. Second was a small networking forum on Blacks in Additive Manufacturing organized by Dr. Chukwuzubelu Ufodike from Texas A&M University. The forum offered insightful discussions, networking opportunities, and the chance to explore career advancements and research collaborations. This event provided a valuable platform for diverse professionals, faculty, and students in Additive Manufacturing (AM). Methods to encourage under-represented students and faculty to attend the conference were discussed.

There are over XX papers in this conference proceedings. Papers marked "REVIEWED" in the title area were peer reviewed by two external reviewers. The Table of Contents file and Author-Attendee file have links to all the papers. We have sequentially numbered the pages of the papers to facilitate citation. Manuscripts for this and all preceding SFF Symposia are available for free download at the conference website: https://www.sffsymposium.org/; select the "Proceedings Archive" pull-down menu item.

Joe Beaman took over as the Chair of the Organizing Committee The next SFF Symposium is August 12-14, 2024 at the Hilton Austin Hotel in Austin, Texas USA. The conference website will become active in mid-January 2023.

The editors.