



Manufacturing Engineering Division

NEWSLETTER Spring 2024

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Message from the 22/23 and 23/24 MED Executive Committee Chairs

Submitted by **Barbara Linke - MED Executive Committee Chair 2023/24** and **Frank Pfefferkorn, Committee Chair 2022/23**

Dear Manufacturing Engineering Division members,

On behalf of the MED Executive Committee, we are happy to present an update on the state of the division and share this newsletter collaboratively written by many volunteers. It has been our honor and privilege to work with such an amazing group of dedicated volunteers. MED remains strong and well positioned for the future. MED has over 9600 members including over 3200 with Manufacturing as a primary field and over 900 students. As this newsletter attests, our community remains active on many fronts, and there remains growing interest in collaborating with MED in other ASME activities and other professional societies. It is an exciting time to be involved in manufacturing research with the increasing recognition of the importance of our work in many facets of life. None of our activities would be possible without the dedicated involvement of members and volunteers like you that continue to advance the science and practice of manufacturing.



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EDITORS – Barbara Linke, University of California, Davis; ZJ Pei, Texas A&M; Frank Pfefferkorn, University of Wisconsin - Madison

The MED Executive Committee looks forward to serving the members of our community. As the 2023/24 Chair, Barbara Linke of the University of California, Davis is joined this year by Jarred Heigel of Ata-e (Vice-Chair), Professor Miki Banu of the University of Michigan (Program Chair), Jaydeep Karandikar of Oak Ridge National Laboratory (Communications), and Professor Johnson Samuel from Rensselaer Polytechnic Institute (Secretary). We are also joined by nine Technical Committees (TCs) that actively contribute to MED's efforts:

- *Additive Manufacturing*: Professor Chi Zhou of University of Buffalo (Chair) and Professor Tsz Ho Kwok of Concordia University (Vice-Chair)
- *Advanced Materials*: Professor Saeed Farahani of Clemson University (Chair) and Professor Weihong "Grace" Guo of Rutgers University (Vice-Chair)
- *Bio manufacturing*: Professor Yihao Zheng of Worcester Polytechnic Institute (Chair) and Professor Yifei Jin of University of Nevada, Reno (Vice-Chair)
- *Life Cycle Engineering*: Professor Daniel Cooper of University of Michigan (Chair) and Professor Julius Schoop of University of Kentucky (Vice-Chair)
- *Manufacturing Equipment and Automation*: Dr. Chandra Nath of Majker Corporation (Chair) and Professor Chabum Lee of Texas A&M University (Vice-Chair)
- *Manufacturing Processes*: Professor Jingjing Li of Penn State University (Chair) and Dr. Thomas Feldhausen of Oak Ridge National Laboratory (Vice-Chair)
- *Manufacturing Systems*: Professor Xiaoning Jin of Northeastern University (Chair) and Professor Chenhui Shao of University of Michigan (Vice-Chair)
- *Nano/Micro/Meso Manufacturing*: Professor Ping Guo of Northwestern University (Chair) and Professor Sourabh Saha of Georgia Institute of Technology (Vice-Chair)
- *Quality and Reliability*: Professor Emma Yang of University of Texas at Arlington (Chair) and Professor Peng "Edward" Wang (University of Kentucky (Vice-Chair)

You can find updates on matters of interest to our community at:

<https://www.asme.org/get-involved/groups-sections-and-technical-divisions/technical-divisions/technical-divisions-community-pages/manufacturing-engineering-division>

We are also very fortunate to continue to be able to rely on the support provided by the highly dedicated ASME staff, especially Ms. Barbara Zlatnik, Ms. Lori Lee, and Mr. Andrew Koleba. Again, our entire team is here to support you, so please do not hesitate to get in touch if you have any questions or suggestions. And of course, we always welcome your enthusiastic participation, so I highly encourage everyone to volunteer however you can. There are many ways to get involved at the division and society level and grow both personally as well as professionally. Every little bit counts!

Our primary annual event, the 2023 Manufacturing Science and Engineering Conference (MSEC 2023), was held from June 12-16, 2023, held at Rutgers University-New Brunswick, New Jersey, USA. The meeting was extremely well organized and provided an amazing environment and opportunity to engage as a community and share technical ideas and discussions. None of it would have been possible without the tireless efforts of Professor Yuebin Guo, Professor Grace Guo, Professor Fernando Muzzio, Professor Paul Takhistov, and their organizing team at Rutgers University. We would also like to extend the recognition to Professor Binil Starly of Arizona State University and Professor Chinedum Okwudire of the University of Michigan, Ann Arbor as the Technical Program Chair and Vice-Chair, respectively. The technical program was well executed and provided an excellent mix of cutting-edge ideas and research over 28 technical symposia and a posters & doctoral symposium.

We look forward to continuing the efforts established by our colleagues at MSEC 2023 that will be hosted by the University of Tennessee on June 17 - 24, 2024. Planning is well underway by Professor Tony Schmitz and the team at the University of Tennessee and by our Technical Program Chair, Professor Chinedum Okwudire of the University of Michigan, Ann Arbor, and Vice-Chair, Professor Guha Manogharan of Pennsylvania State University. We look forward to an exemplary technical program for conference participants with over 21 symposia across 9 technical tracks. For the first time, brief papers will be introduced. There will also be additional opportunities for interaction and networking, including the Early Career Forum, the Women in Advanced Manufacturing Forum, the Blacks In Advanced-Additive Manufacturing Forum, the Student Manufacturing Design Competition, the NSF Manufacturing Blue Sky Competition, and the now well-established Doctoral Symposium.

In addition to MSEC, MED has two technical journals that disseminate top-notch manufacturing research: the ASME Journal of Manufacturing Science and Engineering (JMSE) and the ASME Journal of Micro- and Nano-

Manufacturing (JMNM). Many thanks to the Editors-in-Chief of these journals, Professor Albert Shih of the University of Michigan (JMSE) and Professor Stefan Dimov of the University of Birmingham (JMNM), and all the Associate Editors for their tireless efforts and continued and sustained commitment and hard work to ensure the publication of excellent research results and findings.

It is also important as a professional society that we recognize and honor the hard work and achievements of our distinguished colleagues. We are continually inspired by our awardees. MED administers several awards, including the Blackall Machine Tool and Gage Award, the William T. Ennor Manufacturing Technology Award, the Chao and Trigger Young Manufacturing Researcher Award, the Milton C. Shaw Manufacturing Medal, the M. Eugene Merchant Manufacturing Medal of ASME/SME, the Kornel F. Ehmann Manufacturing Medal, and the DeVor-Kapoor Manufacturing Medal. Please consider nominating deserving colleagues for these awards. More information can be found at the MED awards website: <https://www.asme.org/get-involved/groups-sections-and-technical-divisions/technical-divisions/technical-divisions-community-pages/manufacturing-engineering-division>

We continue to seek new ways to grow our community and the impact of our MED's work. One newly invigorated way of communication is our MED LinkedIn page: <https://www.linkedin.com/groups/8221210/> Please become a member!

Please do not ever hesitate to reach out if you have any ideas or suggestions - they are always welcome! And stay tuned for more about MED activities in the future. We hope to continue building on the efforts of our colleagues and ask that you join us in this endeavor. Thank you for being a part of MED, and we and the EC look forward to working with you!

Barbara Linke, MED Chair (2023-2024)

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Frank Pfefferkorn, past MED Chair (2022-2023)

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Past Events

ASME International Manufacturing Science and Engineering Conference (MSEC)

2022 MSEC Technical Program Report

Submitted by Yong Chen and Binil Starly - Program Chairs

The 17th ASME International Manufacturing Science and Engineering Conference (MSEC 2022), sponsored by the Manufacturing Engineering Division (MED) of ASME, was held jointly with the 50th North American Manufacturing Research Conference (NAMRC 50), sponsored by the North American manufacturing Research Institute of SME (NAMRI/SME), from June 27 – July 1, 2022, in West Lafayette, Indiana. As preeminent professional societies in manufacturing engineering and mechanical engineering, SME and ASME act as effective bridges between industrial companies, government laboratories, and academic institutions. This joint conference symbolizes the continued collaboration of these esteemed organizations in research exchange and knowledge dissemination in advanced manufacturing and related fields. This year's conference was hosted by the College of Engineering, Purdue University.

NAMRC 50 / MSEC 2022 brought together 610 participants from 19 countries, with 80% from U.S.A., 12% from Asia, and 5% from Europe. Approximately 87% of the total registered conference attendees came from academic institutions, 7% from industry, and 6% from government. The Civil, Mechanical and Manufacturing Innovation (CMMI) Division of the National Science Foundation (NSF) supported the participation of 76 students studying in U.S. institutions with a grant that helped defray the cost of attending the conference. Among them, 36 are underrepresented students (including 28 female, 9 Hispanic or African American, 3 with disability), and 7 are students presenting at the ASME/SME Student manufacturing design competition.

MSEC 2022 reviewers evaluated 263 draft papers and 35 poster submissions. After rigorous peer review, 229 technical papers (87% acceptance rate) and 27 posters were accepted for publication. MSEC 2022 had 36 symposia in 9 Technical Tracks: Additive Manufacturing, Advanced Materials Manufacturing, Biomanufacturing, Life Cycle Engineering, Manufacturing Equipment and Automation, Manufacturing Processes, Manufacturing

Systems, Nano/Micro/Meso Manufacturing, and Quality& Reliability. In all, there were 80 technical sessions, with each paper given a 30-minute presentation including questions & answers. There were three invited symposium keynote speakers (one was canceled at the last minute) and 2 MED 100 state-of-the-art paper presentations. Technical papers had global representation with authors from the U.S. (56%), India (13%), China (11%), Korea (4%), Japan (3%), Canada (3%), Germany (2%), and a number of other countries from Asia, Europe, and South America.

MSEC symposium organizers nominated 15 papers for the Best Paper Award. Author names and identifiers were removed from these papers. Papers were then reviewed and ranked by organizers from each nominating symposium, track chairs/co-chairs, and previous conference chairs. The Technical Program Chair compiled the results and confirmed the top choices with the MED Executive Committee (EC), which provided the final ranking for awards. The final awards were as follows:

1st place: Tengting Tang, Bhushan Ahire, and Xiangjia Li (Arizona State University) for their paper “Scalable Multi-material Additive Manufacturing of Bioinspired Polymeric Material with Metallic Structures via Electrically Assisted Stereolithography” (MSEC2022-85845)

2nd place: Vinh Nguyen and Jeremy Marvel (NIST) for their paper “Evaluation of Data-driven Models in Human-robot Load-sharing” (MSEC2022-83907)

3rd place: Hemant Agiwal, Hwasung Yeom, Kumar Sridharan, and Frank E. Pfefferkorn (University of Wisconsin-Madison) and Christian Baumann, Stephan Krall, and Friedrich Bleicher (TU Wien) for their paper “Towards Multilayered Coatings of 340L Stainless Steels Using Friction Surfacing” (MSEC2022-78115)

MSEC symposium organizers nominated 56 candidate papers to be fast-tracked to the ASME Journal of Manufacturing Science and Engineering (JMSE). All the candidate papers together with their reviews were sent to the JMSE editor, Dr. Albert Shih (University of Michigan – Ann Arbor). The JMSE editor invited 21 papers, including two state-of-the-art review papers, to be reviewed by the journal. Five papers were rejected during the review. The sixteen papers that received positive journal reviews were removed from the MSEC proceedings and will be published in a special issue of JMSE.

The Technical Program Chair selected the recipient of the Best Organizer of a Symposium and Session (BOSS) Award

in consultation with the MED Executive Committee. The recipients of this award were Sourabh Saha (Georgia Institute of Technology), Nilabh Roy (Canon Nanotechnologies), Bruno Azeredo (Arizona State University) for the Symposium on Advances in Micro- and Nano-scale Additive Manufacturing.

The conference included four student-centric events: the NSF Early Career Forum (organized by Dr. Karl Haapala of the Oregon State University), the Student Manufacturing Design Competition (organized by Dr. Barbara Linke of the University of California Davis), and Poster Sessions and the 2nd Doctoral Symposium (organized by the Technical Program Chair and Co-chair). The Doctoral Symposium attracted 21 presentations, each given 13 minutes presentation including questions & answers. Panels of judges consisting of 16 professors selected the following Best Posters and Best Doctoral Symposium Presentations:

- Best Poster Awards (\$50 each)
 - Aditya Nagaraj, Suk Bum Kwon, Dae Nyoung Kim, Dalei Xi, Yiyang Du, Woo Kyun Kim, Sangkee Min, University of Wisconsin-Madison
 - Anika Vandeen, Roland Chen, Washington State University
 - Hossein Abedi, Keyvan Safaei, Mohammad Reza Nematollahi, Ala'aldin Alafghani, Parisa Bayatimalayeri, Mohammad Elahinia, Ala Qattawi, University of Toledo
 - Felicia Stan, Fetecau Catalin, Adriana-Madalina Turcanu, Ionut-Laurentiu Sandu, Dunarea de Jos University of Galati
 - Dongyang Yi, Justin Cormier, Brian Ung, Harrison Zhu, Lei Chen, University of Massachusetts Lowell
 - Xinxiao Li, Jiaqi Yang, Patrick Chernjavsky, Yihao Zheng, Worcester Polytechnic Institute
- Best Doctoral Symposium Awardees (\$100 each)
 - Shohanuzzaman Shohan, North Carolina State University
 - Heejin Kim, University of Michigan-Ann Arbor
 - Deepika Gupta, Indian Institute of Science

The conferences featured the fifth annual NSF Manufacturing Blue Sky Competition, funded by the National Science Foundation (NSF). This competition aims to influence the future of manufacturing research and education in the United States through new, visionary ideas of the future. A selection committee of 10 manufacturing experts from industry and government organizations was responsible for choosing finalists from submitted abstracts to make presentations on June 29, 2022. From these, they selected the recipients of the

2022 SME David Dornfeld Manufacturing Vision Award: Michael Sealy from Purdue University for his presentation, "Feeding the Future through Convergent Manufacturing." The award is named in honor of the late Professor David Dornfeld to recognize his outstanding vision and leadership within the manufacturing community.

This year's conference also welcomed the 3rd Women in Advanced Manufacturing (WIAM) Forum, which aims to address the diversity gap in manufacturing and foster career growth. Funding for the event was provided by MED and the ASME Technology and Engineering Communities (TEC) Sector, and it was co-sponsored by SME. The organizing committee included Dr. Nancy Diaz-Elseyed (Lead Organizer, University of South Florida), Dr. Maya Reslan (NIST), Dr. Megan McGovern (General Motors Global R&D Center), Ala Qattawi (University of Toledo), and Annie Dian-Ru Li (Zap Surgical Systems). The program invited the following panelists: Dr. Qing Chang (University of Virginia), Dr. Gloria Wiens (University of Florida), Dr. Dianna Wegner (General Motors Global R&D Center), and Dr. KC Morris (NIST). The moderator of the WIAM 2022 Workshop was Dr. Terra Winston (InTerract Consulting).

The conference program was the result of the outstanding efforts of many people. We would like to thank all the authors for their technical paper and poster submissions. We also express our gratitude to all the organizers for their dedicated management of the tracks and symposia, as well as for guarding the quality of the papers and posters to be presented, which has contributed a great deal to the success of the conference technical program. We would also like to thank the host Organizing Committee, the Conference Coordinating Committee, the NAMRI/SME Scientific Committee, and the ASME MED Executive and Technical Committees. Our thanks also go to the ASME staff for their outstanding contributions in presenting conference information on the Internet, managing the submitted technical papers and posters, and ensuring the high-quality publication of the conference proceedings for MSEC 2022.

2023 MSEC Technical Program Report

Submitted by Binil Starly and Chinedum Okwudire - Program Chairs

The 18th ASME International Manufacturing Science and Engineering Conference (MSEC 2023), sponsored by the Manufacturing Engineering Division (MED) of ASME, was held jointly with the 51st North American Manufacturing Research Conference (NAMRC 51), sponsored by the

North American manufacturing Research Institute of SME (NAMRI/SME) and the JSME International Conference on Leading Edge Manufacturing/Materials & Processing (LEM&P 2023), sponsored by the Japan Society of Mechanical Engineers (JSME), from June 12-16, 2023. As preeminent professional societies in manufacturing engineering and mechanical engineering, the societies act as effective bridges between industrial companies, government laboratories, and academic institutions. This joint conference symbolizes the continued collaboration of these esteemed organizations in research exchange and knowledge dissemination in advanced manufacturing and related fields. The conference was held in the beautiful New Brunswick campus of Rutgers University.

NAMRC 51 / MSEC 2023 / LEM&P 2023 brought together 720 participants from 24 countries. The Civil, Mechanical and Manufacturing Innovation (CMMI) Division of the National Science Foundation (NSF) supported the participation of 341 students studying in U.S. institutions with a grant that helped defray their cost of attending the conference. Approximately 90% of the total registered conference attendees came from academic institutions, 4% from industry, and 5% from government.

MSEC 2023 received 175 paper submissions. After rigorous peer review, 165 technical papers were accepted for publication. The technical papers had global representation, with authors from the US, India, China, Romania, South Korea, Japan, Germany, Canada and several other countries from Asia, Europe, and South America. For the first time, we had 5 authors who had recently published in JMSE present their paper at MSEC 2023. Among the accepted technical papers, MSEC symposium organizers nominated 23 candidate papers to be fast-tracked to the ASME Journal of Manufacturing Science and Engineering (JMSE). All the candidate papers, together with their reviews, were sent to the JMSE Editor-in-Chief for a new round of journal paper review. The JMSE Editor-in-Chief invited 21 papers, to be further reviewed by the journal. A total of 11 top MSEC papers received positive journal reviews and were compiled and published in the JMSE Special Issue for MSEC 2023.

MSEC symposium organizers nominated 20 papers for the Best Paper Award. Author names and identifiers were removed from these papers. Papers were then reviewed and ranked by organizers from each nominating symposium, track chairs/co-chairs, and previous conference chairs. The Technical Program Chair compiled the results and confirmed the top choices with

the MED Executive Committee (EC), which provided the final ranking for awards. The final awards were as follows:

- *Joint First Place*: MSEC2023-104962, "Contactless 3D Printing of Artificial Cells in Air for Biomedical Applications", Tengeng Tang, Dylan Joralmon, Tochukwu Anyigbo, Xiangjia 'Cindy' Li.
- *Joint First Place*: MSEC2023-101281, "Normalizing Flows for Intelligent Manufacturing", Matthew Russell and Peng Wang.
- *Second Place*: MSEC2023-104650, "Investigation on the Printability of Recycled Thermoplastic Polyurethane/Carbon Nanotube Nanocomposites", Felicia Stan, Ionut-Laurentiu Sandu, Catalin Fetecau.

The Technical Program Chair selected the recipient of the Best Organizer of a Symposium and Session (BOSS) Award in consultation with the MED Executive Committee. The recipients of this award were Nehika Mathur (National Institute of Standards & Technology), Nancy Diaz-Elsayed (University of South Florida, Tampa), Buddhika Hapuwatte (University of Maryland) for the Symposium on Advances in Sustainable Manufacturing for a Circular Economy.

The conference included four student-centric events: the NSF Early Career Forum (organized by Dr. Yong Chen of the University of Southern California), the Student Manufacturing Design Competition (organized by Dr. Miki Banu of University of Michigan), and Poster Sessions and the 2nd Doctoral Symposium (organized by the Technical Program Chair and Co-chair). We had a strong showing at the MSEC Poster Sessions with 46 posters presented by students at all degree levels. The Doctoral Symposium attracted 6 presentations, each given 15-20 minutes presentation including questions & answers. Panels of judges consisting of 10 professors selected the following Best Posters awards:

- Best Poster Awards:
 - Poster # 113974, "Directed Energy Deposition of SS 316L/SiC Composites Using Coincident and Coaxial Wire-Powder Feeding", Corresponding Author: Fuda Ning, SUNY, Binghamton
 - Poster # 113985, "Transfer Learning for Predictive Quality in Laser-Induced Plasma Micro-Machining", Corresponding Author: Mengfei Chen, Rutgers University
 - Poster # 113563, "Heat Treatment for SLM Printed Nitinol Shape Memory Alloy for Biomedical Applications", Corresponding Author: Haseung Chung, Michigan State University

The conferences featured the Sixth annual NSF Manufacturing Blue Sky Competition, funded by National Science Foundation (NSF). This competition aims to influence the future of manufacturing research and education in the United States through new, visionary ideas of the future. A selection committee of 10 manufacturing experts from industry and government organizations was responsible for choosing 6 finalists from submitted abstracts to make presentations on June 13, 2023. From these, they selected the recipients of the 2023 SME David Dornfeld Manufacturing Vision Award: Radu Pavel (Tech Solv Inc.), Steven R. Schmid, UNC-Charlotte, Gregory Harris (Auburn University) for their presentation, "The Intelligent Machine Tool" The award is named in honor of the late Professor David Dornfeld to recognize his outstanding vision and leadership within the manufacturing community.

This year's conference also welcomed the Annual Women in Advanced Manufacturing (WIAM), which aims to address the diversity gap in manufacturing and foster career growth. Funding for the event was provided by MED and the ASME Technology and Engineering Communities (TEC) Sector, and it was co-sponsored by SME. Two WIAM sessions were organized. The first one was themed: Future Leaders in Additive Manufacturing". The program invited the following panelists: Dr. Nanci H. (MELD Manufacturing), Dr. Addy Olubamiji (D-Tech Centrix, Inc.) as external members of the panel on Future leaders in Additive Manufacturing. The 2nd session was on Professional Development workshops. The organizing committee included Dr. Nancy Diaz-Elsayed (Lead Organizer, University of South Florida), Maya Reslan (NIST), Dr. Megan McGovern (General Motors Global R&D Center), Ala Qattawi (University of Toledo), Sarah Wolff (Ohio State University), and Annie Dian-Ru Li (Zap Surgical Systems). The panel was moderated by Prof. Kimberly Cook-Chenault.

The conference program was the result of the outstanding efforts of many people. We would like to thank all the authors for their technical paper and poster submissions. We also express our gratitude to all the organizers for their dedicated management of the tracks and symposia, as well as for guarding the quality of the papers and posters to be presented, which has contributed a great deal to the success of the conference technical program. We would also like to thank the host Organizing Committee, the Conference Coordinating Committee, the NAMRI/SME Scientific Committee, and the ASME MED Executive and Technical Committees. Our thanks also go to the ASME staff for their outstanding contributions in presenting conference information on

the Internet, managing the submitted technical papers and posters, and ensuring the high-quality publication of the conference proceedings for MSEC 2023.

ASME/SME Student Manufacturing Design Competition

2022 report, submitted by Barbara Linke - Student Competition Coordinator

The 2022 Student Manufacturing Design Competition, jointly sponsored by ASME MED and NAMRI/SME, took place at Purdue University on June 28, 2022 as part of the program of the 2022 MSEC/NAMRC conference. Eight submissions from two countries (Canada and United States) were received. Seven finalists were selected and gave presentations on June 28, 2022 over two time slots, 9:10 – 10:40 AM and 2:50 – 4:20 PM Eastern Time. The team members that attended the conference to present had their registration and four nights of accommodation paid for by a National Science Foundation (NSF) Travel Award and received a travel stipend by the Manufacturing Engineering Division of ASME. All of the presentations were of high quality and very interesting. The judges had a very difficult time selecting the top three.

First place and \$1000 went to Tadeusz Kosmal, Kieran Beaumont, Eric Link, Dalton Phillips, Conner Pulling, Heather Wotton, and Camille Kudrna from Virginia Tech, Blacksburg, VA, USA for their project “Autonomous Robotic Aerial Vehicle Fabricator”.

Second place and \$750 went to Jeremy T. Bennett, Aaron M. Foreman, Kavish Srivastav, Micah W. Eckstein, and Nathaniel A. Fritsch from the University of Texas at Dallas, TX, USA for their project “Small Scale 3D Material Recycling Device”.

Third place and \$500 went to Daniel Clavijo, Abdullah Elqabbany, Muhammad Ali Khan, and Camilo J. Perez Espinosa from the Sheridan College Institute of Technology and Advanced Learning, Brampton, ON, Canada for their project “Automated Robotic Bricklaying”.

All participants were well-prepared and presented new and innovative manufacturing design projects with good potential for impact in industry and research. I would like to thank the team of judges for their time and thoughtful questions to the student teams: Dale Lombardo of GE Aviation, Jarred Heigel of Third Wave Systems, and John Karigiannis of GE Research.

2023 report, submitted by Miki Banu - Student Competition Coordinator

The 2023 Student Manufacturing Design Competition, jointly sponsored by ASME MED and NAMRI/SME, was held on June 13, 2023, at Rutgers University as part of the MSEC/NAMRC/LEM&P Conferences. This competition sought original student designs that focus on manufacturing engineering and science, welcoming any design of a system, component, or process that could promote the art, science, and practice of manufacturing engineering.

Twenty submissions from Europe and the United States, were received. Eight finalists were selected to present their projects over two time slots: 9:10 – 10:40 AM and 2:50 – 4:20 PM Eastern Time on June 13, 2023. Team members who attended the conference to present were supported by a National Science Foundation (NSF) Travel Award, which covered their registration and four nights of accommodation. Additionally, they received a travel stipend from the Manufacturing Engineering Division of ASME. The quality and innovation of all presentations made the judging process challenging.

Participants competed for top honors with prizes of \$1,000 for first place, \$750 for second place, and \$500 for third place (awarded to two teams). The student teams presented their innovative projects and demonstrated their potential impact on industry and research.

First place and a prize of \$1,000 were awarded to Kayla Blas, Lukas Wolf, Margaret Gao, and Sam Griswold from Northwestern University for their project “Desktop Robotic English Wheel System.” Their work was guided by Professors Michael Beltran, Jian Cao, and Kornel Ehmann.

Second place and a prize of \$750 went to Brad McCreight, Ryley Murakami, Austin Tran, Simon Demaggio, Lucas Nguyen, Phillip Branca, and Kishan Patel from the University of Texas at Dallas for their project “Weldment Fixture for Manufacturing of Radome Panels.” This team was mentored by Professor Robert Hart.

Third place and a prize of \$500 were awarded to two teams:

1. Jack Pluta, Jake Holwerda, Dante Cardinali, and Connor Christensen from Michigan State University for their project “Improved Camshaft Delivery Process,” under the guidance of Professor Vinh Nguyen.
2. Andrea Pastor Villarreal, Jesus Martinez, Haydn Haby, Kennedy Donovan, Jared Tolentino, and Mustafa

Hamid from Texas A&M University for their project “Truck Tire Install Lifting Device,” supervised by Professor Robert Hart.

All participants were well-prepared and showcased innovative manufacturing design projects with substantial potential for industry application and further research. Special thanks to the judges for their time and insightful questions posed to the student teams: Dr. Jarred Heigel, Third Wave Systems, Inc., Dr. Shaopeng Liu, GE Aerospace, Dr. Chris Tyler, ORNL and Prof. Stefania Bruschi, University of Padova, Italy.

NSF Early Career Forum (ECF)

2022 report, submitted by Karl Haapala - Organizer

The Early Career Forum was held during the joint conference of the 17th ASME International Manufacturing Science and Engineering Conference (MSEC 2022) and the 50th NAMRI/SME North American Manufacturing Research Conference (NAMRC 50), hosted by Purdue University, on June 29, 2022. The ECF event attracted more than 120 participants, who discussed career opportunities, paths, and planning with a diverse and talented panel representing industry, academia, and government/national labs. The event was sponsored by the National Science Foundation. The goal of the Early Career Forum was to provide current students at all levels of graduate and undergraduate programs, as well as recent graduates, with better information/knowledge of various research and technical positions in industry, academia, and national laboratories. This was achieved by networking between students and graduates and a panel of 11 diverse professionals (below), with wide-ranging experience in industry, academia, and government/national labs.

consisted of a welcome and brief career advice by each panelist, followed by small roundtable discussions over pizza.

Panelist	Academia	Government/ National Labs	Industry
Dr. Sam Anand (University of Cincinnati)	X		
Dr. Sara Behdad (University of Florida)	X		
Dr. William Bernstein (U.S. Air Force Research Lab)		X	
Dr. Muhammad P. Jahan (Miami University)	X		X
Dr. John La Scala (Army Research Lab)		X	
Dr. Ajay Malshe (Purdue University)	X		X
Dr. Monique S. McClain (Purdue University)	X	X	
Dr. Megan E. McGovern, PE (GM Global Research and Development)			X
Ms. KC Morris (U.S. NIST)		X	
Dr. Chandra Nath (Majiker Corp.)	X	X	X
Dr. Chinedum Okwudire (University of Michigan)	X		X

Each panelist hosted a table to address questions from rotating groups of students and graduates. In three 12-minute rounds, forum attendees were given the opportunity to move to another table according to their specific interests. Conference attendees were given the biographies of all panelists as part of the conference booklet. The informal nature of the forum facilitated meaningful discussions, where questions from all the students could be answered. Students came away feeling more knowledgeable about future opportunities in manufacturing engineering and related careers. Through their own experiences, the panelists also enhanced the students’ enthusiasm and confidence by discussing the exciting array of available career paths, as well as providing their advice on how to overcome career-related challenges. I would like to thank all who participated, and to extend gratitude to the National Science Foundation for covering the registration and lodging costs for 76 students, of whom 36 were from underrepresented groups in STEM (including 28 female, 9 Hispanic or African American, and 3 with a disability). Seven of the awardees presented their work at the ASME/SME Student Manufacturing Design Competition. I would also like to recognize the efforts of the conference hosts at Purdue University for their invaluable support in making this well-attended Early Career Forum successful, by providing the meeting space and a pizza dinner for the event.



This was the twelfth Early Career Forum at these collocated conferences, with the conferences cancelled in 2020 due to the COVID-19 pandemic. The last Early Career Forum had been held virtually in 2021. The forum

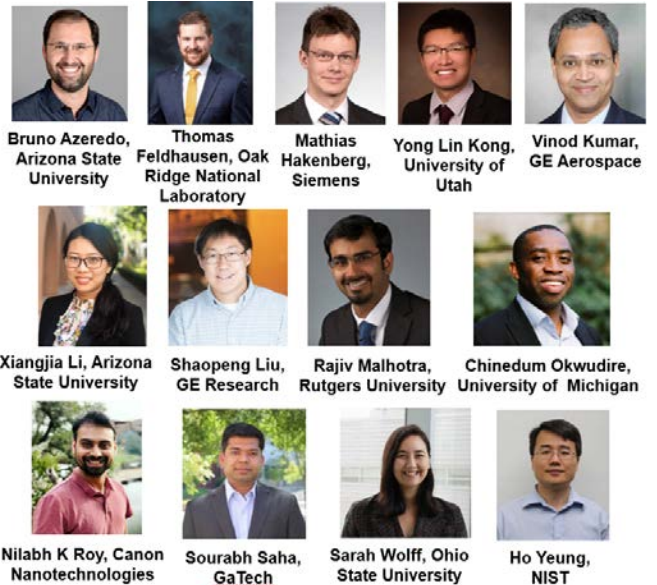


2023 report, submitted by Yong Chen – Organizer

The Early Career Forum (ECF) was held during the joint conference of the ASME International Manufacturing Science and Engineering Conference (MSEC 2024) and the 51st NAMRI/SME North American Manufacturing Research Conference (NAMRC 51), hosted by Rutgers University-New Brunswick. The ECF event attracted about 150 participants, who discussed career opportunities, paths, and planning with a diverse and talented panel representing industry, academia, and government career paths. The event was sponsored by the National Science Foundation (NSF). The goal of the Early Career Forum was to provide current students at all levels of graduate and undergraduate programs, as well as recent graduates, with better information/knowledge of various research and technical positions in industry, academia, and national laboratories. This was achieved by networking between students and graduates and a panel of 13 diverse professionals with wide-ranging experience in industry, academia, and government/national labs. The panelists are shown below. Several of the panelists have experience in more than one of these sectors, as indicated in the following table.

This was the thirteen Early Career Forum at these co-located conferences. The conference attendees were given the biographies of all panelists as part of the conference booklet. The forum consisted of a welcome and brief self-introduction and career advice by each panelist. While setting up the tables with food, two announcements were given, one on NSF international research experiences for students and one on ASME standards and certification. Group discussions were then held in break-out tables, shown in the photos, where each panelist sat at his/her table to address questions

from rotating groups of students and graduates (around 7-9). Every 20 minutes, forum attendees were given the opportunity to move to another break-out table according to their specific interests.



Panelist	Academia	Government/ National Labs	Industry
Dr. Bruno Azeredo (Arizona State University)	X		
Dr. Thomas Feldhausen (Oak Ridge National Laboratory)		X	X
Dr. Mathias Hakenberg (Siemens)			X
Dr. Yong Lin Kong (University of Utah)	X		
Dr. Vinod Kumar (GE Aerospace)			X
Dr. Cindy (Xiangjia) Li (Arizona State University)	X		
Dr. Shaopeng Liu (GE Research)			X
Dr. Rajiv Malhotra (Rutgers University)	X		
Dr. Chinedum ("Chi") Okwudire (Univ. of Michigan & Ulendo Technologies)	X		X
Dr. Nilabh K Roy (Canon Nanotechnologies)	X		X
Dr. Sourabh Saha (Georgia Institute of Technology)	X	X	X
Dr. Sarah Wolff (Ohio State University)	X	X	
Dr. Ho Yeung (National Inst. of Standard and Technology)	X	X	

The informal nature of the forum facilitated meaningful discussions, where questions from all the students could be answered. Students came away feeling more knowledgeable about future opportunities in manufacturing engineering and related careers. Through their own experiences, the panelists also enhanced the students' enthusiasm and confidence by discussing the exciting array of available career paths, as well as

important advice on how to overcome career-related challenges.

The organizer would like to thank all who participated. The committee would also like to thank the National Science Foundation for covering the conference registration costs for 65 students and early career researchers. Our gratitude also goes out to the conference organizers at Rutgers University, Dr. Grace Guo and Dr. Yuebin Guo, for their invaluable support in making this well-attended Early Career Forum successful.

Women in Advanced Manufacturing (WIAM) Forum

2022 report, submitted by Nancy Diaz-Elsayed - Organizer

The Women in Advanced Manufacturing (WIAM) Forum 2022 continued to showcase successful career paths and discuss next generation technologies, while offering an opportunity for professional development to attendees in the field of manufacturing engineering. The forum was organized by Nancy Diaz-Elsayed (University of South Florida), Maya Reslan (National Institute of Standards and Technology), Megan McGovern (General Motors), Ala Qattawi (University of Toledo), Annie Dian-Ru Li (National Taiwan University), and Barbara Zlatnik (ASME), and held on Thursday, June 30, 2022 from 2:00-4:30PM (ET) at ASME NAMRC50/MSEC 2022 at Purdue University. The WIAM Forum 2022 featured (i) a panel discussion on “Transitioning from Industry 4.0 to Industry 5.0”, (ii) a networking event, and (iii) a professional development workshop entitled “Reimagine Your Career.”

During the panel session, the panelists showcased their successful career paths in advanced manufacturing and discussed opportunities/challenges for the diverse next generation in manufacturing engineering. Panelists were invited from industry, academia, and government and consisted of: Dr. Qing (Cindy) Chang (University of Virginia), Dr. Gloria Wiens (University of Florida), Diana Wegner (General Motors), and KC Morris (National Institute of Standards and Technology).

The panel session was following by an opportunity for networking and a professional development workshop. The networking session aimed to promote more interactions among the panelists and attendees. The professional development workshop was moderated by Terra Winston (inTerract Consulting) and aimed to help participants with career planning by offering an opportunity for them to: 1) fit their career to the life they are building; 2) move beyond job titles; and 3) build a network for where they are going.



With a total of 39 attendees including panelists, moderators and organizers, a list of actionable recommendations to the MED leadership team was developed. There was clear support of continuing the WIAM Forum and planning activities are in process for MSEC 2023.

2023 report, submitted by Ala Qattawi – Organizer

The Women in Advanced Manufacturing (WIAM) Forum 2023 continued to showcase successful career paths and discuss next-generation technologies while offering an opportunity for professional development to attendees in the field of manufacturing engineering. This forum was organized by the ASME Manufacturing Engineering Division (MED). Funding for this event was provided by ASME MED, SME, and NSF. The forum took place over three sessions on Monday, June 12, 2023, and Tuesday, June 13, 2023, at ASME NAMRC51/MSEC 2023. The WIAM 2023 forum featured (i) a welcome reception, (ii) a technical panel discussion with industry leaders, and (iii) a professional development workshop. In the technical panel discussion, the panelists discussed advances in additive manufacturing. The panel discussion was followed by a professional development workshop where participants were able to identify opportunities for recruitment at their organizations to aid in diversifying the advanced manufacturing workforce and support the retention of current employees. Expected outcomes of WIAM 2023 included

enhanced diversity awareness in the field of manufacturing engineering and support of women in manufacturing to be successful in their career endeavors.



The first WIAM 2023 technical panel discussion with industry leaders session was themed: Future Leaders in Additive Manufacturing. The program invited the following panelists: Dr. Nanci H. (MELD Manufacturing), and Dr. Addy Olubamiji (D-Tech Centrix, Inc.) as external members of the panel on Future leaders in Additive Manufacturing. The professional development workshop was focused on “Diversifying and Retaining the Advanced Manufacturing Workforce.” This workshop included four parts: 1) an opening presentation on diversity, equity, and inclusion (DEI) initiatives at ASME by Clare Bruff; 2) panel presentations and Q&A by three speakers who represent workforce development from a corporate perspective (Megan Magee of GE Research), higher education perspective (Salam Elhalabi of CCNY), and from a non-profit and outreach perspective (Dr. Adeola Olubamiji of STEMHub); 3) brainstorming session with audience participation; and 4) closing remarks and an informal networking session.



The WIAM 2023 organizing committee included Dr. Nancy Diaz-Elsayed (Lead Organizer, University of South Florida), Maya Reslan (NIST), Dr. Megan McGovern (General Motors Global R&D Center), Dr. Ala Qattawi (University of Toledo), Dr. Sarah Wolff (Ohio State University), and Dr. Annie Dian-Ru Li (National Taiwan University). The panel was moderated by Dr. Annie Dian-Ru Li.



The WIAM forum for 2023 sponsored students through the NSF supplement fund for Dr. Sarah Wolff as a PI. The fund was used to offer travel awards for 10 students from community colleges, undergraduate, and graduate students interested in advanced manufacturing.

NSF Manufacturing Blue Sky Competition

2022 report, submitted by Tony Schmitz, Frank Pfefferkorn, and Brigid Mullany – Competition Organizers

The 2022 conferences featured the Fifth annual NSF Manufacturing Blue Sky Competition, funded by the National Science Foundation (NSF) and organized by Tony Schmitz, Frank Pfefferkorn, and Brigid Mullany. This competition aims to influence the future of manufacturing research and education in the United States through new, visionary ideas of the future. A selection committee of 11 manufacturing experts from industry and government organizations was responsible for choosing finalists from submitted abstracts to make presentations on June 29, 2022. From these, they selected the recipient of the 2022 SME David Dornfeld Manufacturing Vision Award to be Michael Sealy from Purdue University for his presentation, “Feeding the Future through Convergent Manufacturing.” The award is named in honor of the late Professor David Dornfeld, to recognize his outstanding vision and leadership within the manufacturing community.

2023 report, submitted by Moneer Helu, Frank Pfefferkorn, and Brigid Mullany – Competition Organizers

The 2023 conferences featured the Sixth annual NSF Manufacturing Blue Sky Competition, funded by National Science Foundation (NSF). This competition aims to influence the future of manufacturing research and education in the United States through new, visionary ideas of the future. A selection committee of 10 manufacturing experts from industry and government organizations was responsible for choosing 6 finalists from submitted abstracts to make presentations on June 13, 2023. From these, they selected the recipients of the 2023 SME David Dornfeld Manufacturing Vision Award:

Radu Pavel (Tech Solv Inc.), Steven R. Schmid, UNC-Charlotte, Gregory Harris (Auburn University) for their presentation, "The Intelligent Machine Tool". The award is named in honor of the late Professor David Dornfeld to recognize his outstanding vision and leadership within the manufacturing community.

ASME IMECE Advanced Manufacturing Track

2022 IMECE Advanced Manufacturing track report

Submitted by Muhammad Jahan – Track Chair

The Advanced Manufacturing track is one of the largest tracks of the 2022 ASME International Mechanical Engineering Congress and Exposition (IMECE 2022). This track is sponsored by the Manufacturing Engineering Division (MED) of the ASME. This track contains a collection of topics in the manufacturing ranging from nanomanufacturing, to fastening and joining, to material removal and forming, as well as additive manufacturing. The topics are organized by leading researchers in the field. The topics give a comprehensive coverage of experimental, computational, and analytical approaches employed in order to implement new products and processes, as well as improving current products and processes using new approaches.

The Advanced Manufacturing track remains to be one of the largest tracks of IMECE for the last several years. In this year's IMECE 2022, the Advanced Manufacturing track has a total of 193 presentations making it 2nd largest track just behind the Mechanics of Solids track. However, in terms of final paper received, the Advanced Manufacturing track becomes the largest track with a total of 140 full papers.

The Advanced Manufacturing track is also one of the largest tracks in terms of topics covered. There are a total of 16 topics within the Advanced Manufacturing track.

Topics:

1. 7th Annual Conference-Wide Symposium on Additive Manufacturing
2. Measurement Science, Sensors, Non-destructive Evaluation (NDE) and Process Control for Advanced Manufacturing
3. Nanomanufacturing: Novel Processes, Applications, and Process-Property Relationships
4. Advanced Machining and Finishing Processes

5. 7th Symposium on Fastening and Joining Research and Advanced Technology
6. Advanced Material Forming - Mechanics, Characterization, Novel Processes, and Control
7. Innovative Product Design and Manufacturing
8. Computational Modeling and Simulation for Advanced Manufacturing
9. Variation Simulation and Design for Assembly
10. Robotics and Automation in Advanced Manufacturing
11. Laser-Based Advanced Manufacturing and Materials Processing
12. Digital Manufacturing Process Simulation and Validation
13. Tribological Issues in Materials, Manufacturing, and Medicine
14. 3D/4D Biomanufacturing and Biomaterials
15. Sustainable Manufacturing Systems
16. Manufacturing: General

Besides these 16 topics, two plenary speeches are have been scheduled during two plenary sessions of Advanced Manufacturing track. Two track plenary speakers and the titles of their speeches are as follows:

Plenary Speaker 1:

Name: Thomas R. Kurfess, Ph.D., P.E., HUSCO/Ramirez Distinguished Chair in Fluid Power and Motion Control and Professor of Mechanical Engineering at Georgia Tech.

Presentation Title: Next Generation Digital Manufacturing Operations – Democratizing Advanced Manufacturing.

Plenary Speaker 2:

Name: Dr. I.S. Jawahir, Professor of Mechanical Engineering, James F. Hardyman Chair in Manufacturing Systems, and Founding Director of Institute for Sustainable Manufacturing at the University of Kentucky.

Presentation Title: Next Generation Manufacturing for Advancing Circular Economy with Sustainable Products from Sustainable Manufacturing Processes.

IMECE 2022 Technical Committee Meeting and Outstanding Paper Award:

The IMECE 2022 Technical Committee meeting has been scheduled on Wednesday, November 2nd, 2022. During the technical committee meeting, "Outstanding Paper Award" will be announced. In addition, 1st and 2nd runner up papers will also be announced. The organization of

track and topics for IMECE 2023 will also be finalized during the Track 2 meeting at IMECE.

The Track chair and co-chairs for this year's conference (IMECE 2022) are:

Track Chair: Muhammad Jahan, jahanmp@miamioh.edu

Track co-Chair: Scott Thompson, smthompson@ksu.edu

Track co-Chair: Yifei Jin, yifeij@unr.edu

Track co-Chair: Ross Salary, salary@marshall.edu

2023 IMECE Advanced Manufacturing track report

Submitted by Ross Salary – Committee Chair of the IMECE Track 3

1. Track Chair and Co-Chairs of IMECE 2023



Scott Thompson, Ph.D.
Track Chair
Kansas State University, Manhattan, KS, USA



Roozbeh "Ross" Salary, Ph.D.
Track Co-Chair
Marshall University, Huntington, WV, USA



Yifei Jin, Ph.D.
Track Co-Chair
University of Nevada, Reno, NV, USA



Sekhar Rakurty, Ph.D.
Track Co-Chair
The M. K. Morse Company, Canton, OH, USA

2. Plenary Speakers



Bill Peter, Ph.D.
• Director, Advanced Manufacturing Program
• Oak Ridge National Laboratory
• Presentation Title: ORNL's Advancements in Additive, Digital, Composites and Hybrid Manufacturing



Bruce Kramer, Ph.D.
• Senior Advisor, Division of Civil, Mechanical and Manufacturing Innovation (CMMI) and the National Advanced Manufacturing Program
• National Science Foundation (NSF)
• Presentation Title: Implementation of the National Strategy for Advanced Manufacturing

3. Special Panel Session on Advanced Manufacturing and Education

The aim of this panel was to discuss effective and innovative pedagogical methods that could be potentially used for teaching undergraduate and graduate manufacturing courses, e.g., additive manufacturing, manufacturing processes, manufacturing design, and materials for manufacturing. Effective education methods not only integrate manufacturing education with industrial practice, but also pave the way for establishment of integrated manufacturing education and research plans in academia.



Panelist: Thomas R. Kurfess, Ph.D.

- ASME President
- Chief Manufacturing Officer
- Executive Director, Georgia Tech Manufacturing Institute, Georgia Institute of Technology



Panelist: Kathryn Jablokow, Ph.D.

- Member, ASME Board of Governors
- Program Director, Engineering Design & Systems Engineering, CMMI, National Science Foundation (NSF)



Panel Moderator: Roozbeh "Ross" Salary, Ph.D.

- Assistant Professor of Mechanical and Biomedical Engineering
- Marshall University, Huntington, WV, USA

4. Paper Distribution

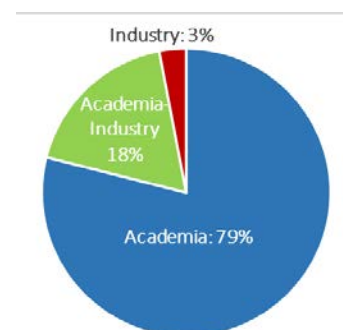
In total, there were 133 presentations (96 *technical publications* and 37 *technical presentations*), as follows:

- 105 presentations were from academia;
- 24 presentations were collaborative (between academia-industry);
- 4 presentations were from industry.

5. Topics of Track 3

There were 15 interdisciplinary topics developed for Track 3, as follows:

1. 7th Annual Conference-Wide Symposium on Additive Manufacturing
2. Congress-Wide Symposium on NDE & SHM:



Distribution of presentations by category in Track 3 (IMECE 2023).

Measurement Science, Sensors, Non-Destructive Evaluation (NDE) and Process Monitoring and Control for Advanced Manufacturing

3. Nanomanufacturing: Novel Processes, Applications, and Process-Property Relationships
4. Advanced Machining and Finishing Processes
5. 8th Symposium on Fastening and Joining Research and Advanced Technology
6. Advanced Material Forming – Mechanism, Characterization, Novel Processes, and Control
7. Innovative Product Design and Manufacturing
8. Computational Modeling and Simulation for Advanced Manufacturing
9. Variation Simulation and Design for Assembly
10. Robotics and Automation in Advanced Manufacturing
11. Laser-Based Advanced Manufacturing and Materials Processing
12. Digital Manufacturing Process Simulation and Validation
13. Conference-Wide Symposium on Biomedical Manufacturing & Materials
14. Novel Verification, Validation, and Uncertainty Quantification (VVUQ) Techniques and Approaches for Advanced Manufacturing
15. Manufacturing: General

6. Best Paper Awards

Best Paper

- **Paper Number:** IMECE2023-113687
- **Title:** Study of Adhesive Joints Quality Based on Multi-Camera DIC System
- **Authors:** Bicheng Guo (Oakland University), Zhongfang Gao (Oakland University), Marco Gerini-Romagnoli (Oakland University), Lianxiang Yang (Oakland University)

1st Runner Up:

- **Paper Number:** IMECE2023-116967
- **Title:** Vibration Loosening Performance of Additively-Manufactured Bolted Joints
- **Authors:** Marco Gerini-Romagnoli (Oakland University), Massimiliano De Agostinis (University of Bologna), Sayed A. Nassar (Oakland University), Khushboo Tedlapu (Oakland University)

2nd Runner Up:

- **Paper Number:** IMECE2023-113456
- **Title:** Toward Additive Manufacturing of Architected Materials: A Planar Analysis

- **Authors:** Jitian Liu (Johns Hopkins University), Mehran Armand (Johns Hopkins University), Michael D. M. Kutzer (United States Naval Academy)

ASME Journal Reports

Report for Journal of Manufacturing Science and Engineering (JMSE)

2022 report, submitted by Albert Shih - Editor in Chief

JMSE is thriving. In the past years, we have fostered increased submission rates and decreased time that papers spend under review. Our impact factor has increased from 2.88 to 3.95, thanks in part to quicker review times and our successful MED Centennial Special Issue last year. We continue to streamline our review process without sacrificing quality of review. The trends of time papers spent in review and number of submissions are shown below. Please note that the data in the following charts is as of August 22, 2022.



Our current Editorial Board consists of 24 members, including the Editor-In-Chief. We are excited to welcome four new Associate Editors since Fall 2021: Sara Behdad, University of Florida; Wayne Li, The Boeing Co.; Arif S. Malik, University of Texas at Dallas; and Cheryl Xu, North Carolina State University. Cheryl will also serve as the Diversity Advocate for JMSE. Yong Chen, University of Southern California, will join on December 1, 2022. Both Arif and Yong have served as the Technical Committee Chair of MED. Additionally, several Associate Editors have kindly agreed to serve another term of three years, and their terms have been extended accordingly: Kevin Chou, University of Louisville/NSF; Martine Dubé, École de technologie supérieure; Yannis Korkolis, Ohio State University; and Tugrul Ozel, Rutgers State University.

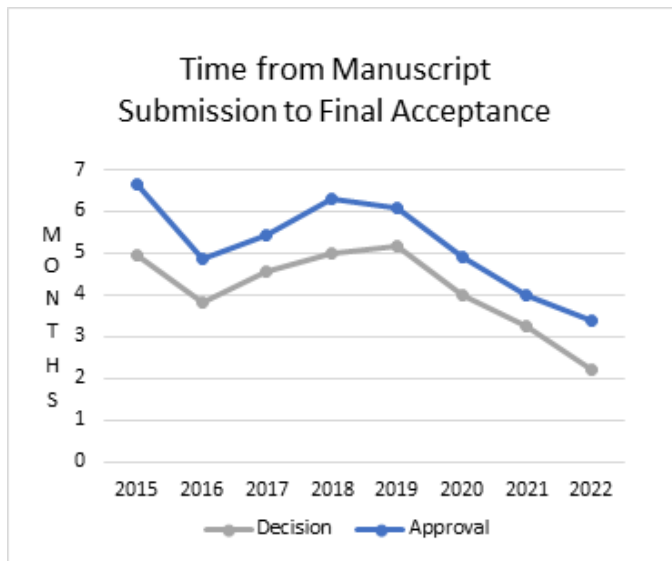
Emily Bosco continues to be the journal assistant. She has an outstanding reputation serving JMSE along with Larry and is working with me to serve JMSE together.

Partnering closely with MED has been one of my goals since I became the JMSE Editor-Elect. Working with the Technical Committee (TC) of MED, we will have a Special Issue for January 2023 comprised of 16 well-reviewed papers submitted to MSEC 2022. We are improving this process for MSEC 2023 to provide a path for quality papers to appear in JSME sooner. We have also started an initiative to invite authors whose papers have been accepted by JMSE to present their papers in MSEC.

We are planning three Special Issues on the topics of:

- (1) Human-Robot Collaboration for Futuristic Human-Centric Smart Manufacturing
- (2) State-of-the-Art in European Manufacturing Research
- (3) Semiconductor Manufacturing

You will see the announcements soon; please plan to submit your best research work to these Special Issues, or to a regular JMSE Issue. A few Special Issues dedicated to giants in manufacturing research have also been planned.



JMSE has many challenges ahead. Diversity, equity, and inclusion within the editorial board and journal operations are a new focus. Compared to our peer manufacturing journals, such as Additive Manufacturing, Journal of Manufacturing Processes, Journal of Manufacturing Systems, CIRP Annals, International Journal of Machine Tools and Manufacture, Journal of Material Processing Technology, and CIRP Journal of Manufacturing Science and Technology (all published by

Elsevier), we still have a lot of room for improvement in both impact factor and review process protocols.

We are creating a reviewer list to connect colleagues who wish to review papers to MED TC and JMSE Associate Editors. We have also created a companion website for JMSE to 1) engage with the manufacturing community, 2) timely announce Special Issues, 3) connect to highlighted and high impact JMSE papers and 4) publish webinars from top JMSE papers. Finally, we have invited a few leaders in manufacturing to write position papers to guide our community towards future research directions.

In closing, I would like to thank the JMSE authors and peer reviewers for their continued support, and the MED Executive Committee for its guidance and support. I also invite and strongly encourage you to participate in the process of strengthening JMSE by sending me your thoughts and ideas for improving JMSE and our service to the community: shiha@umich.edu.

2023 report, submitted by Albert Shih- Editor

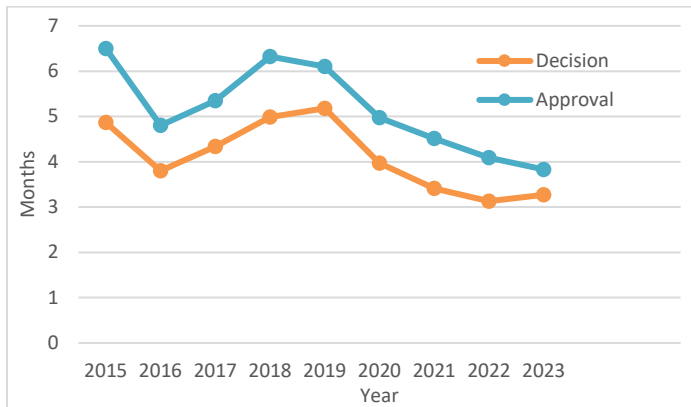
This report provides MED colleagues an update on JMSE. I want to emphasize that JMSE is “our” journal. JMSE may not have the deep connection to young MED members as it did 30-40 years ago. The tradition and record of publishing high quality manufacturing research papers is there and remains as the hallmark and an uncompromising goal of JMSE. There are many other outstanding manufacturing journals with a higher impact factor, I encourage and hope that your research lab may submit 2-3 top research manuscripts to JMSE every year. JMSE continues to be well recognized by the quality of review and has the highest impact factor among all ASME Technical Journals.

Due to ASME Publications cost-cutting to consolidate journal assistants to a contractor, we have a new journal assistant, Elizabeth Bruce. She replaces our long-time journal assistant Emily Bosco. Please join me in welcoming Elizabeth.

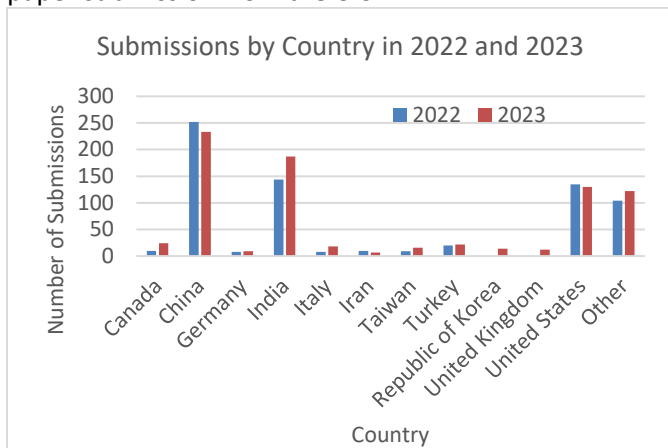
This report summarizes the status of JMSE on review turnaround time, country of submission, impact factor, partnership with the MED and MSEC, special issues, and editorial board and DEI.

The perception that papers submitted to JMSE will take a longer time to review is not correct anymore. Manufacturing is about continuous improvement. We still have rooms to improve and will continue to find a way to improve the turnaround time. Some Associate Editors may take longer to handle the submission. I am

taking the lead to identify and improve issues related to review turnaround time.



My first surprise as the editor of JMSE is that there are few submissions from our US colleagues. I hope together with MED we can gradually increase the percentage of paper submission from the U.S.



You can help by citing papers published in JMSE. Downloading the PDF from ASME Journals may not be as convenient as that in Elsevier journals, we should together identify good JMSE references and cite them in our publications. I served as the editor of Elsevier's Procedia Manufacturing and gained great respect for their professional journal managers who were humble and aggressive, and found ways to improve their journals' impact factor. Almost all our peer manufacturing journals are published by Elsevier. We need to work together to further advance the impact factor of JMSE.

Building a close connection with MED Executive and Technical Committees has always been JMSE's goal. The JMSE papers can be presented in MSEC (with March 1 cutoff date for presenting in MSEC in June). MSEC papers can fast-track to be reviewed by JMSE and potentially published in a MSEC Special Issues. This two-way partnership is going well. We are exploring if JMSE and MED can share the same promotional social media for communication. Your inputs are welcome.

Special Issue is a way to engage with the manufacturing community and recognize leaders in the field. JMSE has published the following four Special Issues:

- January 2023: [MSEC 2022](#)
- October 2023: [State-of-the-Art in European Manufacturing Research](#)
- December 2023: [Human-Robot Collaboration for Futuristic Human-Centric Smart Manufacturing](#)
- January 2024: [MSEC 2023](#)
- February 2024: JMD-JMSE Special Section on [Advances in Design and Manufacturing for Sustainability](#)

The Special Issues or Special Section (for papers in the same topic but not enough for an Issue with 10-12 papers) schedule to be published are:

- April 2024: Special Section: [European Advanced Manufacturing Part 2](#)
- May 2024: Special Section: Semiconductor Manufacturing
- August 2024: [Physics-Informed Machine Learning for Advanced Manufacturing](#)
- November 2024: In-Space Manufacturing
- December 2024: MSEC 2024
- January 2025: Japanese Advanced Manufacturing
- March 2025: Advanced Laser Materials Processing - Honoring Larry Yao

I encourage you to submit your research manuscript to the Special Issues. You contact Guest Editors of Special Issue to see if your manuscript is a good fit.

JMSE has 24 Associate Editors (including two incoming) with 6 women and 4 URM. We have a lot of rooms to improve and will continue working on the DEI of our editorial board. Chi Okwudire and Cheryl Xu are DEI advisors to the editor. All new Associate Editor appointments are consulted with DEI advisors.

2023 Report for Journal of Micro and Nano-manufacturing (JMNM)/ Journal of Micro and Nano Science and Engineering (JMNSE)

Submitted by Stefan Dimov - Editor

The ASME Journal of Micro- and Nano-Manufacturing (JMNM) has continued to attract submissions from the international communities in Micro and Nano Manufacturing (MNM), i.e. ASME, International Institute for Micro Manufacturing (I2M2), Multi-Material Micro Manufacturing (4M) Association and International Forum on Micro Manufacturing (IFMM). The journal

received for the first time an impact factor, i.e. JIF of 1 from data indexed in the Web of Science Core Collection, that is an important milestone in establishing JMNM as a prime scholarly journal for the MNM communities. The declining trend for submissions in previous years was reversed in 2023, especially almost twice more submissions (65) has been received compared with those in 2022, while the submission-to-acceptance time was reduced to less than 3 months. Also, [the JMNM Editorial Board](#) has been expanded with 5 new Members, i.e. Lawrence Kulinsky from UC Irvine, Sylvie Castagne from KU Leuven, Ramesh Singh from IITB, Ping Guo from Northwestern University and Xiaoyu (Rayne) Zheng from UC Berkeley.

The journal has reconnected to the ASME MED, and so a system has been established for inviting and fast-tracking well-reviewed MSEC and IMECE papers for a subsequent publication consideration. This collaboration with the ASME MED and the MSEC and IMECE Programme Committees will continue in 2024 and beyond; it is envisaged invited papers that received a “journal quality” rating from at least one JMNM reviewer to be considered for publication without further reviews. Also, the mutually beneficial collaboration with I2M2/4M/IFMM has continued and high-quality submissions to the World Congress on Micro and Nano Manufacturing (WCMNM) 2023 has been invited to submit Technical Briefs/Letters Papers or extend them and submit them as Research Papers to a Special Issue on WCMNM2023. Three Guest Editors, i.e. Tohru Sasaki from the University of Toyama, Bruno Azeredo from Arizona State University and Pavel Penchev from the University of Birmingham, were enlisted to assist in preparing this Special Issue.

Also, as in previous years, JMNM papers published in 2021 and 2022 was nominated for the annual [Kornel F. Ehmann Manufacturing Medal](#) awarded by ASME MED. The winners of the 2023 Medal were Robert M. Panas and Martin L. Culpepper for their Research Paper: [“Fabrication of Six Degrees-of-Freedom Hexflex Positioner With Integrated Strain Sensing Using Nonlithographically Based Microfabrication”](#).

The last but not the least, a potential broadening of the JMNM scope and a respective new journal name has been discussed with ASME MED, the EiC of JMSE, the JMNM Advisory Group and ASME Publishing. It was agreed that the changes of the journal scope and name are necessary to attract contributions not only from researchers in MNM field but also from those developing products and devices enabled by MNM. Therefore, it was decided in consultation with ASME MED and ASME

Publishing the name of the journal to change to ASME Journal of Micro and Nano Science and Engineering (ASME JMNSE) starting with the 2024 volume year.

On behalf of the Editorial Board, I would like to thank the authors and reviewers for their continued support of JMNM, and thank the MED Executive Committee for its guidance and support. We look forward to continuing our work within and beyond the ASME community in creating a platform for scholars and experts from across the globe to educate and discover. We invite you to submit manuscripts to [JMNM](#).

Publishing in an ASME Journal and Presenting the Same Material at an MSEC or IMECE Conference

Submitted by Submitted by Frank Pfefferkorn - MED Chair, Albert Shih - Editor JMSE, and Nicholas X. Fang - Editor JMNM

The long-standing practice of simultaneously submitting the same (or very similar) manuscript to MSEC or IMECE as well as one of the ASME’s journals is no longer permitted.

High-quality MSEC 2023 and IMECE 2023 papers will be invited to submit to an ASME journal (either ASME Journal of Manufacturing Science and Engineering or ASME Journal of Micro and Nano Manufacturing) for review under the journal-paper standards. The deadline for submitting the invited conference paper to an ASME journal is May 1, 2023, for MSEC 2023 papers and October 1, 2023, for IMECE 2023 papers. Papers accepted by the ASME Journal will be removed from MSEC or IMECE proceedings. This process takes the place of our previous “Fast Track” for journal-quality conference papers.

MSEC 2023 and IMECE 2023 papers that have not been invited to submit to an ASME journal may not submit the same or very similar manuscript to a journal. However, after significant changes, including additional data and analysis, a substantially modified manuscript may be submitted to an ASME journal for consideration.

Authors who first send their paper to an ASME journal (either ASME Journal of Manufacturing Science and Engineering or ASME Journal of Micro and Nano Manufacturing) and have it accepted for publication will be invited to present that research at the next ASME Manufacturing Science and Engineering Conference (MSEC) or International Mechanical Engineering Congress & Exposition (IMECE). These authors will not

need to submit a separate paper to MSEC or IMECE: i.e., presentation only. Interested authors will be asked to inform the journal assistant before March 1, 2023 (for MSEC) and July 1, 2023 (for IMECE). The authors will be contacted by the MSEC or IMECE technical program leaders about a potential presentation and need to register for the conference to be eligible to present. Only the title and abstract of these papers will be published in the conference proceedings. *** This mechanism does not apply to manuscripts that were first accepted by a conference and then invited to submit to the journal.

Q&A on manuscripts submitted/published in MSEC or IMECE conferences and an ASME journal

- (1) Can I simultaneously submit the same paper to both MSEC or IMECE and an ASME Journal? **NO**
- (2) Can I submit the same paper that has been accepted for presentation at MSEC or IMECE to an ASME Journal? **Only if you have been invited to do so by the ASME journal editor.**
- (3) Can I submit the same paper that has been accepted for publication in an ASME journal to MSEC or IMECE? **No need. In the acceptance email from the ASME journal you will be invited to present your work (presentation only) at the following MSEC or IMECE.**
- (4) If my MSEC or IMECE conference paper is accepted by the conference, invited to be submitted to an ASME journal, I submit it to the journal and the paper IS NOT accepted for publication in the journal, will it be published in the MSEC proceedings? **YES**
- (5) And if the paper IS accepted for publication in the journal, will it be published in the MSEC proceedings. **NO. Only the title and abstract will be published in the conference proceedings as well as a link to the journal paper.**
- (6) If a paper is submitted and accepted in the ASME Journal of Manufacturing Science and Engineering, can this paper be presented in MSEC or IMECE? **YES. The author(s) will be invited to present at the next MSEC or IMECE.**
- (7) Who do I contact if I have questions about submitting a manuscript to MSEC 2023? **Binil Starly <Binil.Starly@asu.edu> (MSEC 2023 Technical Program Chair)**
- (8) Who do I contact if I have questions about submitting a manuscript to IMECE 2023? **Scott Thompson <smthompson@ksu.edu> (Lead Technical Program Chair for Advanced Manufacturing Track at IMECE 2023)**
- (9) Who do I contact if I have questions about submitting a manuscript to the ASME Journal of

Manufacturing Science and Engineering? **Emily Bosco <emrbosco@gmail.com> (Journal Assistant)**

- (10) Who do I contact if I have questions about submitting a manuscript to the ASME Journal of Micro and Nano Manufacturing? **Lauren Murrah <lauren.asme@gmail.com> (Journal Assistant)**

Should you have comments or suggestions regarding the information presented in this Newsletter, please do not hesitate to contact members of the EC and MED Technical Committees listed below.

Honors Committee Reports

Every year ASME bestows a number of awards on our most outstanding colleagues for their efforts to move various aspects of the manufacturing field forward. It is important that these individuals be recognized for their tremendous contributions. Please consider nominating a deserving colleague for one of the MED sponsored awards including the ones below. See <https://www.asme.org/about-asme/honors-awards> for further information on these awards and their nomination process.

Blackall Machine Tool and Gage Award

The Blackall Machine Tool and Gage Award is presented for the best original paper or papers (not published elsewhere) which has/have been presented before ASME and/or published by ASME during the two calendar years immediately preceding the year of the award. The paper(s) should clearly demonstrate that the science and engineering technologies outlined in the paper, resulted in a significant contribution to the manufacturing processes and systems for the design or application of machine tools, gauges, dimensional measuring instruments, or new manufacturing technologies and metrology approaches. Papers by multiple authors are eligible. The award shall be made annually if warranted. The award was established in 1954 by Frederick S. Blackall, Jr., Fellow and Seventy-second President of the Society.

2022 report, submitted by Yuebin Guo - Committee Chair

The recipients of 2022 Blackall Machine Tool and Gage Award are Pablo Hernández-Becerro, Joel Purtschert, Jan Konvicka, Christian Buesser, David Schranz, Josef Mayr, Konrad Wegener for their paper "Reduced-Order Model of the Environmental Variation Error of a Precision Five-Axis Machine Tool," ASME Transactions Journal of

2023 report, submitted by Y. Lawrence Yao - Committee Chair

The recipients of 2023 Blackall Machine Tool and Gage Award were Dong Zhang, Markus Meurer, Xiao-Ming Zhang, Thomas Bergs, and Han Ding for their co-authored paper "*Understanding kinematics of the orthogonal cutting using digital image correlation—measurement and analysis*." Journal of Manufacturing Science and Engineering, Transactions of the ASME 144 (3), 031008." This research pioneers applying the digital image correlation analysis to quantitatively measure and identify the kinematic fields during cutting process. The in-situ imaging approach gained better understanding of the material and tool-chip friction and enabling accurate validation of machining simulations.

William T. Ennor Manufacturing Technology Award

The William T. Ennor Manufacturing Technology Award is presented to an individual or team of individuals for developing or contributing significantly to an innovative manufacturing technology, the implementation of which has resulted in substantial economic and/or societal benefits. The award was established by the Production Engineering Division (now the Manufacturing Engineering Division) in conjunction with the Alcoa Company in 1990.

2022 report, submitted by Yuebin Guo - Committee Chair

The recipient of 2022 William T. Ennor Manufacturing Technology Award is Dr. Xiaochun Li at University of California, Los Angeles for his significant contributions to solidification processing, scalable manufacturing, and successful commercialization of nanoparticle-reinforced metal matrix nanocomposites.

2023 report, submitted by Y. Lawrence Yao - Committee Chair

The recipient of 2023 William T. Ennor Manufacturing Technology Award was Prof. William P. King of University of Illinois at Urbana-Champaign for contributions to digital manufacturing and additive manufacturing through the development of new technologies, translation of these technologies for impactful applications, and industry leadership leading to widespread implementation.

Chao and Trigger Young Manufacturing Engineer Award

The Chao and Trigger Young Manufacturing Engineer Award acknowledges a promising manufacturing researcher under the age of 40, demonstrating the potential for substantial fundamental contributions to the science and technology of manufacturing processes.

2022 report, submitted by Yong Huang - Committee Chair

On behalf of the members of the award selection committee, it is our pleasure to announce that the Chao and Trigger awardee for 2022 is Professor Dong Lin of Kansas State University (now with Oregon State University). Prof. Lin is recognized for his significant achievements in the development of additive manufacturing technologies for aerogels, carbon fiber composites, and metal matrix composites and related manufacturing science.

2023 report, submitted by Jingjing Li - Committee Chair

This award is granted to one recipient each year. In 2023, Dr. Cunjiang Yu received this award. The 2024 awardee is pending, with the nomination deadline on February 1.

Milton C. Shaw Manufacturing Research Medal

The Milton C. Shaw Research Medal established in 2009, recognizes significant fundamental contributions to the science and technology of manufacturing processes.

2022 report, submitted by Yong Huang - Committee Chair

On behalf of the Milton C. Shaw Manufacturing Research Medal Committee, we are pleased to announce that the 2022 Milton C. Shaw Manufacturing Research Medal is awarded to Professor Gary J. Cheng of Purdue University. Chosen from a set of outstanding nominees, Prof. Cheng is recognized for his fundamental contributions to manufacturing science in laser-based scalable nanomanufacturing processes and understanding of laser-matter interactions during laser-induced shock deformation, additive processing, and phase transformation.

2023 report, submitted by Jingjing Li - Committee Chair

This prestigious award is bestowed upon one recipient annually. In 2023, the Milton C. Shaw Manufacturing Research Medal was awarded to Dr. Robert X. Gao. The 2024 awardee is undecided; nominations are open until February 1.

M. Eugene Merchant Manufacturing Medal of ASME/SME

The M. Eugene Merchant Manufacturing Medal of ASME/SME was established in 1986 in recognition of the numerous contributions of Gene Merchant to manufacturing research. The medal is awarded annually to an individual who has had significant influence and responsibility for improving the productivity and efficiency (either by research or by implementation of research) of manufacturing operation(s).

The selection committee (Board of Award) consists of notable manufacturing experts from ASME and/or SME. Past recipients of the Merchant Medal are leaders from industry, e.g., Edson Gaylord, George Fisher, Laurence Seifert, and Richard Dauch, and academia/government, e.g., Gunter Spur, Yoram Koren, and Michael Molnar.

2022 report submitted by John Sutherland - Board of Award Chair

The M. Eugene Merchant Medal Board of Award is pleased to announce that Mr. Brian L. Papke is the recipient of the 2022 Merchant Medal. Mr. Papke is being recognized for his contributions to metal-cutting machine tools that have resulted in a substantial improvement in productivity and efficiency including improved factory productivity, strategic part-processing advantages, and standardized machine interconnectivity.

The 2022 medal presentation will occur at the SME Annual Gala held in Atlanta in November.

Congratulations to Mr. Papke for this well-deserved honor!

2023 report, submitted by John Sutherland - Board of Award Chair

The 2023 recipient of the M. Eugene Merchant Manufacturing Medal of ASME/SME was Dawn R. White. Dr. White was recognized for her innovations and commercialization of ultrasonic consolidation and for her

pioneering work in using novel sensor data to gain insight into manufacturing processes.

The 2023 medal presentation occurred at the SME Fall Gala event in Long Beach, CA in November 2023.

Congratulations to Dr. White on this well-deserved honor!

Dr. Scott Smith became chair of the Board of Award in Summer 2023. Nominations were due for the 2024 Merchant Medal on Feb. 1, 2024. Nominations for next year's award will be due on Feb. 1, 2025. More detail can be found at the M. Eugene Merchant Manufacturing Medal website.

<https://www.asme.org/about-asme/honors-awards/achievement-awards/m-eugene-merchant-manufacturing-medal-of-asme-sme>

Kornel F. Ehmann Manufacturing Medal

The Kornel F. Ehmann Manufacturing Medal was established in 2019 by the Manufacturing Engineering Division of ASME, and is presented for the best current original journal paper or papers (not published elsewhere) which has/have been presented before ASME and/or published by ASME during the two calendar years immediately preceding the year of the award. The paper(s) should clearly demonstrate that the science and engineering technologies outlined in the paper, resulted in a significant contribution to the micro or nano-scale manufacturing processes and systems. Papers by multiple authors are eligible. The award will be made annually if warranted.

2022 report, submitted by Jian Cao - Committee Chair

We are pleased to congratulate the 2022 recipients, Taajza Singleton and Lawrence Kulinsky, for their paper, "Fabrication of Carbon Nanotube Gas Sensor Using Stepwise Dielectrophoretic Deposition Onto Interdigitated Pyrolyzed Carbon Electrodes," published in September of 2021. The award was given at MSEC 2022.

2023 report, submitted by Michael Cullinan - Committee Chair

We are pleased to congratulate the winners, awarded in June 2023, Robert Panas (LLNL) and Martin Culpepper (MIT) for their paper, "Fabrication of Six Degrees-of-Freedom Hexflex Positioner With Integrated Strain

Sensing Using Nonlithographically Based
Microfabrication” Journal of Micro-and Nano-
Manufacturing 9 (1), 010902,
<https://doi.org/10.1115/1.4049123>.

DeVor-Kapoor Manufacturing Medal

**2022 report, submitted by John W. Sutherland
and Shreyes N. Melkote**

We are pleased to report that through the generous financial support of their students, friends, and colleagues a new award has been established to recognize the many decades of distinguished technical contributions of Professors Richard E. DeVor and Shiv G. Kapoor to the field of manufacturing. This new award, the ASME DeVor-Kapoor Manufacturing Medal, seeks to recognize an individual or a team of researchers for a body of “impactful achievements in the field of manufacturing.” Manufacturing professionals from academia, industry, and national laboratories, with distinguished and sustained contributions to and impact in the manufacturing field will be eligible for this medal. The nomination materials must provide evidence of the long-term contributions in one or more of the following exemplar areas: pioneering research, innovative technology development/ transfer, inspirational mentorship, and ground-breaking scholarship/writings.

**2023 report, submitted by Albert Wavering -
Committee Chair**

The DeVor-Kapoor Manufacturing Medal was established by the Manufacturing Engineering Division in 2022 to honor Richard E. DeVor and Shiv G. Kapoor for their long-term contributions to manufacturing science and engineering as reflected through their innovative research contributions, thoughtful mentoring of graduate students and others, translation of transformative research into industrial practice, impactful scholarship, and leadership within the profession. The medal is awarded annually to recognize an individual or a team of researchers for a body of similarly impactful achievements in the field of manufacturing.

The recipient of the inaugural DeVor-Kapoor Manufacturing Medal in 2023 was Dr. Jian Cao of Northwestern University. Dr. Cao is recognized for her pioneering research in advancing the hybrid physics-based data-inspired approach for design and execution of flexible manufacturing processes through publications and collaborations with industry and national laboratories, and for her inspirational mentorship to

women and underrepresented minorities in manufacturing. The medal was presented to Dr. Cao at the ASME MED Award Luncheon held at the MSEC 2023/NAMRC 51 Conference in New Brunswick, NJ in June 2023. Congratulations to Dr. Cao!

The recipient of the 2024 Devor-Kapoor Manufacturing Medal will be announced later this spring.

Nominations are sought and encouraged for the 2025 Devor-Kapoor Manufacturing Medal. The due date for nominations is February 1, 2025, and nomination details can be found at the [DeVor-Kapoor Manufacturing Medal page](#) on the ASME website.

Upcoming Events

2024 International Manufacturing Science and Engineering Conference (MSEC)

**Submitted by Chinedum Okwudire,
Guhaprasanna Manogharan, and Tony Schmitz -
Program Chairs and Conference Chair**

MSEC 2024 will be held in Knoxville, TN. We anticipate record attendance for the co-located conference with SME’s NAMRC 52 based on paper submissions. Reviews are currently underway, and decisions will be released soon. MSEC 2024 will be hosted by Professor Tony Schmitz and his colleagues from the University of Tennessee, Knoxville, Oak Ridge National Laboratory, and IACMI-The Composite Institute. The technical program will be chaired by Chinedum Okwudire and co-chaired by Guha Manogharan. MSEC 2024 will provide both university research and industrial insights from international experts. Other participation opportunities include the Student Manufacturing Design Competition, the Early Career Forum, the Women in Advanced Manufacturing Forum, Doctoral Colloquium, Poster presentation, pre-conference tutorials, local tours, and Industry Night. Details are available on the conference website, <https://utconferences.eventsair.com/2024-msec-namrc/>.

ASME IMECE 2024

**Submitted by Ross Salary – Committee Chair of
the IMECE Track 3**

- **Location:** Portland, OR, USA
- **Dates:** November 17–21, 2024
- **Abstract Submission Deadline:** March 19, 2024
- **Full-Paper Submission Deadline:** May 14, 2024

- **Track Chair and Co-Chairs:**



Roozbeh "Ross" Salary, Ph.D.
Track Chair
Marshall University, Huntington, WV, USA



Yifei Jin, Ph.D.
Track Co-Chair
University of Nevada, Reno, NV, USA



David Guerra-Zubiaga, Ph.D.
Track Co-Chair
Kennesaw State University, Kennesaw, GA, USA



Salman Pervaiz, Ph.D.
Track Co-Chair
Rochester Institute of Technology – Dubai Campus, UAE

Award nomination deadlines

Nominations are Due February 1 annually, except December 15 for the Blackall Machine Tool and Gage Award (one and a half months earlier). Please visit the ASME websites for details:

<https://www.asme.org/about-asme/honors-awards/unit-awards#med>

<https://asme.org/about-asme/honors-awards/achievement-awards>

Should you have comments or suggestions regarding the information presented in this Newsletter, please do not hesitate to contact members of the EC and MED Technical Committees listed below

ASME MED Executive Committee Members (2023-2024)				
Chair	Vice-Chair	Program Chair	Communications	Secretary
Barbara Linke	Jarred Heigel	Mihaela (Miki) Banu	Jaydeep Karandikar	Johnson Samuel
University of California Davis	Ata Engineering	University of Michigan	Oak Ridge National Laboratory	Rensselaer Polytechnic Institute
bslinke@ucdavis.edu	jarred.heigel@ata-e.com	mbanu@umich.edu	karandikarjm@ornl.gov	SAMUEJ2@rpi.edu
ASME MED Technical Committees (2023-2024)				
Additive Manufacturing	Chair: Chi Zhou (University of Buffalo, chizhou@buffalo.edu) Vice-Chair: Tsz Ho Kwok (Concordia University, tszho.kwok@concordia.ca)			
Quality and Reliability	Chair: Yiran (Emma) Yang (University of Texas at Arlington, yiran.yang@uta.edu) Vice-Chair: Peng "Edward" Wang (University of Kentucky, Edward.Wang@uky.edu)			
Manufacturing Systems	Chair: Xiaoning (Sarah) Jin (Northeastern University, xi.jin@northeastern.edu) Vice-Chair: Chenhui Shao (chshao@illinois.edu)			
Manufacturing Processes	Chair: Jingjing Li (Penn State, jul572@psu.edu) Vice-Chair: Thomas Feldhausen (feldhausenta@ornl.gov)			
Manufacturing Equipment and Automation	Chair: Chandra Nath (Purdue University, nathc@purdue.edu) Vice-Chair: Chabum Lee (cblee@tamu.edu)			
Life Cycle Engineering	Chair: Julius Schoop (University of Kentucky, julius.schoop@uky.edu) Vice-Chair: Nehika Mathur (nehika.mathur@nist.gov)			
Biomanufacturing	Chair: Yihao Zheng (Worcester Polytechnic Institute, yzheng8@wpi.edu) Vice-Chair: Yifei Jin (University of Nevada, Reno, yifeij@unr.edu)			
Advanced Materials Manufacturing	Chair: Saeed Farahani (Cleveland State University, s.farahani@csuohio.edu) Vice-Chair: Weihong "Grace" Guo (Rutgers University, wg152@soe.rutgers.edu)			
Nano/Micro/Meso Manufacturing	Chair: Rajiv Malhotra (Rutgers University, rajiv.malhotra@rutgers.edu) Vice-Chair: Sourabh Saha (sourabh.saha@me.gatech.edu)			