NEWSLETTER FALL 2014
https://community.asme.org/manufacturing_engineering_division/default.aspx/

Message from the Chair

Submitted by Xiaoping Yang - MED Executive Committee Chair

Dear Fellow Manufacturing Engineering Division (MED) Members,

On behalf of the MED Executive Committee, I am writing this article for the newsletter to provide you with an update on the state-of-the-division. FY 2015 is the transition year of the One ASME reorganization. The objective of the reorganization is to align with the ASME Mission and Strategy set by the Board of Governors, called “Pathway 2025.” While significant changes are taking place, the decision has been made for divisions to continue and retain name and leadership committees, which is good news to MED as the division remains strong with 3300 primary members, and continues to grow. This is due to the dedicated members and volunteers like you that continue to advance the science and practice of manufacturing both nationally and internationally. There are several exciting activities and initiatives at the division and society level that will sustain these current trends into the future.

Active member participation is always a key to the growth and prosperity of a volunteer-based organization such as ASME MED. Our executive committee currently consists of Professor Brian Paul (Vice Chair), Dr. Shawn Moylan (Program Chair), Dr. Edmund Chu (Secretary/Treasurer), and Professor Kevin Chou (incoming member). MED’s technical needs are well served by eight active and highly-regarded Technical Committees (TC), with many of them having new leadership teams in place for the 2014-2015 term. They are the:

- Manufacturing Processes TC chaired by Dr. Radu Pavel and co-chaired by Professor Hitomi Yamaguchi Greenslet;
- Manufacturing Equipment TC chaired by Professor Johnson Samuel and co-chaired by Professor Mathew Kuttolamadom;
- Manufacturing Systems TC chaired by Professor Jaime Camelo and co-chaired by Professor Jing Shi;
- Quality & Reliability TC chaired by Professor Dragan Djurdjanovic and co-chaired by Professor Lin Li;
- Life Cycle Engineering TC chaired by Professor Chris Yuan and co-chaired by Professor Barbara Linke;
- Nano/Micro/Meso Manufacturing TC chaired by Professor Curtis Taylor and co-chaired by Professor Cheryl Xu;
- Biomanufacturing TC chaired by Professor Scott Miller and co-chaired by Professor Eda Yildirim-Ayan; and
- Textile & Composites Engineering TC chaired by Professor Gap-Yong Kim and Professor Ronald Bucinell.
Professor Laine Mears serves as the Newsletter Editor who brings you this wonderful Fall 2014 edition. In addition to his leadership role on the technical committee, Professor Gap Kim continues to be the Web Liaison for MED to provide timely updates on matters of interests to our membership at our website: https://community.asme.org/manufacturing_engineering_division/default.aspx.

Our Division is also supported by two dedicated ASME staff, Ms. Erin Dolan and Mr. Robert Powers. The entire MED Leadership team is here to serve our members. Please feel free to contact us if you have any questions and/or suggestions. Suggestions on how to improve MED’s operations are always welcome.

Our flagship annual conference, the 2014 International Manufacturing Science and Engineering Conference (MSEC 2014), was held in early June in Detroit, Michigan. It was a huge success by all accounts. It was co-located again with the 42nd North American Manufacturing Research Conference (NAMRC42). In addition, it was co-located with the Japanese Society of Manufacturing Engineers (JSME) International Conference on Materials and Processing. This is the second time that these three conferences have been co-located, the fourth time that MSE and NAMRC have been co-located, and the third time that MSEC and ICMP have been co-located. We were very fortunate to be in downtown Detroit and having our conference joint with two other exceptional SME events, RAPID and the BigM. In an effort to strengthen the technical program and attract more participants, the MED Executive Committee took the initiative to sponsor high-profile international symposium keynote speakers. It was truly an extraordinary event with balanced research and industrial presentations from both national and international experts. Please join me in thanking the many volunteers for making the conference a success, especially our hosts, Professors Albert Shih, Kira Barton, Chinedum Okwudire, and others at the University of Michigan for their extraordinary efforts to host us and bring all of the conferences together; another special acknowledgement is required for Professors Seiichi Hata, John Ziegert, Ihab Ragai, and Gracious Ngaile who are the technical program chairs for the three conferences. A quality event of this size and stature does not happen without considerable effort from these selfless volunteers; all symposium organizers and session chairs’ hard work and dedication were also important for the success of the conference. This event also allowed the first face-to-face meeting of the leadership of the initial 4 institutes of the newly-formed National Network for Manufacturing Innovation (NNMI), funded by various agencies of the U.S. government. We hope to facilitate continued gatherings of this type at future conferences.

Our next conference, MSEC 2015, will be hosted by the University of North Carolina at Charlotte next June. It will again be collocated with NAMRC. The conference host is Professor John Ziegert. The technical program will be chaired by Professor Gracious Ngaile and co-chaired by Professor Frank Pfefferkorn. To those who have already submitted papers to MSEC 2015, I thank you for your participation. To the rest of the MED community, you still have time for paper and poster submissions. You can also join us at the event through panel discussions, an Early Career Forum, or simply attending the conference and industrial exhibitions. Professors Ziegert, Ngaile, and Pfefferkorn are putting together a wonderful program for us all.

As the premier organization for manufacturing researchers and engineers in the US, MED has two technical journals, the ASME Journal of Manufacturing Science and Engineering (JMSE) with Professor Lawrence Yao of Columbia University as its Editor and the ASME Journal of Micro- and Nano-Manufacturing (JMNM) with Professor Jian Cao of Northwestern University as its founding Editor. Both of these Editors are finishing their second years on the job and have continued the strong tradition for our journals. Please join me in thanking Professors Cao and Yao and all of the Associate Editors for their service to MED.

As a community, it is extremely important to honor our colleagues who deserve the highest recognition. Awardees will serve as role models and inspire their peers and future generations in various roles. Awards administrated by MED include the Blackall Machine Tool and Gage Award, the William T. Ennor Manufacturing Technology Award, the Chao and Trigger Young Manufacturing Engineer Award, the Milton C. Shaw Manufacturing Medal, and the M. Eugene
Merchant Manufacturing Medal of ASME/SME. In 2014, MED established a new award, the Ehmann Medal, seeking to annually recognize authors of the best paper published in the ASME Journal of Micro- and Nano-Manufacturing within the last two years for their novel and concrete contributions to the knowledge in the field. I encourage you to submit your nominations to respective committee chairs. Details can be found at the MED awards website:

https://community.asme.org/manufacturing_engineering_division/w/wiki/3659.honors-awards.aspx

We are exploring new ideas to further strengthen our Division and serve our members. Continuing to sponsor high-profile international symposium keynote speakers, leveraging the emerging Manufacturing Innovation Institutes under the National Network for Manufacturing Innovation, and organizing Round Table Technical Discussion and Technical Exchange are the initiatives being discussed. In order to strengthen the Technical Committees that are the important pillars of the MED, the Executive Committee has developed Technical Committee Leaders’ Roles and Responsibilities guidelines, and will share these with TC leaders in coming months. In this rapidly evolving world, the Executive Committee is also looking into leveraging social media to expand MED’s reach and influence. The Executive Committee and the entire Leadership team would love to hear ideas from you on how we could better serve the MED community!

I wish all of you the very best in the coming year.

Dr. Xiaoping Yang, MED Chair (2014-2015)
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9th ASME International Manufacturing Science and Engineering Conference
Hosted by University of Michigan in Detroit, MI, June 9-13, 2014.
Technical Program Report

Submitted by Ihab Ragai and Gracious Ngaile - Program Chairs

The 9th ASME International Manufacturing Science and Engineering Conference (MSEC 2014), sponsored by the Manufacturing Engineering Division (MED) of ASME, was jointly held with the 42nd North American Manufacturing Research Conference (NAMRC42), sponsored by the North American Manufacturing Research Institution of SME (NAMRI/SME), and the 5th International Conference on Materials and Processing (ICM&P), sponsored by the Japan Society of Mechanical Engineers (JSME) and ASME, collocated and hosted by the University of Michigan-Ann Arbor from June 9 to June 13, 2014, in Detroit, Michigan. As leading world-class societies in the Mechanical Engineering field, ASME, SME and JSME act as global bridges between industries, government laboratories, and academic institutions.

The MSEC 2014 proceedings include 232 peer-reviewed papers (197 accepted to conference - 3 removed for no-show) and 12 posters. 5 additional posters were presented at the conference but not included in the proceedings. The technical papers and posters come from authors representing 24 countries around the world. MSEC is pleased to present five technical tracks in the MSEC 2014 proceedings: Materials, Processing, Micro and Nano Technologies, Properties, Applications and Systems, and Sustainable Manufacturing. In the 5 technical tracks, a total of 28 symposia were executed.

The joint conference consists of 3 keynote speeches, 5 plenary panel presentations, the NAMRI/SME Founders Lecture (NAMRC), 130 concurrent technical sessions (70 MSEC sessions, 25 NAMRC sessions, and 35 ICM&P sessions), an early career forum, industry and laboratory tours, a student manufacturing design competition (MSEC), and a
student author research presentation competition (NAMRC). MSEC consists of 3 symposium-keynote speakers (Professor Dr.-Ing. Dr.-Ing. E.h. A. Erman Tekkaya, Institute of Forming Technology and Lightweight Construction TU Dortmund, Germany, Professor Jerry Fuh, National University of Singapore, and Professor Toshihiko Kuwabara, Tokyo Univ. of Agriculture & Technology) and 2 plenary panel presentations (Manufacturing Innovation Institutes, and Cloud Manufacturing). The early career forum was sponsored by the ASME Old Guard, ASME MED, SME, and the National Science Foundation, and was conducted with great success because of Prof. Laine Mears’ leadership. In addition to paper submissions from foreign institutions, participation by non-US students in the student design competition is encouraged to promote the globalization of the conference. One of the eight teams entered was from India. To help conference attendees to plan their participation and interaction with others, equal time was allotted for each technical paper presentation regardless of the conference (MSEC, NAMRC or ICM&P) in which it was included. This approach seemed to please the conference attendees.

The symposium organizers nominated 13 papers for the Best Paper Award. The 13 papers were reviewed and ranked by MED Executive committee, technical program chairs, and symposium organizers. The recipients of the Best Paper Award were as follows:

1st Place: Multi-Scale Surface Characterization and Control Based High Density Measurements by Xin Weng, Xiaoning Jin, and Jun Ni

2nd place: High-Definition Metrology Enabled Surface Variation Control by Reducing Cutter-Spindle Deflection by Hai Nguyen, Hui Wang, and S. Jack Hu

3rd place: Application of System Learning to Precedence Graph Generation for Assembly Line Balancing by Kavit R. Antani, Bryan Pearce, Laine Mears, Rahul Renu, Mary E. Kurz, and Jörg Schulte

The MED Executive committee selected the recipients of the Best Symposium and Session Organizer (BOSS) award; the candidates were nominated by the technical program chairs. This year’s recipients were Lihui Wang, Xun Xu, and Xiaoping Yang for their symposium entitled Challenges in Cloud Manufacturing. The symposium organizers played key roles in constructing high-quality technical sessions and drawing a large number of papers.

The Civil, Mechanical, and Manufacturing Innovation (CMMI) Division of the National Science Foundation supported student conference participation. Students studying in US institutions and planning to attend the MSEC/NAMRC applied for this opportunity, and 54 students (44 doctoral, 4 Master’s, and 6 undergraduate students) received conference registration support. Of the supported students, 11 were from underrepresented groups.

The successful conference was the result of the outstanding efforts of many people. We would like to express our gratitude to all the volunteers (student workers, symposium organizers, session chairs, track chairs, and hosts), as well as individual and corporate sponsors who supported the 2014 event.
Student Manufacturing Design Competition at MSEC 2014

Submitted by Shawn Moylan - Student Competition Coordinator

The 2014 Student Manufacturing Design Competition, jointly sponsored by ASME MED and NAMRI/SME took place Detroit, MI during the 2014 MSEC/NAMRC. The competition comprised eight finalists. Each finalist was represented by at least one team member who attended the conference. Teams received travel assistance from MED and/or the National Science Foundation.

The top three awardees were:

1. Amanda Shagori representing Rensselaer Polytechnic Institute for “PuckLight”
2. Joshua Konstantinos representing Drexel University for “The Dragon Conductive 3D Printer”
3. John Malcovitch representing Rensselaer Polytechnic Institute for “A Joint Eye Glasses and Contact Case”

Awardees were granted cash prizes of $1000, $750, and $500, respectively. Other finalists included teams from the Indian School of Mines, the University of Michigan—Shanghai Jiaotong University Joint Institute, and Chippewa Valley Technical College. All participants were well-prepared and presented projects demonstrating results with a high potential for impact in industry. Judges for the event included Joshua Tarbutton of University of South Carolina., Edmund Chu of Alcoa, and Shawn Moylan from the National Institute of Standards and Technology.

Early Career Forum at MSEC 2014

Submitted by Laine Mears - Organizing Committee Chair

The Early Career Forum (ECF) was held during the joint conference of the 9th ASME International Manufacturing Science and Engineering Conference (MSEC 2014) and the 42nd North American Manufacturing Research Conference (NAMRC42) at the Detroit Cobo Center on June 10, 2014. The event attracted over 50 participants who interacted closely with a talented panel representing industry, academia, and governmental career paths. Sponsorship came primarily from the ASME Old Guard, as well as ASME MED and the Society of Manufacturing Engineers.

The objective of the Early Career Forum was to educate students engaged in scientific programs around manufacturing and early-career manufacturing engineers and scientists on the possible career paths available to them, and details of feasible expectations for activities and future opportunities when following a given career path. This objective was addressed through a small-scale networking event where manufacturing students and young engineers were introduced to a panel of mid-career professionals, and placed in an environment of local discussion. This was the fifth ECF tied to the co-located conferences. A big thanks for their time goes to the 12 talented panelists:

Dr. Kavit Antani, BMW Manufacturing
Dr. Aindrea Campbell, Ford Motor Company
Prof. Dragan Djurdjanovic, University of Texas
Dr. Robert Ivester, US Dept. of Energy AMO
Prof. Mathew Kuttolamadom, Texas A&M University
Dr. Shawn Moylan, NIST
Prof. Chinedum Okwudire, University of Michigan
Prof. Z.J. Pei, National Science Foundation
Prof. Ihab Ragai, East Carolina University
Dr. Michael Smith, Chrysler Corporation, LLC
Prof. Joshua Tarbutton, University of South Carolina
Mr. Jason Viers, Mclean-Fogg Corporation

The forum consisted of small group discussions and question sessions as participants moved to different panelist tables. The informal nature of the session facilitated some meaningful discussions, and participants came away with powerful personal information for their future. The committee would like to thank all who participated.
The Journal continues to be on a solid footing, and its annual submission rate increased significantly in 2014. In 2013, we received a total of 445 submissions; in 2014, we already have received 448 (as of August 26). Our page allotment per issue was increased to more closely align it with the number of submissions we actually receive, and this has increased the journal size from 180-200 pages to about 220 per issue.

Despite our confidence in this strong showing, we continue to focus on streamlining our review process without sacrificing quality. Not only do we want to serve our submitting authors fairly—we want to increase our impact factor, which my research shows is related to the length of time which submissions spend in review. Accordingly, our AEs met together during ASME’s annual conference and brainstormed ideas for improving our system. We are now experimenting with implementing these initiatives and are encouraged by the level of interest and the responses we have received. And, although year-end figures for 2014 are obviously not available yet and are likely to increase, we are already seeing results: In 2013, the average time that papers spent between submission and TE approval was 7.402 months; in 2014, the average time is 4.186 months to date (year-end figures are likely to show an increase, although this statistic has steadily decreased throughout 2014). On the other hand, our impact factor remains essentially the same as last year. We do not expect it to show real improvement for a few years.

We also plan to draw readers to JMSE through the publication of several robust and timely special issues, and currently have three in the pipeline. First, we are about to complete preparation for a special issue on Additive Manufacturing, to be published in December 2014. We received 75 submissions for it, so some that are publication-worthy cannot even be accommodated in the space allotted and will be published in subsequent issues of JMSE. We are delighted by the strong response, however, and are grateful to our distinguished Guest Editors—Joseph Beaman and David Bourell from the University of Texas at Austin; and Darryl Wallace from Youngstown State University, Ohio—for handling these submissions in an expert and timely manner.

In addition, a special issue on Advances and Challenges in Cloud Manufacturing is scheduled for publication in August 2015, with manuscripts due by October 15, 2014. Submissions will be handled by Lihui Wang, the KTH Royal Institute of Technology, Sweden; and Xun Xu, the University of Auckland, New Zealand. Finally, Forming and Joining of Lightweight and Multi-material Systems will constitute our October 2015 issue, with manuscripts due by December 1, 2014. Submissions for this special issue will be handled by Guest Editors Yannis Korkolis of the University of New Hampshire, Jingjing Li of the University of Hawaii, Edmund W. Chu of the Alcoa Technical Center, and Blair Carlson of General Motors Global R&D. We anticipate three interesting and robust special issues, and gratefully acknowledge the willingness of our Guest Editors to contribute so generously of their valuable time.

Our current Editorial Board consists of 17 members, including the TE. We want to thank four AEs, whose terms are expiring, for their fine service to JMSE: Robert Landers at the Missouri University of Science and Technology; Wei Li at the University of Texas at Austin; Eric Marsh at Penn State; and Burak Ozdoganlar at Carnegie Mellon. We look forward to our continuing collaboration with them, and are excited to welcome four new AEs as we move forward: Guillaume Fromentin at Arts and Metiers PARISTECH; Hongiang Chen at the GE Global Research Center, Manufacturing Process Laboratory; Radu Pavel, at TechSolve in Cincinnati, Ohio; and Jianjun Shi, at the Georgia Institute of Technology.

On behalf of the Editorial Board, I would like to thank the authors and reviewers for their continued support of JMSE. I also invite and strongly encourage you to participate in the process of strengthening the Journal by sending me your thoughts and ideas for improving JMSE and our service to the community: yly1@columbia.edu, 212-854-2887.
ASME Journal of Micro and Nano-manufacturing (JMNM)

Submitted by Jian Cao - Editor

Moving through its second year of publication, the ASME Journal of Micro- and Nano-Manufacturing (JMNM) continues to gain momentum and presence within the ASME journal series. I am grateful for the hard work and support of our colleagues within the ASME community who have helped us build and maintain the solid foundation on which this publication assuredly grows.

The Journal of Micro- and Nano-Manufacturing provides a forum for the rapid dissemination of original theoretical and applied research in the areas of micro- and nano-manufacturing. It offers special coverage of research relating to process innovation, accuracy and precision, throughput enhancement, material utilization, compact equipment development, environmental and life-cycle analysis and predictive modeling of manufacturing processes with features sizes less than one hundred micrometers.

On average we receive 79 papers annually, and aim to exceed that number this year with increasing quality submissions. We have successfully cut our Submission-to-Acceptance time by 74% from 8 months in year 1, to 2.1 months so far this year. We attribute this gained efficiency to well-maintained and managed review progression that allows for the same rigorous and quality review process, in the shortest time frame possible.

A special September issue will be published for quality papers submitted to the Symposium on Micro/Nano Scale Fabrication Processes at the 2014 ASME Manufacturing Science and Engineering Conference in Ann Arbor, Michigan. This special issue is dedicated to the latest research efforts on non-traditional manufacturing processes at small scales, ranging from novel process development and simulation, to advanced material characterization. Guest Editors Prof. Cheryl Xu of the University of Central Florida, and Dr. Hongqiang Chen of General Electric worked diligently in leading the peer-review and publication of this issue. Our Editorial Board member, Prof. Nicholas Fang of MIT also offered his assistance with this publication. We are pleased with the results and are proud to share this issue with our readers.

The past year has seen the departure of three Editorial Board members, Dr. Hitoshi Ohmori from the Institute of Physical and Chemical Research (RIKEN), Dr. Ashutosh Sharma from the Indian Institute of Technology at Kanpur, and Dr. J. Rhett Mayor from the Georgia Institute of Technology. Having helped to establish this journal from the beginning, their work was fundamental to the success of JMNM and I am certainly appreciative for their support. We have also welcomed a new member to our Editorial Board, Dr. Sangkee Min from the Lawrence Berkeley National Laboratory. Dr. Min’s background and experience at private companies and national labs will add needed diversity to the current Editorial Board and we look forward to working alongside him. I am proud to work with a team of
international experts on the JMNM Editorial Board who provide expertise and conduct the peer-review process for our full-length research papers and technical briefs.

At the recent ASME Manufacturing Engineering Division Conference Banquet Dinner, we were excited to announce the creation of the Ehmann Medal. This newly named medal acknowledges the profound impact of Professor Kornel Ehmann’s work on micro- and nano-manufacturing. The Ehmann Medal will be awarded every year for the best paper published in JMNM.

On behalf of the Editorial Board, I would like to thank the authors and reviewers for their continued support of JMNM. Particularly, we would like to express our sincere gratitude to our journal assistant Mrs. Maegen Gregory, for her extraordinary organization skills and her dedication to JMNM. 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.

Please submit your manuscripts to JMNM at http://journaltool.asme.org.

**Honors Committee Reports**

**Blackall Machine Tool and Gage Award**

Submitted by Shreyes Melkote - Committee Chair

The Blackall Machine Tool and Gage Award is presented for the best current 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 be clearly concerned with or related to the design or application of machine tools, gages, or dimensional measuring instruments, submitted to ASME for presentation and publication.


**William T. Ennor Manufacturing Technology Award**

Submitted by Shreyes Melkote - Committee Chair

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 Ennor awardee for 2014 is Professor Placid M. Ferreira of the University of Illinois, recognized for his contributions in the field of nanoscale manufacturing and manufacturing systems control.
**Chao and Trigger Young Manufacturing Engineer Award**

Submitted by Shounak Athavale - Committee Chair

The award recognizes a young manufacturing researcher under 40 with potential for significant fundamental contributions to the science and technology of manufacturing processes.

The Chao and Trigger awardee for 2014 is Professor Ibrahim T. Ozbolat. This researcher was chosen for his contributions to bioprinting for 3D tissue and organ manufacturing.

**M. Eugene Merchant Manufacturing Medal of ASME/SME**

Submitted by Jian Cao - Committee Chair

On behalf of the members of the M. Eugene Merchant Medal of ASME/SME award selection committee, it is our great pleasure to announce this year’s awardee, Dr. Dean Bartles of the Digital Manufacturing & Design Innovation Institute at UI Labs for his pioneering contributions to tank, mortar and artillery ammunition production processes as well as the multiple launch rocket system demilitarization process, which resulted in improvements in production rate efficiency, environmental control and energy utilization.

The M. Eugene Merchant Manufacturing Medal of ASME/SME is awarded 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 the manufacturing operation(s). This award was established in 1986 in honor of M. Eugene Merchant.

The selection committee consists of three immediate past recipients, ASME/MED Vice Chair, ASME MTG leader, three members-at-large, SME President and the committee Chair. The committee unanimously praised the extraordinary quality of each candidate and thoroughly discussed their major achievements and how those achievements reflected or matched what this particular award is intended for. Dr. Dean Bartles emerged as the committee’s top choice due to his leadership and vision for important advances in improving manufacturing efficiency. Dr. Bartles received his award at the SME International Awards Gala on June 9, 2014 at Cobo Center in Detroit. Congratulations to Dr. Bartles for receiving this prestigious award!

The nomination of this award is due annually by February 1. Information on how to nominate a candidate and past recipients can be found at https://www.asme.org/about-asme/get-involved/honors-awards/

**Milton C. Shaw Manufacturing Research Medal**

Submitted by Shounak Athavale - Committee Chair

Milton C. Shaw Manufacturing Research Medal was established in 2009. However the medal was awarded first time in 2011. The award recognizes significant fundamental contributions to the science and technology of manufacturing processes. The nominations are due to the Honors Committee by February 1st. The nominations are considered for five calendar years beginning the first year of consideration. Nominations can be revised each year. Nomination forms and rules are available on the ASME web site.

The 2014 Milton C. Shaw Manufacturing Medal Committee reviewed and evaluated eight nominees for this award. It was the Committee’s conclusion that Prof. Albert J. Shih’s fundamental contributions to advancing manufacturing
science and engineering as evidenced by research in super-abrasive grinding in high-volume production and by research related to advanced medical devices and healthcare operations are significant and worthy of the award. Congratulations to Professor Shih on receiving this award.

Past recipients of this award are: Prof. Hoshi (2011), Prof. Ehmann (2012), and Prof. Jawahir (2013).

**Nomination Deadline for All Awards above:**

**February 1 annually.** Please visit the ASME MED awards website for details:

https://community.asme.org/manufacturing_engineering_division/w/wiki/3659.honors-awards.aspx

**Upcoming Events**

**10th ASME International Manufacturing Science and Engineering Conference**

Submitted by John Ziegert, Gracious Ngaile, and Frank Pfefferkorn - Conference and Program Chairs

Our next conference, MSEC 2015, will be hosted by Profs. John Ziegert, Scott Smith, Tony Schmitz, and Bridgid Mullany of the University of North Carolina at Charlotte and will be co-located with NAMRC43, ensuring a dynamic event that will draw top manufacturing researchers from throughout the world. The conference will be held during the period, June 8-12, 2015. The MSEC technical program will be chaired by Profs. Gracious Ngaile and Frank Pfefferkorn and will feature multiple technical tracks and symposia (see below). Paper submissions are due Nov. 1. Instructions and schedule for paper submission can be found at [http://www.conferencetoolbox.org/MSEC2015/](http://www.conferencetoolbox.org/MSEC2015/). In addition to the outstanding program of technical presentations, the conference will feature a roster of distinguished speakers, an Early Career Forum, and the opportunity to participate in outstanding industry tours, as well as fun events that allow for networking and socializing with colleagues. We look forward to seeing you in Charlotte in June!
The University of North Carolina at Charlotte is pleased to invite you to attend the 2015 International Manufacturing Research Conference, combining three organizations:

- American Society of Mechanical Engineers (ASME) International Manufacturing Science and Engineering Conference (MSEC 2015)*;

- 43rd North American Manufacturing Research Conference (NAMRC 43), sponsored by the North American Manufacturing Research Institution of the Society of Manufacturing Engineers (NAMRI/SME); and

MSEC is the foremost annual forum sponsored by the Manufacturing Engineering Division (MED) of ASME International. It is intended to disseminate the most recent manufacturing research and development through both technical presentations and panel sessions.

NAMRC is the premier international forum for applied research and industrial applications in manufacturing and design, sponsored by NAMRI/SME. Global academicians, government and industry researchers, engineers, and leaders in manufacturing attend this conference to interact with each other and advance the field.

The conference schedule will include keynote and technical presentations; expert panels; student poster presentations; an exhibition of industry partners; an early career forum; University of North Carolina at Charlotte lab tours; industry tours; an awards banquet; luncheons; and more.

MSEC 2015 Technical Program Summary

Tracks

1. Materials
2. Processing
3. Biomanufacturing
4. Properties, Applications and Systems
5. Sustainable Manufacturing

Symposia (Track)

1. Advances in Experiments and Modeling of Micromechanics and Microstructure Evolution in Manufacturing Processes (Materials)
2. Materials Processing, Microstructure, Plasticity, and Testing (Materials)
3. Advances in Manufacturing of Ceramic and Metal Matrix Composites (Materials)
4. Advances in Abrasive Machining Processes (Processing)
5. Advances in Assisted / Augmented Manufacturing Processes (Processing)
6. Advances in Energy Beam Based Surface Modification (Processing)
7. Advances in Modeling, Analysis, and Simulation of Manufacturing Processes (Processing)
8. Advances in Nontraditional Manufacturing Processes (Processing)
9. Advances in Processing of Polymers and Polymer-Based Composites (Processing)
10. Challenges and Innovations in Additive Manufacturing (Processing)
11. Green Energy Manufacturing (Processing)
12. Innovations in Equipment Design, Tooling, and Control/Automation to Enhance Manufacturing Processes (Processing)
13. Innovations in Joining and Assembly Processes (Processing)
16. Monitoring, Sensing, and Control for Intelligent Machining and Inspection (Processing)
17. Laser, Process Innovations and Energy Field Manufacturing Methodology (Processing)
18. Advances in Manufacturing Processes for Biomedical Materials and Devices (Biomanufacturing)
19. Key Technologies for Cloud Manufacturing (Systems)
20. Information extraction and utilization for monitoring and control of Multistage Manufacturing Processes (Systems)
22. Competitive Manufacturing Engineering (Systems)
23. System and Sustainability Considerations for Emerging Manufacturing Technologies (Sustainable)
24. Sustainable Manufacturing Technologies and Practices (Sustainable)
25. Sustainable Manufacturing Processes and Systems (Sustainable)

Submissions will only be accepted via the conference website at http://www.asmeconferences.org/msec2015/