

**ERM Business Meeting Agenda**  
**Tuesday, June 27, 2017**  
**5:00-6:00pm**  
**Delaware A, Hyatt Regency Columbus**

1. Welcome & Review of the Agenda (Monica Cardella)
2. Consent Agenda
  - Secretary/Treasurer – Jeremi London
  - Vice Chair for FIE 2016 Programs – Holly Matusovich; no report
  - Vice Chair for FIE 2017 Programs – P.K. Imbrie; no report
  - Vice Chair for ASEE 2017 – Matthew Verleger
  - Vice Chair for ASEE 2018—Deborah Gryzbowski
  - Vice Chair for Publications – Geoffrey Herman
  - Nominating Committee Chair – James J Pembridge
  - Apprentice Faculty Grant Committee Co-Chairs – Nadia Kellam & Samantha Brunhaver
  - Benjamin Dasher Award Committee – Noemi Mendoza; no report
  - Helen Plants Award Committee – Jaqi McNeil
  - Best Paper Award for 2016 ASEE Conference – David Knight
  - Diversity Delegate/At Large Director – Julie Martin
  - Interdivisional Cooperation Delegate/ At Large Director – Alan Cheville
3. Additional Updates from the Executive Board/Officers
4. Introductions Around the Room
5. Thank You
6. Opportunities to Get Involved with ERM
7. Strategic Plan Updates and Committee Meetings
  - Building Community
  - Promoting Research
  - Promoting Teaching Practices
  - Supporting Training
  - Becoming a Voice in Policy
8. PIC Chair Report – Terri Reed
9. Other Business

## Reports from ERM Officers

### Chair

*Submitted by Monica Cardella on June 22, 2017*

As I prepare to “pass the hat” to our new division Chair, four key priorities for the division that stand out in my mind are:

- Being a welcoming division
- Providing opportunities for people to get involved with ERM
- Ensuring that our paper review processes are fair and consistent
- Connecting with other divisions and communities.

I believe that these priorities are related. It is difficult for us to be a welcoming division if we do not have opportunities for people to get involved with ERM, or if authors feel that their papers are not reviewed fairly. Additionally, being well-connected to other ASEE divisions and other professional communities also positions us to be able to be a welcoming division.

Providing opportunities for people to get involved with ERM was both exciting and challenging for me as chair. It often seemed like there were far more people interested in serving the division (thank you!) than there were service opportunities. My goal in creating committees related to the five areas of our strategic plan was to both make progress towards our strategic goals, and also provide more opportunities for people to get involved in ERM.

With regards to paper review processes, for several ERM has talked about creating resources, workshops, trainings, etc. that will help people to be good reviewers. This can ensure a good review process for our ASEE and FIE conference papers as well as provide opportunities for engagement in ERM. While we have much to celebrate in terms of the number of people active in the review process, the overall quality of the reviews, and the new approaches Matthew Verleger has used for assigning reviewers to papers, there is still room to help those who are new to reviewing papers become confident and skilled in their reviews.

Finally, in the past year there has been increased interest across DBER (disciplinary-based educational research) communities towards a more unified STEM DBER community – where DBER researchers focusing on chemistry education, physics education, mathematics education, engineering education, etc. better connect with each other in order to support each other’s scholarship, learn from each other, and collaborate to tackle research topics that cross our disciplinary-based educational research fields. You can learn more about the new STEM DBER Alliance here:

<http://serc.carleton.edu/StemEdCenters/news/169928.html>

### Secretary/Treasurer Report

*Submitted by Jeremi London on June 19, 2017*

- ASEE Accounting continues to make progress toward providing more timely updates on account details (i.e., transactions, balances). The last detailed report about ERM accounts was shared on June 19, 2017. It included the account details up to September 30, 2016.
- Account balances as of September 30, 2016  
BASS account: \$42,519.12  
Operating account: \$1,408.00
- The outstanding transactions mentioned in the most recent Secretary/Treasurer report (drafted October 2016, after FIE 2016 conference) have been paid.
- Since December 2016, there have been other transactions (e.g., best paper award 2017, AFG award 2017, deposits for ASEE annual conference activities, deposits associated with FIE). The account balance does not reflect these most recent transactions.

### Vice Chair for ASEE 2016

*Submitted by Lisa Benson on June 12, 2017*

ERM’s proposal for a Distinguished Lecturer was accepted this year. We will be sponsoring Dr. Jim Pellegrino’s presentation, “The Integration of Teaching, Learning, and Assessment: A Design-based Approach.” This year’s ERM Distinguished Lecture

builds on “ASEE’s Year to Commit to P12 Engineering Education,” with the goal of appealing to multiple divisions across ASEE, and to address the urgent need for research to translate to practice in engineering education. Dr. Pellegrino has a unique perspective on how to affect change in educational systems and learning environments. His expertise in cognitive science, psychometrics, educational technology, instructional practice, and educational policy, combined with his activities on multiple national level boards and programs, will help provide insight for researchers and practitioners alike into how students learn and conditions that will prepare students for life after college.

The Distinguished Lecture will be given on Wednesday, June 28, 9:45 AM to 11:15 AM (session W214) in Ballroom II, Columbus Convention Center.

### [Vice Chair for ASEE 2017](#)

*Submitted by Matthew Verleger on June 10, 2017*

#### Conference Papers:

The call for papers was posted in early August 2016.

Changes included:

- (1) WIPs were not separated into their own sections/grouping as they were for the 2016 conference.
  - a. The change for WIPs was an oversight in the process by the program chair. One issue that caused the oversight is the lack of ability to get WIP status in a downloadable format. Authors indicate it as part of their upload but that information is not contained in any of the paper data download options obtained through Monolith. This makes it difficult to have separate processes for WIPs, as they are hard to identify if authors did not include WIP in the title as requested (and many didn’t).
  - b. I recommend that ERM push ASEE to improve their download/reporting tools in Monolith. There is a lot of captured data that is not available in an offline format necessary for handling the number of papers ERM receives.
- (2) Page limits were added. 4 pages for WIPs and 12 pages for full papers.

- a. The limits were mostly added because of excessively long papers that were a burden on peer reviewers.
- b. Peer reviewers were specifically told not to reject a paper only because of exceeding the page limit, though it should be noted in the feedback. This was also the approach I generally took to accept/reject decisions.
- c. It was clear that many authors did not read the call for papers.
- d. I recommend keeping this policy in future years.

A total of:

- 258 abstracts submitted
- 16 abstracts withdrawn before review (likely to submit to another division)
- 21 abstracts rejected, 48 formally withdrawn before draft submission, 18 no draft uploaded, 158 sent to draft review
- 22 draft papers rejected
- 2 papers withdrawn after draft review.
- 4 papers asked for a rewrite and did not submit requested revision.
- 130 accepted & finalized for publication
  
- 447 accepted reviewers
- 3 reviewers were randomly assigned to each of remaining 242 abstracts
- 3 Reviewers were assigned draft reviews using reviewer/reviewee keyword profiles
  - o All accepted reviewers had prior ASEE publications analyzed to identify words disproportionately used in their prior work.
  - o All draft papers were similarly analyzed to identify words used disproportionately more compared to other draft papers.
  - o Matches were made to maximize reviewer expertise on each paper while limiting papers to three reviewers and reviewers to two reviews.
  - o 7 reported potential conflicts of interest. If reviewers felt they should recuse, the paper was arbitrarily reassigned.
  - o This material is based upon work supported by the National Science Foundation under Grants No. EEC-1264005 "Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

### Special Sessions and Workshops

This year, we had 2 special sessions and 7 workshop proposals. Peer review was done on all but 1 of the workshops/special sessions (see below).

- 1 workshop was rejected
- 1 workshop was withdrawn by the presenters
- 1 workshop (the one not put through peer review) is a proposed annual ERM workshop.
  - o W514D·WEDNESDAY WORKSHOP: ERM Presents! An Introduction to Research Methods in Engineering Education
  - o This year is being jointly held with Biomedical Division who asked us for a session on doing educational research more effectively.
  - o Goal is to annually present an “introduction to research”
  - o Looking for someone to put this on next year. The purpose of the session is to broaden the adoption/understanding of some of the techniques that are used by ERM members.
- All 5 workshops were accepted by PIC chairs.

### Distinguished Lecturer

Jim Pellegrino was selected and accepted as our distinguished lecturer. His talk, “The Integration of Teaching, Learning, and Assessment: A Design-based Approach” will be Wednesday, 9:45 AM – 11:15 AM in Ballroom II.

(Also, shout out to Student Division for their distinguished lecturer getting picked up. Matt King is a blind engineer working as an Accessibility Specialist at Facebook. If Jim’s talk had not been accepted, ERM would be co-sponsoring this session.)

### Other ERM Sessions

- ERM will again be participating in the Division Mixer on Sunday evening, 4:00 PM – 5:30 PM.
- ERM will sponsor a welcome breakfast for new members on Monday at 7:00 AM at the Hyatt Regency. This session was added late due to issues about the time and not overlapping the session with the morning Plenary. Thank you to Kathryn Jablow, Brent Jesiek and Jeremi London for heading this up.

### Looking Around

EXTENSIVE thanks to Lisa Benson for compiling a 29-page handbook on being Program Chair. This document proved amazingly helpful. I intend to add to/edit this book for Deb and make it a living document for future program chairs to ease the pain of being ERM program chair.

### Vice Chair for ASEE 2018

Brouhaha will be held at Huntington Park, 6:30-11pm. Attendance is projected to be similar to last year (118 as of 06/22, with anticipated 150 total). Attendees will meet Columbus Clippers Mascot Lou Seal in the Lobby of the Hyatt (attached to the Convention Center) at 6:15 PM for an expertly guided walk to Huntington Park. At Huntington Park we will enjoy fun & games with inflatables, corn hole, and of course some adult beverages in the Left Field Hall of Fame Bar. The event features hot hors d'oeuvres and multiple action stations including a sundae bar!

Tickets are still available, as of 06/22: \$75.00 advanced registration and \$85.00 on site registration.

### Vice Chair for Publications

*Submitted by Geoffrey Herman on June 12, 2017*

- I have migrated everything over to the new ASEE approved site format and should hopefully have it finalized by the conference.
- Glen Livesay has shared examples of the ERM bookmark and distinguished lecture brochure to use to create this year's print resources.

## [Nominating Committee Report](#)

*Submitted by James Pembridge on June 8, 2017*

Chair: James J Pembridge

Committee: Archie Holmes, Rebecca Reck

The Nominating committee held elections for ERM Chair and two (2) Directors.

A call for nominations was distributed through the ERM Announcements on March 1, 2017 and accepted for through March 17, 2017. During this time, the nominating committee and general members of ERM nominated nine candidates were nominated for Chair and nine candidates were nominated for Director. All nominated candidates were contacted and given the option to accept or decline the nomination. Three candidates accepted their nominations for Chair:

- Trevor Harding, PhD
- Holly Matusovich, PhD
- Sarah Zappe, PhD

and eight candidates for Director accepted the nomination and were placed on the ballot:

- Stephanie Cutler, PhD
- Allison Godwin, PhD
- Jacob Grohs, PhD
- Micah Lande, PhD
- Jaqueline McNeil, PhD
- Noemi Mendoza Diaz, PhD
- Marissa Orr, PhD
- Matthew Verleger, PhD

The ballot was reviewed, edited, and confirmed by the Nominating Committee, Chair, and At- Large-Director (focused on diversity and inclusion) to ensure the ballot was appropriate and diverse. An electronic voting system was developed using SurveyMonkey and was reviewed by the Chair and Nominating Committee. In addition to the officer elections, the following proposed bylaw changes were added to the ballot:



*Motion:* revise the ERM bylaws to add a diversity & inclusion statement, a standing committee focused on diversity & inclusion, and the chair of this committee as a member of the ERM executive board. This proposed bylaw change has been voted on and unanimously approved by the ERM executive board.

The ballot was distributed to the ERM division through the ERM Announcements on April 1 with a link to the survey. On April 3, it was identified that one of the candidate profiles was not loading correctly in SurveyMonkey. The error was corrected, the casted ballots were cleared, and an email was sent to ERM community noting the error and requesting that all members resubmit their vote on April 3.

The ballot was open for two weeks, closing on April 17 with a reminder being sent out in the April 13 and April 17. During this time 255 votes were cast out of ~1420 current members (18%).

Votes were tallied for the Chair and ranked-choice voting ("instant runoff" voting) was used for the Directors. **The results of the election are:**

**Chair: Holly Matusovich** (52% of the votes)

**Director: Allison Goodwin** (ranked #1 or #2 by 49% of voters) **Director: Matthew Verleger** (ranked #1 or #2 by 33% of voters)

Thank you to all the board members who nominated candidates, those that voted, and everyone that assisted the Nominating Committee.

### [Apprentice Faculty Grant Committee](#)

*Submitted by Nadia Kellam & Samantha Brunhaver on June 19, 2017*

This year we received 29 applications for the 2017 ASEE-ERM Apprentice Faculty Grant (AFG) program. We asked previous award winners and ERM members for volunteers, and were thankful to have 28 ERM members step forward to be reviewers for this year's award selection. It was a very competitive set of applicants and the decision was difficult to make.

This year we are awarding four AFG winners:

- Cory Hixson from Rowan University,
- Rebecca Reck from Kettering University,
- Brooke Coley from Arizona State University, and
- Stephanie Cutler from Penn State University.

### [Helen Plants Award Committee](#)

*Submitted by Jaqi McNeil on June 12, 2017*

#### 2016 Representatives

- ERM: Jaqi McNeil ([j.mcneil@louisville.edu](mailto:j.mcneil@louisville.edu))
- Computer Society: Mats Daniels ([mats.daniels@it.uu.se](mailto:mats.daniels@it.uu.se) )
- Education Society: Melany M. Ciampi ([melany@copec.eu](mailto:melany@copec.eu) )

Nine special sessions were evaluated (Two were invited and had not gone through the same peer review process thus were not evaluated: Developing ABET Criteria for Undergraduate Cybersecurity Programs and Open Sourcing Education for Data Engineering and Data Science). Attendance varied from just a few to about 30 in all the sessions. Session topics and formats varied greatly. Several sessions were outstanding in different ways, which made the decision difficult.

The winner of the 2016 Helen Plants Award is: **“Innovation T-ball: Everybody Wins,”** run by:

- Dr. Stephanie Cutler
- Dr. Thomas Litzinger
- Dr. Sarah Zappe
- Dr. Michael Alley

The theme of this session was the T-ball game, where the carrying idea was that all players win (or nobody loses) and that everyone has fun. The attendees were divided into groups represented places on the T-ball playing field, where each place represented an aspect of taking a pedagogical idea to practice. Each attendee was asked to come up with an idea for a learning activity they wanted to try out. Some of

these ideas were presented and handed over to one of the groups to consider the aspect, e.g. scalability, represented by that place.

All groups discussed among themselves, but the particular group were the ones presenting the issues they discussed before opening up to everyone. All groups moved to a new place between each new idea to discuss. The session organizers contributed with their experience and made sure that each idea got good coverage and kept the discussions going in each group.

The session was well attended and it worked well. The attendees gave the session good grades and positive comments.

### [Best Paper Award for 2017 ASEE Conference](#)

*Submitted by David Knight on May 18, 2017*

**Committee Members/Reviewers:** Six individuals helped review eleven papers nominated for the ERM Best Paper award. The reviewers for this year were:

- Courtney Faber
- Allison Godwin
- Jake Grohs
- Justin Hess
- Laura Hirshfield
- Walter Lee
- Jacqueline McNeil
- Nicole Rynearson

### **Selection Process**

In March 2017, fifteen papers were identified that had either received a Best Paper rating from a single reviewer or had rating of Excellent from two reviewers. Four of those papers were removed from consideration because they were Works in Progress. The eleven remaining papers were the finalists for the ASEE Best Paper Award for the ERM Division, which were passed to a set of reviewers. Each reviewer was asked to review three papers in a preliminary round using the ERM Best Paper scoring rubric. No two reviewers were paired together across multiple papers. Scores were calculated in an absolute (i.e., raw score) and relative sense (i.e., ranking and z-scores), and the top three papers across those scoring methods were moved into a second round of

review. All reviewers then read and scored those three papers using the scoring rubric. Scores for each paper were investigated from both an absolute and relative scoring system, and overall results were presented to the set of reviewers for comment. Members of the committee were satisfied with the final scoring result, and no subsequent meeting was required.

### **Decision Timeline:**

March 7, 2017 – ERM Best Paper finalist draft papers identified.

March 8, 2017 –Drafts of papers received and assigned to reviewers for round 1.

March 24, 2017 – Round 1 scores due. Scores tabulated and circulated to committee.

March 27, 2017 –Drafts of papers assigned to reviewers for round 2.

April 14, 2017 – Round 2 scores due. Scores tabulated and circulated to committee.

April 26, 2017 – Winning paper sent along to ERM ASEE Program Chair.

### **Final Result**

Paper Title: *Measuring students' subjective task values related to the post-  
undergraduate career search*

Authors: Samantha Brunhaver, Cheryl Carrico, Holly Matusovich, Mitikaa Sama, Rohini  
Abhyankar, Ruth Streveler, and Sheri Sheppard

The paper is being presented in ERM's "Life After Graduation" session – Monday, 1:30  
– 3:00 in room C160A.

### Diversity Delegate/At Large Director

*Submitted by Julie Martin, June 20, 2017*

This past year, ERM board voted to include a diversity statement in the ERM by-laws and approved the creation of a standing Diversity and Inclusion Committee, which I am chairing. The new statement is as follows: "ERM recognizes diversity, inclusion, and equity as core values in educational research. The division encourages its members and leaders to think broadly about these topics, and to consider both the observable and non-observable characteristics of individual ERM members, the institutions they represent, the positions they hold, the research and pedagogical methods they use, the populations they study and teach, and epistemologies they espouse."

The following members have expressed interest in serving on the committee, and will be working in the coming year to solidify the committee's charge and processes: Kelly Cross, Alex Mejia, Renata Revelo and Allison Godwin. Other interested members are encouraged to contact me at martin1@clemson.edu.

As the Diversity and Inclusion Committee chair, I have begun to assist with ERM's organizational processes. For example, I worked with the Nominations Committee chair, Jay Pembridge, to review the slate of candidates for ERM elections with respect to the new bylaws statement.

Additionally, the Diversity and Inclusion committee took responsibility for review and selection of the ERM Best Diversity Paper. Matthew Verleger, ERM Program Chair, identified five nominated papers, then sent them to me to oversee review and scoring. I ensured that at least four reviewers scored each nominated paper using the society-wide Best Diversity Paper rubric.

Congratulations go to authors Emily E Liptow, Coleen Carrigan, Michelle Helene Bardini, Noah Robert Krigel, and Monica Lauren Singer on their paper entitled, "Engaging engineers in inclusive cultural change through a new method, Articulating a Succinct Description." The paper is being presented in ERM's "Diversity and Inclusion" session – Monday, 3:15 – 5:15 in room C160A.

The program chair forwarded the ERM Best Paper to the ASEE-wide competition. Thanks go to the following Diversity and Inclusion committee members and past AFG winners for serving as reviewers:

- Ana Rynearson,
- Jaqi McNeil,
- Laura Hirschfield,
- Walter Lee,
- Katie Nelson,
- Kelly Cross and
- Alex Coso Strong.

As ERM's delegate to the ASEE diversity committee, I am also participating in ASEE Diversity Committee meetings and a subcommittee. Please stop by the Diversity Committee booth in the Exhibit Hall during the conference to learn more about ASEE-wide diversity efforts.

#### [Interdivisional Cooperation Delegate/ At Large Director](#)

*Submitted by Alan Cheville June 20, 2017*

See attached:

- The Annual Report & Recommendations of the Connecting Us Team, Strategic Doing Initiative (Ad Hoc Committee on Interdivisional Cooperation)
- Report of the Ad Hoc Subcommittee on ASEE Publications & Policies