

ASEE Multidisciplinary Engineering Division Business Meeting Minutes

7:00 - 8:30 am CST

Wednesday, June 27, 2022

1. Welcome from the Division Chair and Attendance

Cindy Barnicki	barnickc@msoe.edu ;	(Division Chair)
Lynn Albers	lynn.albers@hofstra.edu ;	(Program Chair)
Duncan Davis	d.davis@northeastern.edu ;	(Secretary/Treasurer) + K-12 Rep
Victoria Bill	victoria.bill@nyu.edu ;	(CDEI Delegate)
Ruby Mehrubeoglu	ruby.mehrubeoglu@tamucc.edu ;	(Town Hall Rep)

Attendees:

Eric Rice	ericmrice@gmail.com
Trevor Mackeset	tmackes1@jhu.edu
Bill Smedick	smedick@jhu.edu
Shuvra Das	dass@udmercy.edu
Yuchen Huang	yuchen@pdx.edu
Nathan Kathir	Nkathir@gmu.edu
Lucas Faria de sa Tucker	fariadesatucker.l@northeastern.edu
Cory Budischak	coryb@temple.edu
Ruth Ochia	ruth.ochia@temple.edu
Matt Aldeman	maldema@ilstu.edu
Stephen Wilkerson	swilkerson@ycp.edu
Scott Kiefer	skiefer@ycp.edu
Cristian Vargas Ordonex	cvargaso@purdue.edu
Ruben Dario Lopez	rlopezpa@purdue.edu
Ciana Winston	winston.c@northeastern.edu
Jada Wong	wong.jad@northeastern.edu
Susan Tripathy	susan_tripathy@uml.edu
Trina Kershaw	tkershaw@umassd.edu
Lizzie Meier	el.meier@ufl.edu
Edward Latorre	elatorre@ufl.edu
Brian Faulkner	faulkner@msoe.edu

2. PIC V Chair Report - Maureen Barcic, University of Pittsburgh (Retired)

- 1365 Unique Talks, 3119 Unique Co-Authors, and 3022 Attendees
- ASEE headquarters insists that all visitors be vaccinated for the safety of their employees.
- 5/9 proposals for Special Projects came from our PIC
- Issues with Slayte - she is going to discuss with the CEO of Slayte at 8 pm tonight
- JEE Editor open
- VP of Scholarship open
- PRISM leadership changing
- Impexium new system coming through next year
- 30% ASEE cut is gone this year
- 2023 Conference: in person in Baltimore

3. Circulation of business meeting minutes from 2021, and approval decision

Business Meeting Minutes from 2021 were presented by Lynn Albers. A motion was made by Cindy Barnicki to accept the minutes as written and seconded by Duncan Davis. The motion passed unanimously.

4. Division officers

- Current officers (June 2021 - June 2023)
Immediate Past Division Chair: **AJ Hamlin**, Michigan Technological University
Division Chair: **Cynthia Barnicki**, Milwaukee School of Engineering
Vice Chair/Program Chair: **Lynn Albers**, Hofstra University
Secretary/Treasurer: **Duncan Davis**, Northeastern University
- New Positions
Webmaster: **Edward Latorre**, University of Florida
Executive Director at-Large: **Yuchen Huang**, Portland State University
P12 Rep: **Jim Olson**, Rensselaer Polytechnic Institute
CDEI Rep: **Cristian Vargas Ordonez**, Purdue University

5. Division Chair Report – Cynthia Barnicki

- Membership in the Multidisciplinary (MULTI) Division - 1236
- Open MULTI positions voted upon

6. Program Chair report – Lynn Albers

- Division program demographics
- Distinguished Lecture W17644: \
 - “Renewable Energy Education, Training and Outreach in the Midwest” by Nick Hylla, Energy Conversion Conservation and Nuclear Division (lead) with the Ocean and Marine Division, and Instrumentation Division

- MULTI received 64 abstracts, 35 papers, and published 34 papers.
- 2022 MULTI Best Paper:
 - “Industry Assessment of Multidisciplinary Teamwork Skills” by Dr. Illysa Izenberg, Johns Hopkins University; Dr. Steven Marra, Johns Hopkins University; Trevor MacKesey, Johns Hopkins University; Leslie Kendrick, Johns Hopkins University; Jenny Bernstein, Johns Hopkins University.
- 2022 MULTI Best Diversity Paper
 - “Experiences of Students supported by an NSF S-STEM Grant in a Robotics and Mechatronic Systems Engineering program” by Dr. Shuvra Das, University of Detroit Mercy.

7. Finance Report – Duncan Davis

- a. BASS Account \$3030.84 rolled forward to FY2021
- b. ASEE Membership Allocation funds of \$1236 applied to FY2022
- c. BASS Account balance of \$4268.11 as of Q4 FY2022

8. MULTI Representative/Delegate Committee Reports

a. Commission on Diversity, Equity, and Inclusion - Victoria Bill, NYU Tandon School of Engineering

- Missing this year

b. P-12 Engineering Education Committee - Duncan Davis, Northeastern University

Activities of the P-12 Engineering Education Committee are listed with corresponding links.

- ASEE Engineering Teacher Prof Dev Endorsement (<https://etpde.asee.org/>)
- bit.ly/PCEEMAP - map of many P12 opportunities divided by state
- bit.ly/PCEEMAPFORM - add an opportunity that you know about
- P12 Spotlight (<https://sites.asee.org/p-12committee/category/news/p12-monthly-spotlights/>)
- Summer Camps (<https://sites.asee.org/p-12committee/2020/06/05/asee-p12-summer-camps/>)
- 2021 Signups - (<https://drive.google.com/file/d/1SQFH3EJ7tJpEI70vcmrp0FN0l2I4ggOZ/view>)
- P12 Speakers Bureau - Signups: (<https://forms.gle/e1eTSnrD4eichmPL8>)
- Engineering for Us All (<https://e4usa.org/>)
- Framework for P12 Engineering Learning (<https://p12framework.asee.org/>)
- P12 Engineering Workshop (happens in June)

c. Interdivisional TownHall - Ruby Mehrubeoglu, Texas A&M University - Corpus Christi

The Town Hall video is at minute 21: <https://www.youtube.com/watch?v=r9-P0lM32T8>

- Topic 1: The Engineers of the 2030s versus the Engineers of 2020s.
- Topic 2: Engineering a More Just World
- Topic 3: Mentorship, Instruction, and Coaching in Engineering Education and Industry
- Topic 4: Preparing Stewards of the Profession
- Prompt 1: Based on what you heard about new knowledge and skills students will need to become tomorrow's engineer, what new areas of faculty professional development will be most needed in the future?
- Prompt 2: What benefits would an ASEE initiative that provides national recognition for faculty professional development have for engineering and engineering technology education broadly? How would recognition of such professional development benefit you personally in your current role?
- Prompt 3: What are the potential barriers at your institution that might affect offering professional development opportunities, or recognizing instructors and faculty that invest their time in pursuing such opportunities? What would be needed to overcome these barriers?

d. ABET Activities Committee (AAC): Gayle Ermer, Calvin University

- Come join ABET as a reviewer
- Learn about the ABET process
- ASEE assigns reviewers to general engineering programs
- This committee coordinates with ABET for general engineering programs

9. Adjournment 8:30 p.m. CST

Appendices

Appendix A - Business Meeting Agenda

ASEE Multidisciplinary Engineering Division

Business Meeting Agenda

Monday, June 27, 2022

1. Circulation of sign-in sheet and self- introductions
 1. Estimated attendance based on signup – 20 to 30

2. Welcome from Division Chair

3. PIC V Chair Report: Maureen Barcic (her schedule permitting)

4. Introduction of officers (July 2021-June 2023)
 - Immediate Past Division Chair: **AJ Hamlin**, Michigan Technological University
 - Division Chair: **Cindy Barnicki**, Milwaukee School of Engineering
 - Vice Chair and Program Chair: **Lynn Albers**, Hofstra University
 - Secretary/Treasurer: **Duncan Davis**, Northeastern University
 - Webmaster: **OPEN**

5. Circulation of business meeting minutes from July 28, 2021, and approval decision

6. Division Chair Report
 - Meeting and Division Demographics
 - Update on Division By-laws
 - Overview of Committees
 - ✓ Commission on Diversity, Equity and Inclusion (CDEI)
 - ✓ P-12 Engineering Education Committee
 - ✓ ABET Activities Committee (AAC)
 - ✓ Interdivisional Town Hall
 - New Positions for Officers:

- ✓ Director at large (2)
- Future Directions for Division

7. Program Chair Report

8. Treasurer Report

Balance as of end of 2021: \$4,268.11
1,236 members of MULTI (as of 9/30/2021)

9. Committee Reports:

- ✓ Commission on Diversity, Equity and Inclusion (CDEI): Victoria Bill
- ✓ P-12 Engineering Education Committee: Duncan Davis
- ✓ ABET Activities Committee (AAC): Gayle Ermer
- ✓ Interdivisional Town Hall: Ruby Mehrubeoglu

10. Election for Director at Large position(s)

Appendix B - Program Chair Report

**2022 ASEE Annual Conference & Exposition
July 26-29
Multidisciplinary Engineering Division
Program Chair's Report**

Submitted by Lynn Albers
Hofstra University
June 27, 2022. 7:00 PM (CDT)

The program for the Multidisciplinary Engineering Division (MULTI) at the 2022 ASEE Annual Conference and Exposition (Virtual) comprises seven technical sessions, one panel, a Tuesday afternoon social, and a Business Meeting. MULTI is also a co-sponsor for the following sessions:

- Distinguished Lecture W17644: “Renewable Energy Education, Training and Outreach in the Midwest” by Nick Hylla, Energy Conversion Conservation and Nuclear Division (lead) with the Ocean and Marine Division, and Instrumentation Division

In response to the call for papers, MULTI received 64 abstracts (71 for ASEE 2021 and 68 for ASEE 2020). These 64 abstracts (63 were submitted to the division and 1 transferred from another division) were managed as follows:

Status of Abstract/Paper	Count
Abstracts submitted/transferred in	64
Abstracts not accepted	0
Abstracts withdrawn before review	0
Abstracts transferred out based on reviewers' recommendations	2
Abstract converted to panel request	0
Abstracts accepted/draft papers expected	62
Draft papers not submitted (past deadline but not withdrawn)	0
Draft papers withdrawn by author (i.e., no draft submitted)	0

Draft papers submitted and reviewed	35
Draft papers not accepted	1
Draft papers withdrawn after reviews	0
Draft papers transferred in after review	0
Draft papers approved on draft (no rewrites necessary)	2
Draft papers moved to rewrites	32
Rewrites not accepted	0
Rewrites not submitted (past deadline but not withdrawn)	0
Accepted papers not finalized	0
Final papers accepted for MULTI technical sessions	34
Final papers accepted for MULTI poster session (no poster session)	0
Total final papers accepted for poster and technical sessions	34

Average number of abstracts submitted to MULTI at past 3 years	67.67	Abstracts submitted/transferred in 2022 Abstracts submitted/transferred in 2021 Abstracts submitted/transferred in 2020	64 71 68
Average yield percentage (final papers to abstracts submitted)	52.71%	Yield percentage for this conference (final papers to abstracts submitted)	53.1%

Average number of final papers (3 years)	35.67	Final papers for 2022 conference Final papers for 2021 conference Final papers for 2020 conference	34 39 34
Average number of technical sessions (3 years)	8	Number of 2022 technical sessions Number of 2021 technical sessions Number of 2020 technical sessions	8 8 8
Average number of panel sessions	1	Number of 2022 panel sessions Number of 2021 panel sessions Number of 2020 panel sessions	1 1 1

2022 MULTI Best Paper

“Industry Assessment of Multidisciplinary Teamwork Skills” by Dr. Illysa Izenberg, Johns Hopkins University; Dr. Steven Marra, Johns Hopkins University; Trevor MacKese, Johns Hopkins University; Leslie Kendrick, Johns Hopkins University; Jenny Bernstein, Johns Hopkins University.

2022 MULTI Best Diversity Paper

“Experiences of Students supported by an NSF S-STEM Grant in a Robotics and Mechatronic Systems Engineering program” by Dr. Shuvra Das, University of Detroit Mercy.

2021 MULTI Technical Sessions:

U42203 - Multidisciplinary Engineering Division Technical Session - PBL with Control Theory, Writing, ABET, and Shaping Ethical Worldviews
Sunday, June 26th, 1:15 PM to 2:45 PM, Room 207
Moderators: Cynthia Barnicki, Anna Engelke

U42204 - Multidisciplinary Engineering Division Technical Session - Integrated Engineering and Interdisciplinary Impacts
Sunday, June 26th, 1:15 PM to 2:45 PM, Room 210
Moderators: Duncan Davis, Stephanie Lunn

U4216 - Multidisciplinary Engineering Division Technical Session - Empathy, Metacognitive Skills, and Perceptions of Success
Sunday, June 26th, 3:00 PM to 4:30 PM Room 210
Moderators: Olga Qaqish, Anna Engelke

M42163 - Multidisciplinary Engineering Division Technical Session - NAE Grand Challenges, Graduate Students, Sustainability, and Makerspaces
Monday, June 27th, 9:45 AM to 11:15 AM Room 210

Moderators: Steven “Drew” Wilkerson, Trevor MacKeseey

M4251 - Multidisciplinary Engineering Division Technical Session - Best Paper
Monday, June 27th, 1:45 PM to 3:15 PM Room 210
Moderators: Olgha Qaqish, Rea Lavi

T42115 - Multidisciplinary Engineering Division Technical Session - Best Diversity Paper
Tuesday, June 28th, 3:30 PM to 5:00 PM Room 210
Moderators: Cynthia Barnicki, Ismail Haltas

T42261 - Multidisciplinary Engineering Division Technical Session - Interdisciplinary Capstone
Projects, Pandemic Adapted Mechatronics Lab, Call for Change
Tuesday, June 28th, 3:30 PM to 5:00 PM Room 205D
Moderators: Duncan Davis, Bart Johnson

W42162 - Multidisciplinary Engineering Division Technical Session - Machine Learning, IoT,
Writing Center Peer Tutors, Conceptual Modeling
Wednesday, June 29th, 3:30 PM to 5:00 PM Room 205D
Moderators: Lynn Albers, Ruby Mehrubeoglu

2022 MULTI Panel Session

M42332: Panel Session on Integrated Engineering with Dr. Becky Bates, Minnesota State
University Mankato; Dr. Susan Lord, University of San Diego; Dr. Emanuela Tilley, University
College London; Dr. Jenna Carpenter, Campbell University.
Location: Hyatt Regency, Room Minnehaha
Monday, June 27th, 11:30 AM to 1:00 PM

2022 MULTI Co-Sponsored Distinguished Lecturer:

W17664 Distinguished Lecture: Renewable Energy Education, Training and Outreach in the
Midwest by Mr. Nick Hylla, Energy Conversion Conservation and Nuclear Division lead
Location: Convention Center Auditorium 1
Wednesday, June 29 1:45 PM to 3:15 PM

2022 MULTI Business Meeting:

M42414: Multidisciplinary Engineering Business Meeting
Location: Minneapolis Sculpture Garden
Monday, June 27th 7:00 PM to 8:00 PM

2022 MULTI Social:

M42356: Multidisciplinary Engineering Division Social
Location: Lakes and Legends Brewing Company
Monday, June 27th 8:30 PM to 10:30 PM

Appendix C - Treasurer Report

ASEE Multidisciplinary Engineering Division Treasurer's Report

June 28, 2022

Submitted by Duncan Davis, Northeastern University

THIS YEAR (6/28/2021-6/27/2022)

Account Type	BASS 249
Balance as of 9/30/2021	\$3030.84
<u>BASS Debits:</u> June/2022: Food and Beverage for 2022 Division Social/Meeting 05/24/2022: Transfer to ECCND – Co-Expense- Distinguished Lecture 09/30/2022: ASEE Administrative Fee	 \$156.25 \$0.00
<u>BASS Revenues: (through 9/30/2020)</u> 6/27/2020: 2022 Annual Conf. Session Ticket Sale	
Carry forward to new fiscal year on 10/01/2021	\$3030.84
ASEE Membership Allocation Funds at \$1.00 per member on 10/01/2021	\$1236.00
Interest: 12/31/2021	\$1.27
ASEE administrative fee:	\$0.00
<u>Subtotal for 2021:</u>	\$4,268.11
Debits: (10/1/2021 – 6/30/2022)	

Revenues: (10/1/2021 - 6/30/2022)	
Balance as of 06/27/2022	

Notes:


All account balances are consistent with ASEE records

Appendix D - PIC Report





BEST PAPERS

- **The Impact of Math and Science Remediation Education on Engineering Major Choice, Degree Attainment, and Time to Degree from PIC II**
 - **Best Paper from PIC V is from Design in Engineering Education Division (DEED) and is entitled 'A Comparative Study of Collaborative and Inclusion Skills Development in Capstone Design Teams at Three Different Engineering Institutions'**
- 



SPECIAL FUNDS PROJECTS 2022

PIC V Divisions were involved in five of the nine proposals put forth for Special Projects Funds, with four PIC V proposals being funded.



CONFERENCE NUMBERS

ASEE Conference Numbers

1365 unique authors

3119 unique co-authors

3,022 attendees



**\$50 off membership or
conference registration for
Baltimore for you and a
new member**

**We know Slayte has been a
great obstacle and meeting
on Monday evening....we
will make it right...**


ASEE BOARD MEETING









- From ASEE meeting:
- Strategic Goals and Objectives include:
 - Engage and Retain Existing Members
 - Promote Promising Practices to Increase Access, Diversity, and Inclusion
- Recruit for JEE Editor
- Board Position/Vice President of Scholarship/this person will be responsible for overseeing publications and other communications within ASEE. More details forthcoming. Invite society- based journals to liaison with VP of Scholarship
- TASK FORCE ON DIVERSIFYING ASEE LEADERSHIP

- Changes to Prism/4 print publications, saving \$32,000; many innovative ideas in the works.
- NEW SOFTWARE SYSTEMS through Impexium
- ASEE Website
- ASEE Hub (everyone encouraged to use HUB)
- Slayte (there will be user sessions and opportunities to provide feedback at ASEE conference)
- Peer Web Portal (Hosts conference paper proceedings)
- Learning Management Systems (LMS)



MEMBERSHIP DATA

- 
- 94% Retention of institutional members from last year
 - 67% Retention of Individual members from last year
 -
 - **Upcoming Membership Dues Increase**
 - There has not been a membership increase since 2007
 - 3% Membership dues increase until 2026; will revisit at that time
 - 5% Institutional membership increase for next two years beginning 2023; 3% increase for two following years with a revisit.
 - With this increase, the plan will be to phase out the 30% charge on divisions currently imposed by ASEE, by January 2023

- 
- 
- 
- 
- 
- 
- 
- 
- In good shape fiscally
 - **2022 Membership:**
 - Encourage new members!!! Those here this year are eligible for \$50 fee reduction next year for either membership or conference registration and you can pass along one \$50 credit to a new member
 - 9417 members, 3.5% increase over last year
 - Academic Institutions currently at 418, a decrease from 432 last year
 - 26% increase in non-academic members over last year (now at 48)