Fall 2024 Chair: Chris Venters

Division Website: https://sites.asee.org/mechanics/ Secretary: Adrian Rodriguez

Message from the Chair

Happy fall, and welcome to this edition of the Mechanics Division newsletter! My thanks to Adrian Rodriguez, who has done an excellent job putting it together.

Thanksgiving always seems to creep up on me, but especially this year since I have been on paternity leave since late August. That said, I'll keep things brief, but I want to acknowledge and

give my appreciation to our past chair Geoff Recktenwald for assisting with division business while I am out.

I am very much looking forward to next year's annual conference in Montreal. Dan Baker, this year's program chair, will organize our technical sessions and hands-on mechanics special session. A big thank you to Dan for taking on this task! Everyone's assistance in this process—paying close attention to ASEE deadlines for your own papers as well as providing thoughtful

JOIN US IN MONTREAL June 22-25, 2025

The ASEE Annual Conference & Exposition will be held at the Palais des congrès de Montréal (Montréal Convention Center) in Montreal, Quebec, CA. For more information on the conference, visit:

https://www.asee.org/events/Conferences-and-Meetings/2025-Annual-Conference

and critical paper reviews—is very much appreciated and makes things easier for Dan and us all.

I am also grateful to our Program Chair-elect Anna Howard, who is planning our next division awards banquet (in a different country!). If you are able, consider purchasing your banquet ticket while completing your conference registration. Also, be sure to verify that your division membership is current since there have been some issues with auto-renewal of division memberships.

Finally, please note the call for award nominations in this newsletter and consider nominating yourself or a colleague to be recognized for their important work. Thank you all for your contributions to this great division as members, committee representatives, authors, reviewers, faithful attendees, and in many other capacities. You are what make it special.

Chris Venters

2024-2025 ASEE Mechanics Division Chair Associate Professor East Carolina University ventersc@ecu.edu

Message from the Program Chair

On behalf of the Mechanics Division leadership team, I want to express my appreciation for the opportunity to serve this wonderful community. Our division is the place to connect with other passionate mechanics educators, discover fresh tools for the classroom, and deepen your approaches to teaching engineering students. Also, this division stands out for its spirit of volunteerism—whether it's reviewing papers, moderating sessions, or serving on committees, no ASEE division demonstrates a stronger commitment to stepping up. Thank you to all our members for making the Mechanics Division exceptional.

If you're not yet a member, consider joining through the ASEE website. We've kept our division fees affordable and signing up ensures you receive our well-timed and concise emails that share ASEE deadlines and opportunities to get involved.

Each year, the Mechanics Division recognizes excellence through several awards, highlighting members who have shown commitment, made impactful contributions, or provided strong leadership in mechanics education. If you know a colleague who fits this description, I encourage you to submit a nomination. Details can be found in this newsletter, and while the deadline is late February 2025, now is the perfect time to start gathering letters of support.

Remember, our division welcomes works-in-progress (WIP) papers, which provide an opportunity to share early results and get valuable feedback from our community. If you've submitted a WIP in the past, consider following it up with a full paper at the next conference.

Our Hands-on Mechanics session, jointly with the Civil Engineering Division, remains one of the most popular events. It showcases innovative ways to bring excitement and clarity to the classroom. If you have a classroom demo that's worked well, reach out to me at dan.baker@colostate.edu with your ideas. I want to express a special thank you to Geoff Recktenwald and Chris Venters for planning last year's conference. Finally, our Mechanics Division Banquets, typically on Tuesday night of the conference, are not to be missed!

If you have any comments, questions, or suggestions about the Mechanics Division, please email me at dan.baker@colostate.edu.

I look forward to seeing everyone at the 2025 conference in Montreal, Quebec!

Dan Baker

2024-2025 ASEE Mechanics Division Program Chair Teaching Associate Professor Colorado State University dan.baker@colostate.edu

Mechanics Division News and Announcements

<u>Job Opportunity</u>: Multiple positions available at the University of Southern Indiana Contributed by Julian Davis

The Pott College of Science, Engineering, and Education at the University of Southern Indiana invites applications for three nine-month tenure-track Assistant Professor of Engineering positions with a start date of August 2025. Jul Davis (julian.ly.davis@usi.edu) is happy to answer questions.

- Electrical: Assistant Professor of Engineering: #493432
 https://careers.usi.edu/jobs/assistant-professor-of-engineering-evansville-indiana-united-states-9d70c369-3e1b-4cc6-b858-2ccf9c750800
 - <u>Duties/Responsibilities</u>: This position includes classroom and lab teaching assignments in electrical engineering courses, as well as introductory engineering courses. The selected candidate is also expected to direct student design projects. It is expected that this faculty member will have a research agenda that leads to scholarly works and the engagement of undergraduate students. This faculty member may teach classes in one or more of the following areas: electrical power, electrical machines, signal processing, electromagnetics, circuits, microcomputers, and electronics.
 - Required Knowledge and Skills: Doctorate in Electrical Engineering or closely related field is required. Doctoral candidates may be considered at the rank of Instructor if a terminal degree is not conferred by hire date.
- Mechanical: Assistant Professor of Engineering: #493426
 https://careers.usi.edu/jobs/assistant-professor-of-engineering-evansville-indiana-united-states
 - <u>Duties/Responsibilities</u>: This position includes classroom and lab teaching assignments in mechanical engineering and technology courses, as well as introductory engineering courses. The selected candidate is also expected to direct student design projects. It is expected that this faculty member will have a research agenda that leads to scholarly works and the engagement of undergraduate students.
 - Required Knowledge and Skills: Doctorate in Mechanical Engineering or closely related field is required. Doctoral candidates may be considered at the rank of Instructor if a terminal degree is not conferred by hire date.
- Manufacturing Engineering Technology: Assistant Professor of Engineering: #493429
 https://careers.usi.edu/jobs/assistant-professor-of-engineering-evansville-indiana-united-states-f93e9e08-b53a-4da6-b193-734a25930d3b
 - <u>Duties/Responsibilities</u>: This position includes classroom and lab teaching assignments in engineering and manufacturing engineering technology courses, as well as introductory engineering courses. The selected candidate is also expected to direct student design projects. It is expected that this faculty member will have a research agenda that leads to scholarly works and the engagement of undergraduate students.
 - Required Knowledge and Skills: Doctorate in Engineering or closely related field required. Doctoral candidates will be considered at the rank of Instructor if the terminal degree will be completed by the end of their first year of employment. If employment starts in August 2025, terminal degree must be completed by the end of July 2026.

<u>Job Opportunity</u>: Open Rank Professional Faculty Position – NC State University – Hiring 2 Contributed by Anna Howard

The Department of Mechanical & Aerospace Engineering at North Carolina State University is seeking applications for multiple open-rank professional-track teaching faculty positions (Assistant, Associate, or Full Professor). While the position offers opportunities for promotion, it does not include tenure. We invite applications in all areas related to Mechanical and Aerospace Engineering. Ideal candidates should have experience teaching large classes and a strong interest in research-based pedagogical techniques. Successful applicants will demonstrate a robust track record of scholarship in teaching, a genuine passion for engineering education, and outstanding communication skills. One of the two jobs will focus on Aerospace Senior Design. https://jobs.ncsu.edu/postings/209977

Job Opportunity: Multiple positions available at the University of St. Thomas *Contributed by Jenny E. Holte*

- Tenure-Track Faculty Mechanical Engineering
 https://facultyemployment-stthomas.icims.com/jobs/8184/tenure-track-faculty---mechanical-engineering/job
 - Responsibilities: As a student-focused institution with a strong hands-on curriculum, we emphasize undergraduate and graduate education that provides technical excellence with a significant emphasis on real world applications. Successful candidates will be expected to develop and deliver an engaging set of courses in their area of expertise, as well as establish and maintain an active research program. The search will give special consideration in the areas of Manufacturing, Robotics and Automation, and Engineering Design. Applications from candidates with specialization in all areas of mechanical engineering are welcome.
 - Requirements: A PhD (U.S or Foreign equivalent) in a relevant Engineering discipline is required, or ABD will also be considered, as well as a clearly articulated vision for advancing a research program. For candidates who are nearing the completion of their PhD, a timeline for PhD completion will be discussed during the interview process and agreed upon prior to extension of an offer. All applicants must have demonstrable skills necessary for excellence in teaching. For candidates whose primary experience is in the engineering industry (outside of academia), skill in teaching may be demonstrated based on other professional experiences which require leadership, mentorship and presentation skills.
- Clinical Faculty Mechanical Engineering

https://facultyemployment-stthomas.icims.com/jobs/8183/clinical-faculty---mechanical-engineering/job

- Responsibilities: The primary role of the clinical faculty in Mechanical Engineering will include instructing and developing the Machine Design Lab. This lab teaches students advanced mechanics theories (e.g. static and dynamic failure) and the function of basic machine components (e.g. bearings, linkages, cams, and gears) through a semester-long design project completed in the lab.
- Requirements: A Master's Degree (U.S. or Foreign equivalent) in an Engineering discipline is required, with a preference for Mechanical, Electrical or a related Engineering field. A successful candidate's background will include a breadth of engineering knowledge, with a preference for at least 5 yrs of experience in hands-on application of principles of machine component design, design for manufacture, and

CAD. While a formal background in teaching is not required, a successful candidate must have demonstratable skills necessary for excellence in teaching. For candidates whose primary experience is in the engineering industry (outside of academia), skill in teaching may be demonstrated based on other professional experience which require leadership, mentorship and presentation skills.

Resources: Open Educational Resources (OER) for Mechanics Contributed by Dan Baker and Jacob Moore

Have you ever wanted 100% of your students to have access to the course textbook from the first day of your course until after they have graduated, all free of charge? Open Educational Resources (OER) may be your answer. OER are a high-quality alternative to commercial textbooks, with the opportunities in Engineering Mechanics growing each year. Here are two resources we have written:

- Engineering Statics by Daniel Baker and Will Haynes Engineering Statics is a free, openly licensed textbook used by over 20,000 learners each month. The text covers all the standard Engineering Mechanics: Statics topics and features interactive figures that allow students to test their conceptual knowledge as they read. Additionally, most chapters conclude with a series of algorithmic exercises for students to practice what they have learned.
- Mechanics Map by Jacob Moore The Mechanics Map is another free and openly licensed textbook for engineering statics and dynamics. Used by more than 14,000 learners each month, the resource has written explanations, video lectures, hundreds of worked examples with both written and video solutions, and a full set of homework problems.

Outside of the content that the article's authors have created and used themselves, several other open resources exist. Below are just a few examples of open content you might consider incorporating into your courses.

- Mechanics of Materials by David Roylance This book was written as part of the
 Massachusetts Institute of Technology Open Courseware Project and has since been brought
 into <u>LibreTexts</u>, where students, faculty, and outside experts work together to build freely
 available open education resources (OER). LibreTexts has a convenient remixing feature that
 allows an instructor to pull content from various books and have it remixed into a cohesive,
 custom online text.
- <u>Engineering at Alberta</u> Hosted by the University of Alberta, this resource includes content for a number of introductory and advanced mechanics courses, including statics, solid mechanics and FEA, vibrations, and advanced dynamics.
- Engineering Mechanics: Statics by Libby Osgood, Gayla Cameron, Emma Christensen,
 Analiya Benny, and Matthew Hutchison This textbook is built in the popular Pressbooks
 system. The book pulls heavily from Mechanics Map discussed earlier but expands upon and
 adapts the content, bringing it in a different direction as is allowed with some of the Creative
 Commons licenses.
- Applied Fluid Mechanics Lab Manual by Habib Ahmari and Shah Md Imran Kabir
 – This lab manual provides students with the theory, practical applications, objectives, and laboratory procedure of ten experiments. The manual also includes educational videos showing how students should run each experiment and a workbook for organizing data collected in the lab and preparing result tables and charts.
- <u>Hands-On Mechanics</u> Last but not least, the Mechanics Division hosts a website full of hands-on activities shared by our members that you can bring into your classroom. The site

is curated by Devin Berg, longtime webmaster for the division, and the system allows for anyone to upload and share their own materials as well as a system for reviewing content.

These are just some of the resources out there. Please consider using OER to increase student access and reduce student costs. We recommend searching the web, https://oercommons.org/, or https

Survey: New Rigid Body Dynamics Concept Inventory

Contributed by Aime Baisley, Jul Davis, Geoff Recktenwald, Phil Cornwell, and Brian Self

Dear Mechanics Division,

At the 2024 annual meeting we presented our work-in-progress paper on a new rigid body dynamics concept inventory:

https://nemo.asee.org/public/conferences/344/papers/42364/view

As a follow up to that presentation, we would appreciate feedback from the Mechanics Community on the concept list we presented. To that end, we would ask that you please take about 10 minutes to fill out the following survey where you will be asked to indicate the importance of each dynamics concept and how well students understand the concept at the end of a semester: https://ufl.qualtrics.com/jfe/form/SV_b9ktY6LdwxwUxtY

DEI Updates: ASEE Commission on DEI Quarterly Meeting (Sept. 2024)

Contributed by Adrian Rodriguez, Mechanics DEI Delegate

General reminders:

- As you review papers, keep an eye out for DEI-focused papers and mark them accordingly!
- ASEE would like to improve accessibility across the entire conference. Remember to make the content in your papers and presentations accessible to the audience.
- Are you interested in getting involved in DEI at ASEE 2025? We'll need help reviewing DEI papers, so let Adrian Rodriguez (<u>adrian.rodz@utexas.edu</u>) know if you'd like to help!

CDEI quarterly meeting highlights:

- Theme for CDEI at ASEE 2025: A year of Transformative Equity
- **Supporting Individuals with Disabilities:** A short guide (attached) on how you can support and advocate for individuals with disabilities within our community.
- Call for Programming*: Promoting diverse, equitable, and inclusive environments in engineering education and the workforce--Workshops, Panel Discussions, and Community Conversations. Prospective facilitators are encouraged to design interactive sessions that actively engage participants and provide actionable practices and strategies that motivate participants to enact meaningful change in their environment. Deadline has passed.
- Distinguished Speaker Nominations*: The ECSJ (Equity, Culture, and Social Justice), MIND (Minorities in Engineering Division), and CDEI are collaborating on the Distinguished Speaker Nomination. This partnership aims to bring influential voices to the forefront,

fostering dialogue on critical topics related to diversity, equity, inclusion, and social justice in engineering. **Nomination period has closed.**

* If you have any questions, please contact Dr. Brianna Benedict McIntyre, CDEI Professional Development Committee Chair at (asee.includes@gmail.com).

Additional News Items

If you have any news items or announcements for the Spring 2025 newsletter, please send them to Adrian Rodriguez (adrian.rodz@utexas.edu) by April 4, 2025.

Archival Materials

Do you have any interesting Division materials from past decades? Specific materials might include articles, photographs, Readiness Test results, role of the Mechanics Division in developing the mechanics curriculum, etc. Please contact Devin Berg at (715) 232-1133, bergdev@uwstout.edu.

Call for Award Nominations

Archie Higdon Distinguished Educator Award

The Archie Higdon Distinguished Educator Award is given annually by the Mechanics Division for distinguished and outstanding contributions to engineering mechanics education. The nomination package should include the following:

- 1. A letter of nomination and no more than four accompanying letters of support which delineate the nominee's contribution to mechanics education,
- 2. Nominee's curriculum vitae.

The award consists of a plaque to be given during the ASEE Annual Conference at the Mechanics Division Awards Banquet, a \$750 cash prize, and registration for the Mechanics Division Banquet for the awardee and a guest.

Ferdinand P. Beer and E. Russell Johnston, Jr., Outstanding New Mechanics Educator Award

The Ferdinand P. Beer and E. Russell Johnston, Jr., Outstanding New Mechanics Educator Award is given annually to up to two individuals (contingent to availability of funds) who have shown a strong commitment to mechanics education. The winners are selected on the basis of their exceptional contributions to mechanics education. Individuals who have no more than five years of academic experience past their first regular academic appointment are eligible. The nomination package should include the following:

- 1. A letter of nomination which delineates the nominee's contribution to mechanics education and no more than two additional letters of support,
- 2. A one-page letter from the nominee describing his or her personal philosophy regarding mechanics education,
- 3. Nominee's curriculum vitae.

The award consists of a plaque to be given during the ASEE Annual Conference at the Mechanics Division Awards Banquet, a \$750 cash prize, and registration for the Mechanics Division Banquet at the 2025 Annual Conference for the awardee and a guest.

Mechanics Division James L. Meriam Service Award

The Mechanics Division James L. Meriam Service Award may be given annually to recognize significant service to the Mechanics Division as characterized by notable leadership, significant contributions, and prolonged and dedicated service. Candidates for the award must be members of the Mechanics Division and must have served the Division for a minimum of ten years. No individual may receive the award more than once, and members of the Division's Awards Committee are not eligible for the award until two years after completing their service on that committee. Nominations may be made by all members of the Mechanics Division except for those members serving on the Division's Awards Committee. Each nomination package must include the following:

- 1. A chronological listing of the candidate's service to the Division,
- 2. A narrative statement detailing the significant elements of the service.

The award consists of a plaque to be given during the ASEE Annual Conference at the Mechanics Division Awards Banquet, and registration for the Mechanics Division Banquet for the awardee and a guest.

Attendance at the ASEE Annual Conference is required for the awardees. Nominations are due by <u>February 28, 2025</u>. Please submit nominations here: https://forms.gle/biHywoe9KFHPWm2c9. For additional information, please contact the Awards Committee Chair James Lord (jklord@vt.edu).

2024 ASEE Mechanics Division Annual Business Meeting Minutes

<u>Note</u>: A final version will be approved at the 2024 Mechanics Division Business Meeting. Please forward any needed corrections via email to <u>adrian.rodz@utexas.edu</u>.

Meeting Time: Wednesday, June 26, 2024, 8:00 am – 9:30 am PST

Location: Columbia 1, Hyatt Regency, Portland, OR

Attendees: Geoffrey Recktenwald, Jul Davis, Phil Cornwell, Keith V. Johnson, Jacob Moore, Chris Venters, Rungun Nathan, Ana Howard, Amie Baisley, Chris Masters, Amir H. Danesh-Yari, Dominic De Bellis, Chris Papadopoulos, Timothy Wood, James Calhoun, Jamal Ardister, Harlan D. Jerro, Kristi Shryock, Andrew Sloboda, James Lord, Fanny Silvestri, Golnaz Miffenderesgi, Dan Baker, Adrian Rodriguez

Call to Order - 8:02 a.m. PST

PIC Update by Keith Johnson substituting for Clay Gloster, Jr PIC V Chair Update

Financial Update

- Headquarters is working to reduce costs
 - Renegotiating rent
 - Minimizing personal costs
- 2018-2019 audit is complete. The audit took longer than hoped, but the Society hopes to be caught up with all outstanding bills by 2025.
 - ASEE has some outstanding bills to the government but are on schedule to pay those back
- Changes to the bylaws and financial plans have been completed
- BASS accounts are no longer frozen, but were zeroed out in Oct 2021
- Division dues as of Oct 2023 are entering our BASS account
 - Starting in Oct 2024 all divisions will get \$1/member + division dues
- Mechanics Division brainstorm of ways to reduce costs
 - Suggestion to set up shared hotel rooms or stay in local college dorms with shuttles

Memberships

- Reduction in academic units as members
- Reduction in individual members
 - In 2021 = 9500 members and in January 2024 = 8700 members
- Also, conference costs have increased
 - · Registration, Flights, Hotel, Per Diem all more expensive
 - Also, with declining enrollments limit money available at the schools
- Geoff asked about survey data from previous year(s), Keith knows the data exists, but has not reviewed it
- ASEE needs to work on its value proposition to help justify that it is valuable
- Brainstorm ways to increase membership
 - Provide 1st-time attendees a reduced conference registration fee

Nemo paper system

- ASEE knows that NEMO needs updating, but can't afford it right now
- Suggestions
 - Make final documents available to all authors
 - Provide functionality to download ALL papers for a reviewer at one time

Distinguished Lectures

- Each division can have a Distinguished Lecture
- This year there were 7

2025 Paper Schedule

- Abstracts open Sept 1 and due Oct 1
- Abstract decision Nov 1
- Draft papers due Jan 15
- Draft decision Feb 7
- Revised papers Feb 21
- Revised paper decision March 7
- Author registration deadline/early bird registration April 7
- Final paper upload deadline May 1
- Shared 2024 PIC best papers
- 2023 Minutes Approved Unanimously
- 2023-2024 Executive Committee
 - Chair: Geoffrey Recktenwald (Michigan State Univ.)
 - Program Chair: Chris Venters (East Carolina University)
 - Program Chair-Elect: Dan Baker (Colorado State University)
 - Immediate Past Chair: Phil Cornwell (US Air Force Academy)
 - Secretary: Jean Batista Abreu (Elizabethtown College)
 - Treasurer: Sahithya Reddivari (Georgia State University Perimeter College)
 - Web Master/Archivist: Devin Berg (Univ. of Wisconsin Stout)
 - Directors (5-7):
 - Anna Howard (2020-24),
 - Andrew Sloboda (2021-25),
 - Nicolas Libre (2022-26),
 - Amir Danesh-Yazdi (2022-26),
 - Amie Baisley (2023-27),
 - Jacob Moore (2023-27) and
 - Kristi Shryock (2023-27)

2023-24 Committees

- Nominating: Phil Cornwell(Chair), Jul Davis, Masoud Rais-Rohani,
- Membership: Jul Davis (Chair), Anna Howard, Kristi Shryock, and Lance Curtis
- <u>Awards</u>: James Lord (Chair), Huihui Qi, Jacob Moore, Hadas Ritz, Alex De Rosa, Christine Masters, Christopher Papadopoulos (plaques)
- Ad-hoc Committee on Sponsorships: Jul Davis, James Lord, Sahithya Reddivari

Notes from the chair. Geoff

- Financial: ASEE has continued to have financial challenges
 - Past money in BASS Accounts is still frozen
 - Unable to subsidize Banquet Costs
- Sponsorship
 - Pearson had opted out of sponsorship for the Distinguished Educator Award
 - Efforts to find a new sponsor are ongoing
 - McGraw Hill continues to be a strong consistent partner at \$2000 per year
- Membership
 - 20-year decline that mirrors the membership numbers in ASEE overall
 - Make sure members are checking the box for Mechanics
 - Also, life members don't automatically enroll in divisions each year

Report from Program Chair – Chris Venters

- 44 abstracts submitted (up from 38 last year)
- 34 draft papers submitted and 32 final papers (up from 23 last year)
 - All papers assessed by at least 3 reviewers
- Sessions
 - 7 Technical Sessions
 - 2 Special Sessions:
 - Hands-on-Mechanics
 - Awards Banquet

- Paper Management Continues to Improve.
- Questions/ suggestions to program chair
 - Question about why the deadlines keep getting earlier.
 - Deadlines are now set year-to-year
 - Also needed to account for reduced staff and cushion in the schedule for exceptional cases
 - Our division does not typically take part in a poster session
 - This year, we only had 2 people want to submit posters
 - Any way to make reviewing easier (e.g. a rubric)?
 - Other divisions use rubrics that we could learn from

Financial Report – Geoff (standing in for Sahithya)

Mechanics Division	Report from the Treasurer	
BASS account 224		
Balance at 03/31/2024:	\$ 11,584.87	Unavailable
REVENUE		
Dues Revenue YTD FY24 & Available Balance)	
FY23	\$ 2,527.00	
McGraw Hill Education Support	\$ 2,000.00	
Interest Revenue:	\$ -	
Total Revenue YTD FY23	\$ 4,527.00	Available
EXPENSES		
Awards	\$ 1,500.00	
Plaques 2024	\$ 500.00	
Plaques 2023	\$ 446.00	
Total Expense YTD FY22	\$ 2,446.00	
Balance at 06/25/2024:	\$ 2,081.00	Available

- Should start 2025 with about \$200 \$300
- Program Chair-Elect Dan Baker
 - Thanks to all who attended the Banquet on Tuesday, June 26, and were flexible with the change in transportation plan and venue
 - The banquet had 31 paid attendees and 9 complimentary attendees, bringing in approximately \$2325, which covered the banquet costs of \$2075.
- Nominating Committee Phil Cornwell
 - Thanked Geoff for taking care of it
- Awards Committee James Lord
 - Quick discussion about finding new sponsor for Distinguished Educator award
 - Need to inform ASEE conferences@ASEE.org before we contact potential
- Ad Hoc Sponsorship Committee Jul Davis
 - Provide ideas to Jul
 - Suggestion to add 'Find more information' QR link or 'Join our division' at Hands-On Mechanics
- Secretary Jean Batista Abreu
 - Not here this year and stepping down
- Elections
 - Program Chair Elect (from Directors)
 - Amir Danesh-Yazdi
 - Anna Howard (ELECTED)
 - Secretary
 - Adrian Rodriguez (ELECTED)

- Treasurer
 - Sahithya Reddivari (Re-ELECTED)
- Web Master/ Archivist
 - Devin Berg (RE-APPOINTED) and helped by Chris Calhoun from U Cincinnati
- Directors (need 1 new)
 - Hadas Ritz (ELECTED)

• Appointed positions (copy from PPT)

- Nominating: Geoff Recktenwald (Chair), Phil Cornwell, Jul Davis,
- Membership: Jul Davis (chair), Anna Howard, Kristi Shryock, and Lance Curtis
 - New volunteers: Jul, Amie, Maxine, Amir, Kristi
- <u>Awards</u>: James Lord (Chair), Huihui Qi, Jacob Moore, Hadas Ritz, Alex De Rosa, Christine Masters,
 - New volunteers: Fanny, Jacob, Christine, (talk with Huihui)
- Ad-hoc Committee on Sponsorships: Jul Davis, James Lord, Sahithya Reddivari
 - New volunteers: Amir, Andrew, Sahithya, James, Jul (Chair)

• Mechanics Division Representatives 2022-2024

- Ethics: Christopher Papadopoulos
- DEI: Adrian Rodriguez
- Interdivisional Town Hall: Andrew
- P12: Kristi

Other Business

- Process for selecting best paper: Refer to Bylaws (Program chair recommends three highly recommended papers to the Awards section)
- The point person to correspond with publishers regarding donation/award money is currently the Chair of the Awards Committee. Is this the right person?
- Suggestions on who could potentially sponsor our Awards Banquet?
- Suggestions on how we could increase membership / involvement?
- See you at the next ASEE Annual Conference June 22–25, 2025, in Montreal, Quebec, Canada

Adjourn at 9:23 a.m. PST

2024 Mechanics Division Awards

Ferdinand P. Beer and E. Russell Johnston, Jr., Outstanding New Mechanics Educator Award:

Matthew Ford, University of Washington Tacoma

Archie Higdon Distinguished Educator Award:

• Timothy Wood, The Citadel

2023 Best Presentation Award:

Paper: Work in Progress: Toward a Free-Body Diagram Mobile Application (read-the-paper)

- Andrew Sloboda, Bucknell University
- Kimberly LeChasseur, Worcester Polytechnic Institute
- Sarah Wodin-Schwartz, Worcester Polytechnic Institute

2024 Best Paper Award:

Paper: Impacts of a Free-body Diagram Mobile App on Content Mastery and Women's Self-Efficacy (<u>read-the-paper</u>)

- Andrew R. Sloboda, Bucknell University
- Kimberly LeChasseur, Worcester Polytechnic Institute
- Sarah Wodin-Schwartz, Worcester Polytechnic Institute

2024-2025 Mechanics Division Officers and Standing Committees

Chair: Chris Venters, East Carolina

(252) 737-1028, <u>ventersc@ecu.edu</u>

Program Chair: Dan Baker, Colorado State University

(970) 491-0261, <u>dan.baker@colostate.edu</u>

Program Chair Elect: Anna Howard, North Carolina State University

(919) 513-4019, annahoward@annahoward.com

Past Chair: Geoffrey Recktenwald, Michigan State University

(517) 432-3658, gdr@egr.msu.edu

Directors:

Andrew Sloboda, Bucknell University (2021-2025) (570) 577-1861, andrew.sloboda@bucknell.edu

Nicolas Libre, Missouri University of Science and Technology (2022-2026)

(573) 341-7069, libren@mst.edu

Amir Danesh-Yazdi, Rose-Hulman Institute of Technology (2022-2026)

(812) 877-8305, <u>daneshya@rose-hulman.edu</u> Amie Baisley, University of Florida (2023-2027)

(352) 392-4523, amie.baisley@eng.ufl.edu

Jacob Moore, Penn State Mont Alto (2023-2027)

(717) 749-6209, jmoore@psu.edu

Kristi Shryock, Texas A&M University (2023-2027)

(979) 458-6842, kshryock@tamu.edu
Hadas Ritz, Cornell University (2024-2028) (607) 255-0897, hr32@cornell.edu

Secretary: Adrian Rodriguez, University of Texas at Austin

(830) 968-7054, adrian.rodz@utexas.edu

Treasurer: Sahithya Reddivari, Georgia State University - Perimeter College

(678) 891-3735, sreddivari@gsu.edu

Webmaster: Devin Berg, University of Wisconsin-Stout

(715) 232-1133, bergdev@uwstout.edu

Archivist: Devin Berg, University of Wisconsin-Stout

(715) 232-1133, bergdev@uwstout.edu

Nominating Committee: Geoffrey Recktenwald (Chair, gdr@egr.msu.edu), Phil Cornwell

(phil.cornwell@usafa.edu), Jul Davis (julian.ly.davis@usi.edu)

Membership Committee: Jul Davis (Chair, <u>ildavis2@usi.edu</u>), Amie Baisley (<u>amie.baisley@eng.ufl.edu</u>), Maxine Fontaine (<u>mkwan@stevens.edu</u>), Amir Danesh-Yazdi (<u>daneshya@rose-hulman.edu</u>), Kristi Shryock (<u>kshryock@tamu.edu</u>)

Awards Committee: James Lord (Chair, <u>iklord@vt.edu</u>), Fanny Silvestri (<u>silvestri.fanny@gmail.com</u>), Jacob Moore (<u>imoore@psu.edu</u>), Christine Masters (<u>cbm100@psu.edu</u>), Chris Papadopoulos (for plaques, <u>christopher.papadopoulos@upr.edu</u>)

Notes: Two Directors are elected at each annual Business Meeting for terms of four years. Directors who have served for at least one year are eligible to be elected as Program Chair Elect (and to serve consecutively as Program Chair and Chair). Secretary and Treasurer are ex-oficio (non-voting) elected at each annual Business Meeting for terms of one year. Webmaster and Archivist are ex-oficio (non-voting) and are elected for terms of one year. The Nominating Committee is specified to consist of the three most recent Past Chairs. The Membership and Awards Committee are appointed to serve for terms of one year.

New Officer Introduction

MAXINE FONTAINE, Stevens Institute of Technology – Membership Committee (2024 - 2025)



Hi everyone! I am a Teaching Associate Professor in the Department of Mechanical Engineering at Stevens Institute of Technology in Hoboken, New Jersey. I am originally from Austin, Texas, and I obtained my B.S. degree in Mechanical Engineering at UT Austin. I completed my Master's at UC Davis in California, and then my PhD at Aalborg University in Denmark. My background is in human movement biomechanics, and I currently teach several undergraduate courses in engineering mechanics and design. My research interests are focused on improving engineering pedagogy and increasing diversity in engineering. I am currently a co-PI

on an NSF S-STEM project aimed at increasing retention of our limited income students through mentorship. My recent research projects are related to spatial skills, adaptive expertise, and sense of belonging in engineering students. In my free time, I enjoy baking, snowboarding, travelling, and spending time with my two little boys (6 yo and 3 yo).

FANNY SILVESTRI, Chandler-Gilbert Community College – Awards Committee (2024 - 2025)



I grew up in the suburbs of Paris, France, where my love for science began early. After completing a Bachelor's degree in Aerospace and Mechanical Engineering from ESTACA in France, I pursued a Master's in Mechanical Engineering at the Polytechnic School in Montreal, Canada, focusing my research on designing a dynamic frame for spinal surgeries. I've had the privilege of living in four countries—France, Canada, the USA, and New Caledonia—and visiting about 30 others. As an engineering educator at Chandler-Gilbert Community College in Arizona, I teach courses ranging from Introduction to Engineering, Engineering and its Impact on Society,

and mechanical engineering courses as Statics, Dynamics, Mechanics of Materials, and CAD, always striving to learn from students and colleagues while fostering an inclusive, supportive classroom environment. Since 2022, I've been the Principal Investigator of an NSF S-STEM grant at Chandler-Gilbert Community College, supporting engineering and Artificial Intelligence, and Machine Learning students through scholarships, mentorship, and professional development. Outside of teaching, I enjoy ice hockey, playing board games, and doing many different crafts.

ADRIAN RODRIGUEZ, University of Texas at Austin – Secretary (2024 - 2027)



Hello! I'm a Lecturer in the Walker Department of Mechanical Engineering at The University of Texas at Austin and also work full-time as a Senior Engineering Content Developer for zyBooks, a Wiley brand. I received my B.S. degree from UT Austin, and both M.S. and Ph.D. degrees from UT Arlington, all in Mechanical Engineering. My research interests include multibody dynamics, contact and impact with friction, nonlinear dynamics, electro-mechanical systems, and engineering education. I actively participate in professional development training for effective teaching practices and supervise undergraduate research projects. In my free time, I enjoy hiking, exercising, watching sci-fi thrillers, and keeping up with my 2.5 yo. girl.

Mechanics Division - Opportunities for Involvement

All members and prospective members of the Mechanics Division are invited to the Mechanics Division Annual Business Meeting, held each year in June at the ASEE Annual Conference. One of the primary activities of the division business meeting is to elect new officers and fill available committee positions.

Some of the offices are described below. For a full list of positions, see "2024-25 Mechanics Division Officers and Standing Committees", provided earlier in this newsletter.

Director: A director is a voting member of the Executive Committee. Main duties: attend the Executive and Business Meetings at the Annual Conference, elect the Program Chair Elect, and participate in decision making as issues arise. Directors must also be willing to accept a nomination for Program Chair Elect, which succeeds consecutively to Program Chair, Chair, and Immediate Past Chair. Term: 4 years.

Secretary: Main duties: Attend Executive and Business Meetings at the Annual Conference and record minutes; prepare ballots for elections of officers; prepare and distribute Newsletter (twice per year); assist Chair with ensuring that Division agenda is executed. Term: 3 years.

Treasurer: Main duties: Keep records of accounts; issue checks to award winners; pay and process other items as necessary. Term: 1 year.

Officer Nominations:

You are welcome to submit nominations before or during the 2025 Mechanics Division Annual Business Meeting. Self-nominations and/or multiple nominations are permitted. Nominations may be submitted via email in advance of the meeting to Chris Venters (venters@ecu.edu). Include a brief statement of the nominee's current/past involvement in the Mechanics Division and nominee's interest in serving in the specific office. If a person is being nominated for more than one position, please state preference.

2025 Annual Division Business Meeting Agenda Items:

If you have any items that you would like included on the agenda for the Annual Division Business Meeting, please contact Division Secretary, Adrian Rodriguez (adrian.rodz@utexas.edu) or Division Chair, Chris Venters (venters@ecu.edu), before the 2025 Annual Business Meeting.