

NUPOC NEWS

The official newsletter of the
Northwestern University Prosthetics-Orthotics Center



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2026 Tamarack Awards

Congratulations to **Mia Albornoz**, **Paige Hennigan**, and **Elizabeth Ibata-Arens** (MPO '26), recipients of the 2026 Tamarack Awards recognizing excellence in patient-centered care and innovation.

Academy Student Poster Award

Christian Maron (MPO-R '26) earned 1st Place in the inaugural Academy John Michael Student Poster Award for his research on prosthetic foot-ankle stiffness and gait biomechanics.

ACPOC Scholarships

Owen Albrecht (MPO-R '26) and **Clare Pitstick** (MPO '27) received scholarships from Boston O&P and OPSB to attend the ACPOC Annual Meeting.

Faculty & Staff Achievements

Dr. Major featured on 'The Human Part of Humotech' Podcast

Dr. Matthew Major was recently featured on The Human Part of Humotech podcast in the episode Dr. Matty Major on Improving Prosthetic Outcomes Through Engineering, where he shares how engineering, interdisciplinary collaboration, and what Northwestern University and the Jesse Brown VA Medical Center are doing to reshape modern prosthetic care. He highlights the role of mechanical testing, device characterization, and stronger standards in driving measurable improvements for patients, while also discussing the VA's Whole Health model and Northwestern's MPO-R program, which is preparing the next generation of clinician-scientists to bridge research and practice. His perspective offers a powerful reminder that translational research is not just beneficial; it is essential for advancing mobility technology and rehabilitation outcomes.



Pictured: 'The Human Part of Humotech' season three, episode five thumbnail, featuring Dr. Matthew J. Major.

Publications

This past month, NUPOC faculty and staff continued to advance the field through new peer-reviewed publications. Below is a selection of their latest scholarly work:

Zavaleta-Ruiz JL, Fatone S, **Major MJ**, Pankaj P. Mechanical Stimulation in the Residual Femur During Gait in Transfemoral Prosthesis Users Provides a Potential Reason for Bone Mineral Density Loss. *Int J Numer Method Biomed Eng*. 2025 Oct;41(10):e70103.

Vaca MA, Beestrum M, **Gard SA**, **Major MJ**. Effects of ankle-foot prosthesis design on gait and standing performance in transfemoral prosthesis users: A scoping review. *Wearable Technol*. 2026 Jan 21;7:e1.

Petelina NT, Arelekatti VNM, Shorter AL, Johnson WB, Kent JA, **Brinkmann JT**, **Major MJ**, Winter V AG. Estimation of Recommended Damping Coefficient Range to Achieve Target Peak Knee Flexion in a Passive Prosthetic Knee. *Ann Biomed Eng*. 2026 Feb 16.

Neelen I, van der Wind B, **Major MJ**, Smit G. State of the art of lower limb prosthesis simulators: A literature review. *Wearable Technol*. 2026 Mar 3;7:e2.

Zavaleta JL, **Major MJ**, Pankaj P. A scoping review on bone mass status in individuals with transfemoral amputation. *Journal of Prosthetics and Orthotics*. 2026 Mar 10; EPub.

Monteiro A, Fey NP, **Major MJ**. Assessing the validity of whole-body and segmental angular momenta during walking in older individuals with and without transtibial limb loss. *Journal of Applied Biomechanics*. 2026 Mar; EPub.

Pogharian AC, **Armstrong KL**, Kent JA, **Stine RL**, **Major MJ**. The role of walking speed and leg proprioception in foot clearance for older transtibial prosthesis users. *Prosthetics and Orthotics International*. 2026 April; EPub.

Publications, Continued

Fatone S, Gravely A, Cutti AG, Hansen A, **Gard SA**, on behalf of the Residual Limb Shape Capture Group. Randomized crossover trial of hand and hydrostatic casting for custom lower limb prosthetic sockets: Assessing socket comfort and fabrication time. PLOS One, 2025;20(11): e0337185.

Kristal A, Gaunaurd I, Kirk-Sanchez N, **Gard S**, Clark N, Da Silva E, Stieg F, Gailey R. Spatiotemporal gait parameters influencing functional mobility of people with lower limb amputation. Prosthetics and Orthotics International, 2025;49(6):670-676.

Arazpour M, Keshavarzi F, **Gard SA**. The effects of virtual reality environment simulations on balance and gait rehabilitation in persons with lower extremity amputation. Prosthetics and Orthotics International, 2026;50(1):15-38.

Nezhad ZG, Arazpour M, **Gard SA**. Investigating the effect of Colditz orthosis in the treatment of basilar joint osteoarthritis: A literature review. Journal of Prosthetics and Orthotics, 2026;38(2):e43-e51.



Pictured: **Dr. Matthew Major** and **Dr. Russell Johnson** with the MPO-R class of 2026

What is POP? - POP Month!

As an official POP partner, NUPOC celebrated POP Month 2026 with campus events, guest speakers, and plenty of P&O spirit! Chicago Math and Science Academy students visited NUPOC to explore the profession and learn how creativity, technology, and patient care come together in prosthetics, orthotics, and pedorthics. Throughout March, students and faculty shared moments that showcased the next generation of P&O professionals in action. MPO '27 also welcomed **Jim Lawson** from the American Board for Certification, who walked students through the pathway to completing an NCOPE-accredited residency and becoming board-certified. From community outreach to professional development, POP Month offered a vibrant look at the future of the field!



Pictured: Chicago Math and Science Academy students on their visit to NUPOC on March 10th, 2026



Pictured: Jim Lawson, Amy Lawrence, and MPO 2027



MPO 2026 Graduation

On Friday, March 27, 2026, the MPO Class of 2026 gathered at Hughes Auditorium to celebrate the completion of their graduate studies. The ceremony included an inspiring keynote from Michael Brncick, former director of the NUPOC P&O Program, who encouraged graduates to approach their careers with curiosity, compassion, and professionalism.

Throughout their time in the program, this class has shown remarkable resilience, collaboration, and dedication to improving the lives of others. Their achievements reflect both their hard work and their commitment to advancing the field.

We are proud of everything the Class of 2026 has accomplished and look forward to seeing the positive impact they will make in their future roles.



Pictured: The Masters of Prosthetics & Orthotics Class of 2026 with Northwestern University Prosthetics-Orthotics Center faculty

MPO 2027 White Coat

In January, NUPOC held its annual White Coat Ceremony for the Master of Prosthetics & Orthotics Class of 2027 at the Shirley Ryan AbilityLab. This event marks a defining moment in the students' academic journey as they transition from classroom instruction to clinical training, underscoring their commitment to patient care and the standards of the O&P profession.

Faculty, staff, family members, and friends joined the celebration both in person and via Zoom, offering their support as students received their white coats for the first time. The ceremony highlighted the professionalism, dedication, and readiness of this cohort as they prepare to enter the clinical phase of their education.

We congratulate the MPO Class of 2027 and look forward to their continued growth as they advance toward becoming future clinicians.



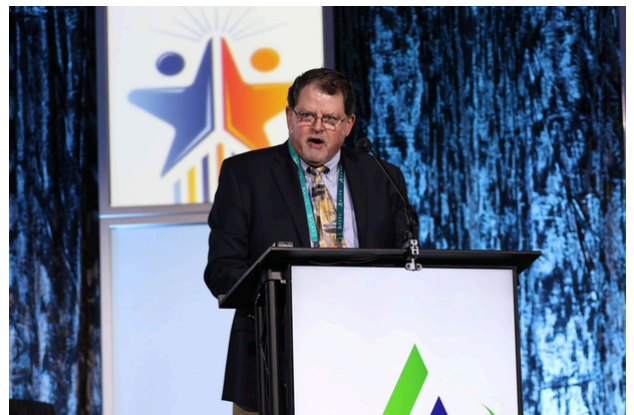
Pictured: The Masters of Prosthetics & Orthotics Class of 2027 taking their oath at White Coat Ceremony 2027

AAOP 2026

Thank you to everyone who stopped by our table at the American Academy of Orthotists and Prosthetists 52nd Academy Annual Meeting & Scientific Symposium in Nashville, Tennessee. In addition to hosting an informational table, NUPOC was well represented throughout the conference, with numerous faculty and students attending, presenting, and contributing to the scientific program. It was a pleasure connecting with colleagues, alumni, and partners, and engaging with so many members of the prosthetics and orthotics community.



Pictured: MPO-R '26 student, Elizabeth Ibata-Arens, and MPO '26 student Mariam El-Khatib recording at the AAOP podcast as Fuel the Future Scholarship winners

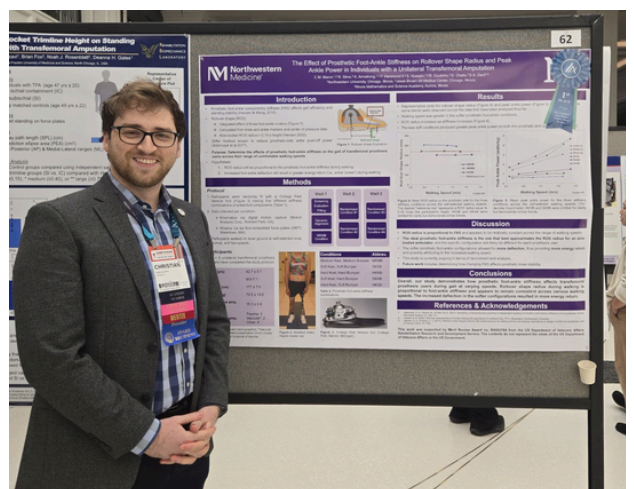


Dr. Steve Gard, NUPOC Director, helped open the AAOP Annual Meeting by presenting the JPO Article of the Year Award.



Kiley Armstrong, MS, MPO, CPO, presented "The Role of O&P and the Interdisciplinary Team in Adaptive Sports" at the AAOP Annual Meeting.

Pictured (right to left): Theresa Berner, Danielle Potemri, Kiley Armstrong, James Pierre-Glaude, and Eric Lamberg.



Pictured: MPO-R '26 student, Christian Maron, and his 1st place poster from the Academy John Michael Student Poster Award, for his research on prosthetic foot-ankle stiffness and gait biomechanics.

Global Educators Meeting (GEM) 2026

NUPOC research and education faculty participated in the Global Educators Meeting (GEM) 2026, held March 23–25 in Bangkok, Thailand. With the theme “From Local Roots to Global Reach: Building Educational Bridges,” the meeting brought together educators from around the world, and NUPOC faculty and staff contributed several presentations throughout the program:

FP #73 — *Investigating Biases of O&P Educators Toward People with Disabilities*

NUPOC Presenters: **Gloria Lee, Kiley Armstrong, and Michael Cavanaugh**

FP #29 — *Mapping EPAs in O&P Education: A Path to Competency-Based Assessment*

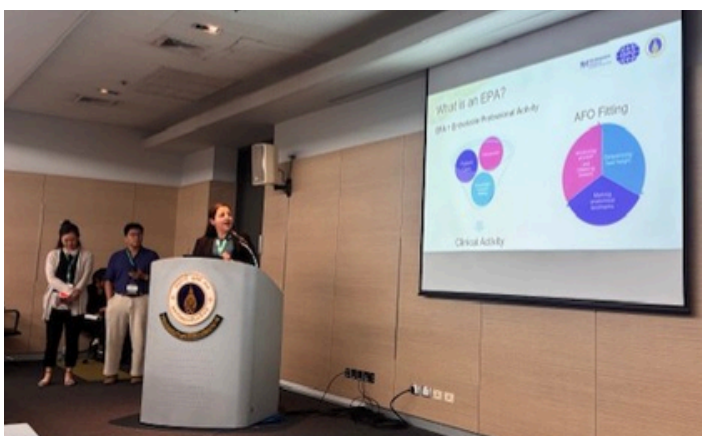
NUPOC Presenters: **Amy Lawrence, Renato Delos Reyes, and Gloria Lee**

FP #73 (Ukraine) — *Training the Trainers: Global Collaboration in P&O Education for Ukraine*

NUPOC Presenters: **Michael Cavanaugh and Mindy Thorpe**

S #07 — *Future-Ready: AI in P&O Education and Clinical Practice*

NUPOC Presenters: **Michael Cavanaugh and Mindy Thorpe**



Pictured: Mapping EPAs in O&P Education: A Path to Competency-Based Assessment with **Amy Lawrence, Renato Delos Reyes, and Gloria Lee**



Pictured: Investigating Biases of O&P Educators Toward People with Disabilities with **Gloria Lee, Kiley Armstrong, and Michael Cavanaugh**

Giving Opportunities

Donor support is essential to our continued success. Your gift can help support emerging researchers, P&O clinicians, and programs that will improve the lives of people who live with amputation or other physical impairments.

Contribute **online**. Or contact FSM Development (T: 312-503-2706)

NUPOC appreciates your generosity!

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NUPOC
680 N Lake Shore Drive, Suite 1100
Chicago, IL 60611
T: 312-503-5700
F: 312-503-5760
www.nupoc.northwestern.edu/