NUPOC NEWS

The official newsletter of the
Northwestern University Prosthetics-Orthotics Center

VOL.12

Faculty & Staff Achievements

Congratulations to **Gloria Lee**, MSPO, CPO, instructor at NUPOC, for being featured in the September 2026 O&P Almanac "Fresh Faces" column, "Instructing and Inspiring the Next Generation."

In the profile, Lee shares her journey into the orthotics and prosthetics profession, her passion for evidence-based practice and patient-centered care, and her commitment to educating future clinicians. The feature also highlights her leadership as chair of the NUPOC Health Equity Council and her role as founder of the Asian Pacific American Association of Prosthetists and Orthotists (APAAPO).

As an educator, Lee is dedicated to preparing the next generation of O&P professionals through mentorship, hands-on instruction, and a focus on lifelong learning. In the interview, Lee reflects on the importance of fostering meaningful connections with students and patients while helping future clinicians develop both technical expertise and compassionate leadership skills. Her feature recognizes the significant impact she continues to make within NUPOC and the broader O&P community.

Congratulations to **Matthew J. Major, PhD**, on being named a recipient of a 2026 Collaborative Intelligence Research Award (CIRA) from the Northwestern Network for Collaborative Intelligence (NNCI).

Alongside collaborators Karan Ahuja and Matthew A. Grayson, Dr. Major received funding for the project, "AI-Enabled Wearable Electrical Impedance Tomography for Prosthetic Control." The research explores how AI-enabled technologies can advance prosthetic control and improve outcomes for individuals with limb loss. The CIRA program supports interdisciplinary research that brings together expertise in artificial intelligence, data science, and domain-specific knowledge. This recognition highlights Dr. Major's contributions to research here at NUPOC and Northwestern as a whole.

Congratulations, Gloria and Matthew!



Pictured: Gloria Lee



Pictured: Matthew Major

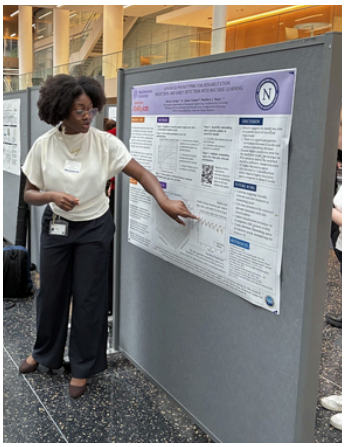
NUPOC Researchers Present at MRS Training Day

Congratulations to **Nicole Attram, Anna Pogharian,** and **Dr. Jack Manning** for presenting their research at the Movement & Rehabilitation Sciences (MRS) Training Day.

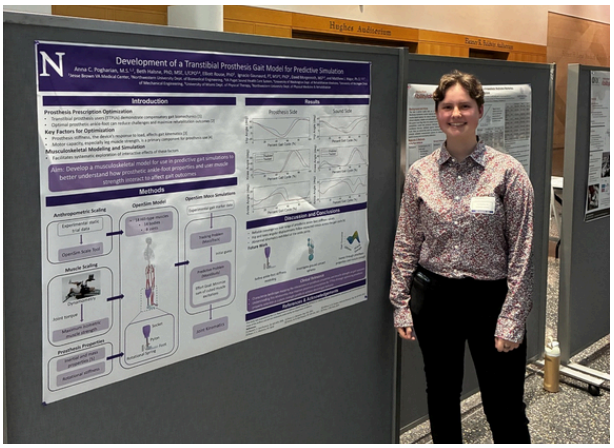
MRS Training Day is an annual Feinberg School of Medicine event that brings together students, postdoctoral fellows, faculty, and investigators from across disciplines to showcase advances in movement and rehabilitation sciences. The event provides a valuable opportunity to share research, exchange ideas, and foster interdisciplinary collaboration.

We are proud to see Nicole, Anna, and Jack represent NUPOC and share their work alongside researchers from across Northwestern. Their presentations reflect the breadth and impact of research being conducted within our program and highlight the important contributions of emerging scientists and scholars to the field.

Congratulations to Nicole, Anna, and Jack on this accomplishment and for helping advance research in movement and rehabilitation sciences!



Pictured: Nicole Attram



Pictured: Anna Pogharian



Pictured: Dr. Jack Manning

NUPOC at the Midwest American Society of Biomechanics (ASB)

Six NUPOC members attended the Midwest ASB conference, held at Cleveland State University on Sep 24-25, 2026. Below are the NUPOC presenters.

Dr. Sudeesh Subramanian, Podium presentation: *Effects of Viscoelastic Prosthetic Pylons and Ankle-Feet on Limb Loading in Unilateral Transtibial Prosthetic Gait.*
Riya Agrawal, Podium presentation: *Design and Analysis of a Novel Passive Dynamic Ankle-Foot Orthotic Strut with Variable Stiffness.*
Anna Pogharian, Podium presentation: *A Musculoskeletal Model for Predicting Interactions of Muscle Strength and Prosthesis Design on Transtibial Prosthetic Gait.*
Brendan O'Rourke, Podium Presentation: *Hand Poses Prediction with Electrical Impedance Tomography.*
Dr. Jack Manning, Poster presentation: *Study Protocol for Assessing the Impact of Cognitive-Sensorimotor Dysfunction on Gait and Balance in Long Covid.*

In addition, Dr. Manning also chaired the session "Materials, Manufacturing, & Fabrication " along with Kareemat Melaiye, PhD Student, Cleveland State University. **Denitsa Zvetkova** attended the conference.



Pictured from left to right: Anna Pogharian, Denitsa Zvetkova, Riya Agrawal, Sudeesh Subramanian, Jack Manning, and Brendan O'Rourke



Pictured: Sudeesh Subramanian presenting *Effects of Viscoelastic Prosthetic Pylons and Ankle-Feet on Limb Loading in Unilateral Transtibial Prosthetic Gait.*

Inaugural MPO-R Cohort Graduation

Congratulations to the inaugural graduating class of Northwestern University's Master of Prosthetics & Orthotics Research (MPO-R) program!

The first MPO-R cohort completed the Master of Prosthetics & Orthotics (MPO) curriculum while conducting original research designed to advance prosthetic and orthotic care. Their thesis projects addressed a range of important topics in rehabilitation science, mobility, and assistive technology:

- **Albrecht, Owen** (2026) The Kinematics and Kinetics of Walking with a Pediatric Powered Prosthetic Knee: A Single-Subject Study of Gait Training and Analysis. Master's Thesis, Prosthetics and Orthotics, Northwestern University.
- **Gamez, Maria** (2026) Impaired Lower Limb Proprioception and the Minimum Foot Clearance in People with Unilateral Chronic Post-Stroke. Master's Thesis, Prosthetics and Orthotics, Northwestern University.
- **Ibata-Arens, Elizabeth** (2026) Effects of Damping Prosthetic Components on Dynamic Balance in Transtibial Prosthesis Users. Master's Thesis, Prosthetics and Orthotics, Northwestern University.
- **Kemper, Amanda** (2026) Effects of Unilateral Myoelectric Prosthesis Use on Upper Body Musculoskeletal Dynamics During Goal-Oriented Tasks. Master's Thesis, Prosthetics and Orthotics, Northwestern University.
- **Maron, Christian** (2026) The Effect of Prosthetic Foot-Ankle Stiffness on Rollover Shape Radius and Energy Return in Individuals with a Unilateral Transfemoral Amputation. Master's Thesis, Prosthetics and Orthotics, Northwestern University.
- **Robbins, Elyssia** (2026) Towards Precision Rehabilitation: Predicting the Effects of Personalized Ankle Foot Orthoses on Symmetry in Hemiparetic Gait. Master's Thesis, Prosthetics and Orthotics, Northwestern University.



Pictured: Dr. Major and Owen Albrecht



Pictured: Dr. Johnson and Maria Gamez



Pictured: Dr. Major and Elizabeth Ibata-Arens



Pictured: Dr. Major, Amanda Kemper, and Dr. Johnson



Pictured: Dr. Gard and Christian Maron



Pictured: Dr. Johnson and Elyssia Robbins

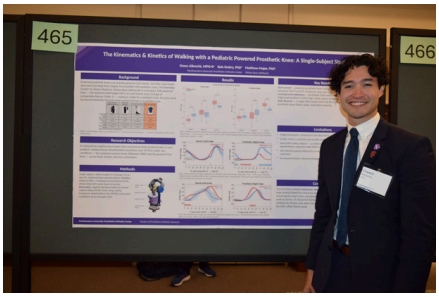
Lewis Landsberg Research Day

Congratulations to our MPO-R alumni who presented their research at the 2026 Lewis Landsberg Research Day on September 10. This annual Feinberg School of Medicine event highlights innovative research across Northwestern and provides students, trainees, faculty, and staff an opportunity to share discoveries and engage with colleagues from a wide range of disciplines.

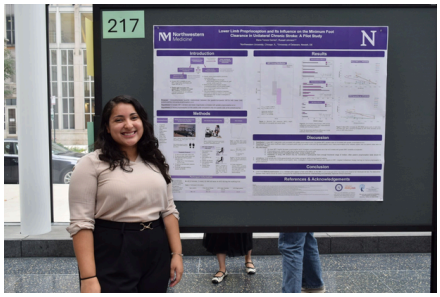
Representing NUPOC, the following researchers presented their work:

- **Owen Albrecht** presented *The Kinematics & Kinetics of Walking with a Pediatric Powered Prosthetic Knee: A Single-Subject Study.*
- **Maria Gamez** presented *Lower Limb Proprioception and Its Influence on the Minimum Foot Clearance in Unilateral Chronic Stroke: A Pilot Study.*
- **Christian Maron** presented *The Effect of Prosthetic Foot-Ankle Stiffness on Rollover Shape Radius and Peak Ankle Power in Individuals with a Unilateral Transfemoral Amputation.*
- **Elyssia Robbins** presented *Towards Precision Rehabilitation: Predicting the Effects of Personalized Ankle Foot Orthoses on Symmetry in Hemiparetic Gait.*

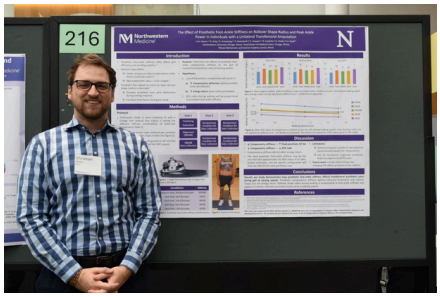
We also congratulate **Riya Agrawal**, a Mechanical Engineering student collaborating with NUPOC, who presented *Analysis of Ankle Foot Orthoses with Variable Strut Stiffness.*



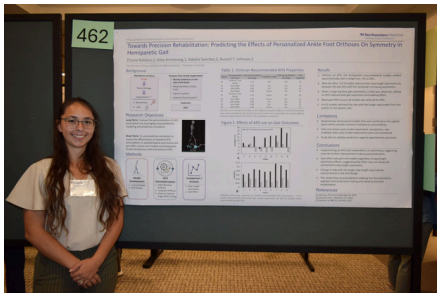
Pictured: Owen Albrecht



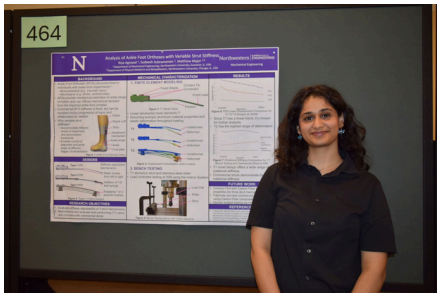
Pictured: Maria Gamez



Pictured: Christian Maron



Pictured: Elyssia Robbins



Pictured: Riya Agrawal

NUPOC Turns 70

In 2028, the Northwestern University Prosthetics-Orthotics Center (NUPOC) will celebrate 70 years of advancing education, research, patient care, and innovation in orthotics and prosthetics.

To mark this milestone, we have launched a special NUPOC 70th Anniversary webpage, where we will share alumni spotlights, historical highlights, photos, stories, and memories from across seven decades of NUPOC's history. We invite alumni, students, faculty, staff, and friends of the program to follow along as we celebrate the people and achievements that have shaped NUPOC over the past 70 years.

The celebration will culminate with a larger anniversary event in February 2028, and we look forward to sharing additional details as plans develop.

Visit the anniversary webpage to learn more and stay up to date on upcoming activities and opportunities to participate in the celebration. Stay tuned for more announcements as we count down to NUPOC's 70th birthday!

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!

Alumni Form

Scan the QR code to update your alumni contact information and stay connected with NUPOC

NUPOC O&P School Alumni Contact Form – Fill out form

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