UW Department of Orthopedics and Rehabilitation Research Forum

Monday, May 4, 2026 – 8:00 AM to 5:00 PM

Fluno Center | Madison, WI

Keynote Speakers

Constance R. Chu, MD

Professor and Vice Chair Research, Department of Orthopedic Surgery at Stanford University
Director of the Joint Preservation Center and Chief of Sports Medicine at the VA Palo Alto
Former Albert Ferguson Endowed Chair and Professor of Orthopaedic Surgery at the University of Pittsburgh

Gwendolyn Sowa, MD, PhD

Professor and Chair, Department of Physical Medicine and Rehabilitation at the University of Pittsburgh
Director of the University of Pittsburgh Medical Center (UPMC) Rehabilitation Institute
Medical Director of the UPMC Total Care - Musculoskeletal Health

Agenda

Welcome

Atrium/Auditorium

8:00 **Breakfast and networking**

8:25 **Tamara Scerpella, MD**
Welcome and Opening Remarks in the Auditorium

Blitz Talks Session 1 (3 minutes each)

Auditorium

Block 1

8:30 **Paul Whiting, MD**
Double Trouble - Risk Factors for Conversion to Total Hip Replacement After Hip Fracture

8:34 **Rachael Tolsma, MD**
Femoral Bone Mineral Density Changes Following Cemented or Cementless Total Knee Arthroplasty: Preliminary Results of a Randomized Prospective Study

8:38 **Justin Lapow, MD**
Comparative Analysis of Common Surgical Risk Indices as Predictors of Adverse Outcomes Following Same-Day Total Joint Arthroplasty

8:42 **Andrea Spiker, MD**
Postoperative Appearance of the Hip After Labral Repair: A Prospective MRI Study of the First Year After Surgery

8:46 **Block 1 Discussion**

Block 2

8:50 **Collin Nguyen, BS**
Sling Immobilization Following Reverse Total Shoulder Arthroplasty Does Not Impair Range of Motion Recovery and Is Not Associated with Increased Complication Rates

8:54 **Jack Drake, BS**
Trends in Research Gap Years in Orthopaedic Residency Applicants

8:58 **Noah John Kalthoff, BS Student**
AI-Assisted Operative Note Generation from Surgical Video: A Research Study

9:02 **Block 2 Discussion**

Block 3

9:06 **Samantha Kultgen, MD**
The Efficacy of Repeat Medial Branch Radiofrequency Ablation

9:10 **Amber McKenna, MD**
Advocating For Advocacy: Effective Teaching Methods for Clinical Firearm Injury Prevention Implementation

9:14 **Laura Burdick, BS**
Get Your Crayon: A Feasibility Study of Adaptive Crayons for People with Limb Differences or Neuromuscular Disorders

9:18 **Block 3 Discussion**

Keynote Talk Ortho – Auditorium

9:25 **Tamara Scerpella, MD**
Introduction of Dr. Chu

9:30 **Keynote Speaker – Constance R. Chu, MD**
The Genesis of Preosteoarthritis

Coffee Break (20 min)
10:15 – 10:35

Keynote Talk PM&R – Auditorium

10:35 **Michael Suer, MD**
Introduction of Dr. Sowa

10:40 **Keynote Speaker – Gwendolyn Sowa, MD, PhD**
The Right Treatment for the Right Patient at the Right Time: Transdisciplinary Phenotyping for Low Back Pain

Blitz Talks Session 2 (3 minutes each)

Auditorium

Block 4

11:25 **Dan Cobian, PT, PhD**
Influence of Visual Disruption and Dual-Task Conditions on Single-Leg Vertical Hop Performance post-ACL Reconstruction

11:29 **Lucia Hockerman, BS Student**
Repeatability of Shear Wave Tensiometry in Tendons With and Without Pathology: A Comparison of Normalization Methods During Countermovement Jump Phases

11:33 **Nao Ito, DPT, PhD**
Ankle Laxity Quantified via Optical-Flow Based Bone-Tracking Relates to Clinically Relevant Characteristics After Ankle Sprains in Division-I Collegiate Basketball Athletes

11:37 **Block 4 Discussion**

Block 5

11:41 **Molly Day, MD**
Knee Biomechanics are Highly Sensitive to the Femoral Attachment Location of an LET

11:45 **Herman Feller IV, MS**
Risk of Graft Slippage During LET Based on Femoral Attachment Location

11:49 **Nicola Brown, DVM student**
Condylar Stress Fracture Risk Assessment in Thoroughbred Racehorses Using Finite Element Analysis

11:53 **Peter Muir, BVSc, MVetClinStud, PhD, DACVS, DECVS, FRCVS**
Virtual Mechanical Testing for Injury Prevention in Thoroughbred Racehorses

11:57 **Block 5 Discussion**

Block 6

12:01 **Eric Lin, PhD**
Repurposed Drugs Targeting Gata6 Reverse Cellular Senescence in Aged Bone Progenitors

12:05 **Jame Dong, BS**
PAPPA as a Novel Functional Mediator of Cartilage Degeneration: Implications for Disease-Modifying Osteoarthritis Therapy

12:09 **Block 6 Discussion**

Lunch – Atrium/Auditorium/219
12:15 – 1:00

Parallel Panel Discussion – Auditorium and 219
1:00 – 1:35

Advancements in Medical Imaging to Enhance Clinical Decision Making Auditorium **Moderator:** Keith Knurr, DPT, PhD, SCS **Panel:** Constance R. Chu, MD Nao Ito, DPT, PhD James Bernatz, MD **Scribe:** Josh Roth, PhD	**Outcomes with Lifestyle Medicine Clinics?** Room 219 **Moderator**: Nathan Rudin, MD **Panel**: Gwendolyn Sowa, MD, PhD Karina Atwell, MD, MPH **Scribe:** Michael Suer, MD

Ortho PGY-5 Presentations & PM&R and Pain Medicine Presentations
Auditorium & Room 219 (pages 6-8)

1:35 –3:02
See pages 6 and 7 for the Orthopedic Surgery PGY-5 Presentation Schedule
See page 8 for PM&R and Pain Medicine Presentation Schedule

Networking/Coffee Break
Atrium

3:05 – 3:35 **Beer/Wine/Coffee/Snacks and Group Photos**
Group Photos – 1st Floor Atrium Staircase
- **Ortho Fellowships: Joints** (3:05)**, Spine** (3:10) **and Ortho Sports** (3:15)
- **Ortho Residency** (3:20)
- **PM&R Residency** (3:25)
- **Pain Medicine Fellowship** (3:30)

Ortho Fellow Presentations & PM&R and Pain Medicine Presentations
Auditorium & Room 219 (pages 6 – 8)

3:35 – 4:52
See pages 6-7 for the Orthopedic Surgery Fellow Presentation Schedule
See page 8 for PM&R and Pain Medicine Presentation Schedule

4:55 **Closing Remarks – Adjourn**

Happy Hour/Networking – Smitty's Study Pub (Mendota Room on the 8th Floor)

5:00 – 6:00 **Cocktails and Hors d'oeuvres**



Dr. Constance R. Chu is Professor and Vice Chair Research, in the Department of Orthopedic Surgery at Stanford University. She is also Director of the Joint Preservation Center and Chief of Sports Medicine at the VA Palo Alto. Previously, she was the Albert Ferguson Endowed Chair and Professor of Orthopaedic Surgery at the University of Pittsburgh. She is a clinician-scientist who is both principal investigator of several projects funded by the National Institutes of Health and who has been recognized as a Castle-Connelly/US News and World Report "Top Doctor" in Orthopedic Surgery as well as on Becker's list of Top Knee Surgeons in the United States. Her clinical practice focuses on the knee: primarily restoration and reconstruction of the ACL, menisci and cartilage. She graduated from the U.S. Military Academy at West Point and earned her medical degree from Harvard Medical School.



Gwendolyn Sowa, MD, PhD, is a physiatrist and is certified in Physical Medicine and Rehabilitation by the American Board of Physical Medicine and Rehabilitation. She is the chair of the Department of Physical Medicine and Rehabilitation, the director of the UPMC Rehabilitation Institute, and the medical director of UPMC Total Care - Musculoskeletal Health. At the University of Pittsburgh, she is a professor, the co-director of the Ferguson Laboratory for Orthopaedic and Spine Research and holds joint appointments in the Departments of Orthopaedic Surgery and Bioengineering. Dr. Sowa received her MD/PhD from the University of Wisconsin and completed her residency at Rehabilitation Institute of Chicago, Northwestern University.

Dr. Sowa's clinical interest is in the interdisciplinary care of patients with low back pain and other musculoskeletal conditions. Throughout her career, she has authored and co-authored over 120 original research publications and 45 book chapters and reviews and given over 250 national and international presentations related to research in musculoskeletal conditions. It is her goal to develop more personalized treatment approaches for low back pain and arthritis informed by her research into these common and multi-factorial conditions.

Ortho PGY-5 Presentations

Auditorium

1:35 **Bio break and room transition**

1:45 **Tamara Scerpella, MD**
Graduating Ortho Resident/Fellow Remarks

1:50 **Aaron Beck, MD, MPH**
Should Inter-prosthetic Screws Be Placed When Prophylactically Plating a Femur?

2:02 **Richard Behlmer, MD**
Predicting Femoral Neck Screw Pullout Strength using DXA 1 and Novel Assessments of Bone Microarchitecture

2:14 **Timothy Carlson, MD**
The Reverse Dorr: Preoperative Radiographic Evaluation of Bone Quality Correlates to Bone Mineral Density in Total Knee Arthroplasty

2:26 **Jakob Ohman, MD**
Immediate vs Delayed Weightbearing After Tibial Tubercle Osteotomy with Concomitant MPFL Reconstruction: Effects on Complications, Time to Union, and Return to Sport

2:38 **David Rossi, MD**
Reality Check: Virtual Reality Is Similar to Sawbones for Resident Training in Total Knee Arthroplasty

2:50 **Cameron Trotter, MD**
Effect of Screw Position on Initial Stability of Press-Fit Acetabular Cups in Total Hip Arthroplasty: A Biomechanical Analysis Using Sawbones Models

Networking/Coffee Break

Atrium

3:05 – 3:35 **Beer/Wine/Coffee/Snacks and Group Photos**
Group Photos – 1st Floor Atrium Staircase

Ortho Fellow Presentations

Auditorium

3:35 **Bio break and room transition**

3:40 **Alexandria Chrumka, MD**
Staged Bilateral Hip Arthroscopy for Femoroacetabular Impingement Syndrome Results in Comparable Outcomes Between Hips Despite Younger Age and Greater Deformity

3:52 **Micah MacAskill, MD**
Acute Total Knee Arthroplasty for the Treatment of Tibial Plateau Fractures: A Comparison of Perioperative Outcomes Utilizing the NSQIP Database

4:04 **Luke Momper, MD**
Unanticipated Postoperative Admissions in Outpatient Single-Level Lumbar Decompressions: Can We Predict Them?

4:16 **Brenden Ronna, MD**
Influence of Tibial Tubercle Osteotomy on Early Postoperative Knee Strength Following Medial Patellofemoral Ligament Reconstruction

4:28 **Sarah Ryan, MD**
Posterior Cervical Laminoplasty: Rates and Risk Factors for Conversion to Posterior Cervical Fusion

4:40 **Matthew Waldrop, MD**
The Interaction of Surface Type and Heat Stress to Influence Injury and Concussion Risk in Youth Soccer

4:52 **End of Ortho PGY5 and Fellows formal event**

4:55 **Closing Remarks – Adjourn**

PM&R and Pain Medicine Presentations

Room 219

1:35 **Bio break and room transition**

1:45 **Michelle Poliak-Tunis, MD**
Current and Graduating PM&R and Pain Medicine Resident/Fellow Remarks

1:50 **Isaac Metzler, DO**
Cannabinoid Modulation for Neurogenic Lower Urinary Tract Dysfunction in Spinal Cord Injury

2:02 **Samantha Kultgen, MD**
The Efficacy of Repeat Medial Branch Radiofrequency Ablation

2:14 **Amber McKenna, MD**
Color Your Way: Optimal Characteristics of Adaptive Crayons for People with Hypotonia or Hypertonia

2:26 **Alexa Pfeifer, DO**
An Unusual Cause of Right Hemidiaphragm Paralysis

2:38 **Ben Ayres, DO**
Isolated Infraspinatus Wasting: A Case Report

2:50 **Luke Tsai, MD**
Resident and Attending Perspectives on the UWRH Call System

Networking/Coffee Break

Atrium

3:05 – 3:35 **Beer/Wine/Coffee/Snacks and Group Photos**
Group Photos – 1st Floor Atrium Staircase

PM&R and Pain Medicine Continued

Room 219

3:35 **Bio break and room transition**

3:40 **Shivani Khakhkhar, DO**
IV Lidocaine Infusions at the Pain Clinic: A Quality Improvement Study

3:52 **Haroutiun Hamzoian, MD**
Efficacy of Spinal Cord Stimulator (SCS) Implantation in Chronic Pain Patients at UW-Madison: A Single-Center Retrospective Cohort Study

4:04 **End of PM&R and Pain Medicine formal event**

4:55 **Closing Remarks – Adjourn**
Auditorium