# **Duke** Orthopaedic Surgery 2025 Departmental Research Day & Symposium

Tuesday, March 18, 2025 • 8:00 a.m. – 4:45 p.m. Interprofessional Education Building, 311 Trent Drive, Durham, NC

Maggie Horn, DPT, MPH, PhD

Associate Professor of

Orthopaedic Surgery; Associate

Professor in Population Health

Sciences; Duke University

School of Medicine





Michael Bolognesi, MD Professor of Orthopaedic Surgery; Adult Reconstruction Division Chief; Duke University School of Medicine

## PRESENTATIONS

### 8:00-8:20 a.m. Breakfast

8:20-8:25 a.m. Welcome 

Benjamin Alman, MD

- 8:25-8:37 a.m. Distal Clavicle vs. Traditional and Congruent Arc Latarjet: Comparison of Surface Area and Glenoid Apposition with 3-Dimensional CT and MRI Caroline Park, MD
- 8:37-8:49 a.m. Circulating Proteomic Profiles Associated with Decreased Tourniquet-Induced Ischemia Jonathon Florance, MD
- 8:49-9:01 a.m. Targeting Stem Cells in Skeletal Muscle Repair and Regeneration Shihuan Kuang, PhD
- 9:01-9:13 a.m. Artificial Intelligence for Automated Osteoporosis Screening on Extremity Radiographs Joshua Helmkamp, MD

### 9:13-9:25 a.m. Break

9:25-10:10 a.m. Department Photo • Outside of IPE

**10:10-11:20 a.m. Poster Session I** • Suite 1225

11:20 a.m.-12:50 p.m. Symposium • "Big<sup>3</sup>: Big Ideas, Big Data & Big Analysis"

> **Development of the Duke Total Joint Learning Health Unit: Data to Dissemination** Michael Bolognesi, MD; Maggie Horn, DPT, MPH, PhD

From Inequity to Innovation: Artificial Intelligence as a Bridge to Health Equity and Value-Based Surgical Care Christian Pean, MD, MS

**Responsible Innovation in Health AI** Michael Pencina, PhD

Automated Methods for Assessing Rehabilitation Intervention Fidelity Elizabeth Skidmore, PhD, OTR/L, FAOTA, FACRM



SYMPOSIUM • FEATURED SPEAKERS

Christian Pean, MD, MS Executive Director for Al and IT Innovation; Assistant Professor of Orthopaedic Surgery; Duke University School of Medicine



Michael J. Pencina, PhD Chief Data Scientist, Duke Health; Vice Dean for Data Science; Duke University School of Medicine



Elizabeth Skidmore, PhD, OTR/L, FAOTA, FACRM Associate Dean for Research; Professor of Occupational Therapy; University of Pittsburgh

#### 12:50-1:30 p.m. Lunch

1:30-1:42 p.m.	Decreasing Hip Offset in Total Hip Arthroplasty Results in Decreased Physical Function Scores Patrick Kelly, MD
1:42-1:54 p.m.	<b>Predicting Complications in Spinal</b> <b>Deformity Surgery</b> Brett Rocos, MD
1:54-2:06 p.m.	<b>Clinical Outcomes After Pelvic Resection</b> <b>With And Without Reconstruction</b> Nicole Levine, MD
2:06-2:16 p.m.	Break
2:16-3:26 p.m.	Poster Session II • Suite 1225
3:26-3:38 p.m.	Micro-CT Analysis of Commonly Utilized Tools for Articular Cartilage Defect Bone Marrow Stimulation Lucy Meyer, MD
3:38-3:50 p.m.	Developing a Novel Setting for Post-Acute Care: High-Intensity Home-Based Rehabilitation Joshua Johnson, PT, DPT, PhD
3:50-4:02 p.m.	<b>Low Complication Rates in Olecranon</b> <b>Fracture Fixation with Dual Plating</b> Matthew Brown, MD
4:02-4:14 p.m.	If Opportunity Doesn't Knock, Build a Door: Orthopaedic Fracture Care as a Potential Entry Point for Improved Primary Care Services Amy Behman, MD
4:14-4:26 p.m.	A Novel Fluoroscopic Sequence to Reveal Residual Elbow Instability Secondary to MCL Disruption Alexandra Paul, MD
4:26-4:45 p.m.	Award Announcements/Adiournment



Physicians & Allied Health Professionals: This live activity is designated as a jointly accredited activity for a maximum of 6.0 AMA PRA Category 1 Credit(s), ANCC, JA Credit—AH. Physicians and allied health professionals should claim only the credit commensurate with the extent of their participation in the activity.