

AMANDA (MANDY) M. AGNEW, PhD

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EXPERTISE

Skeletal trauma, bone biomechanics, rib fracture, skeletal biology, biological anthropology, human anatomical variation, functional anatomy, human anatomy, human osteology, juvenile osteology, injury biomechanics, bioarchaeology, skeletal histomorphometry, skeletal anatomical imaging, forensic anthropology, forensic archaeology, human skeletal identification, graduate student research education and mentorship, scientific methods

h-index = 27 (Google Scholar)

EDUCATION

2006 - 2011: PhD - Biological Anthropology (Human Anatomy minor)

Dissertation: Histomorphometry of the Elderly Rib: A methodological approach with implications for biomechanics, function, and fracture risk

The Ohio State University; Columbus, OH

Advisor: Dr. Samuel D Stout

2004 - 2006: MA - Biological Anthropology

Thesis: Histomorphological Aging of Subadults: A test of Streeter's method on a medieval archaeological population

The Ohio State University; Columbus, OH

Advisor: Dr. Samuel D Stout

2000 - 2004: BA - Anthropology (Biology minor), Cum Laude

The State University of New York at Potsdam; Potsdam, NY

Advisor: Dr. Bethany Usher

ACADEMIC POSITIONS

CURRENT - The Ohio State University

2025 - present: Executive Director

Injury Biomechanics Research Center, School of Health and Rehabilitation Sciences, College of Medicine

2022 - present: Professor

School of Health and Rehabilitation Sciences, College of Medicine (TIU)

Department of Anthropology, College of Arts and Sciences

Department of Biomedical Engineering, College of Engineering

2013 - present: Director of Skeletal Biology Research Laboratory

Injury Biomechanics Research Center, School of Health and Rehabilitation Sciences, College of Medicine

PAST - The Ohio State University

2019 - 2024: Director of Graduate Programs

Graduate Programs (MS, PhD), School of Health and Rehabilitation Sciences, College of Medicine

2017 - 2022: Associate Professor

School of Health and Rehabilitation Sciences, College of Medicine (TIU)

Department of Anthropology, College of Arts and Sciences

Department of Biomedical Engineering, College of Engineering

2012 - 2017: Assistant Professor

School of Health and Rehabilitation Sciences, College of Medicine (TIU)

Department of Anthropology, College of Arts and Sciences

Department of Biomedical Engineering, College of Engineering

2013 - 2015: Graduate Program Chair

Graduate Programs (MS, PhD), Division of Anatomy, College of Medicine

2010 - 2012: Instructor

Division of Anatomy, Department of Biomedical Informatics, College of Medicine

2008 - 2010: Graduate Research Associate and Fellow

College of Engineering

2006 - 2008: Graduate Teaching Associate

Department of Anthropology, College of Arts and Sciences

RESEARCH EXPERIENCE & FUNDING

PRINCIPAL INVESTIGATOR

4/2026 - 12/2028: Quantifying vulnerability to injury in the upper extremity

Co-Principal Investigator: Amanda M Agnew, Randee Hunter - The Ohio State University

Research Contract from Autoliv Development AB, Autoliv Research, Sweden

- \$597,280

10/2025 - 4/2027: REACT-X: Resilient explainable AI for casualty triage with logistics awareness using deep topological modeling

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Grant from MINED XIA from Ohio Federal Research Network (OFRN)

- \$219,572

8/2025 - 7/2026: Mechanistic approach to develop prevention strategies for lower extremity MSKI

Co-Principal Investigator: Amanda M Agnew, Randee Hunter- The Ohio State University

Research Cooperative Agreement from US Army Research Office (ARO)/Department of Defense (DoD)

- \$100,000 (\$2,588,566 ceiling)

7/2025 - 6/2026. Thorax and Pelvis Biomechanics and Injury 2025-2026

Principal Investigator: Amanda M Agnew- The Ohio State University

Updated 13 June 2026

Contract from National Highway Traffic Safety Administration (NHTSA)

- \$407,957

7/2025 - 6/2026. Lower Extremity Biomechanics 2025-2026

Principal Investigator: Amanda M Agnew- The Ohio State University
Contract from National Highway Traffic Safety Administration (NHTSA)

- \$309,549

7/2025 - 6/2026. Upper Extremity Biomechanics 2025-2026

Principal Investigator: Amanda M Agnew- The Ohio State University
Contract from National Highway Traffic Safety Administration (NHTSA)

- \$278,018

4/2025 - 12/2026: Biological aspects of sex differences in ankle injury risk: Experimental validation with finite element modeling

Principal Investigator: Amanda M Agnew- The Ohio State University
Contract from Toyota Collaborative Safety Research Center

- \$438,287

9/2024 - 6/2025: Female biomechanics and injury

Principal Investigator: Amanda M Agnew- The Ohio State University
Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$483,217

9/2024 - 6/2025: Tibia biomechanics for vulnerable road user safety

Principal Investigator: Amanda M Agnew- The Ohio State University
Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$203,521

9/2024 - 6/2025: Upper extremity biomechanics

Principal Investigator: Amanda M Agnew- The Ohio State University
Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$94,442

4/2024 - 6/2026: Development of cortical bone mechanics technology for enhancing the diagnosis of osteoporosis

Co-Principal Investigator: Amanda M Agnew, Randee Hunter- The Ohio State University
Research Grant from Ohio University and the National Institutes of Health/National Institute on Aging (NIH/NIA)

- \$255,710

1/2024 - 12/2026: Quantitative assessment of fracture characteristics in blunt force skeletal trauma for forensic interpretations

Co-Principal Investigator: Amanda M Agnew, Angela L Harden - The Ohio State University
National Institute of Justice (NIJ) Grant - Research and Development in Forensic Sciences for Criminal Justice Purposes

- \$818,054

10/2023 - 10/2025: Tensile and compressive material properties of human pelvic cortical bone

Co-Principal Investigator: Amanda M Agnew, Randee Hunter- The Ohio State University
Research Contract from Virginia Polytechnic Inst./ Research Consortium for Crashworthiness in Automated Driving Systems (RCCADS)

- \$42,391

7/2023 - 3/2024: Variation in volumetric bone mineral density in females assessed by QCT

Co-Principal Investigator: Amanda M Agnew, Randee Hunter- The Ohio State University
Research Contract from the Toyota Collaborative Safety Research Center

- \$97,196

6/2023 - 5/2024: Thoracic biomechanics in frontal impacts, Phase II (2023)

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$491,197

6/2023 - 5/2024: Thoracic biomechanics in side impacts, Phase II (2023)

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$455,834

6/2022 - 5/2023: Thoracic biomechanics in side impacts

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$412,650

6/2022 - 5/2023: Thoracic biomechanics in frontal impacts

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$294,859

10/2020 - 12/2021: Preliminary external accuracy assessment of cortical bone mechanics technology

Principal Investigator: Amanda M Agnew - The Ohio State University

Industry Research Contract from OsteoDx

- \$52,366

3/2020 - 3/2023: Quantitative imaging analysis to understand variation in skeletal injury

Co-Principal Investigator: Amanda M Agnew, Randee Hunter- The Ohio State University

Research Cooperative Agreement from US Army Research Lab (ARL)/Department of Defense (DoD)

- \$554,195

1/2020 - 12/2023: Skeletal trauma in forensic anthropology: Improving the accuracy of trauma analysis and expert testimony

Principal Investigator: Amanda M Agnew - The Ohio State University

National Institute of Justice (NIJ) Grant - Research and Development in Forensic Sciences for Criminal Justice Purposes

- \$782,183

9/2019 - 11/2022: Human variability in thorax biomechanics

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$1,140,681

6/2017 - 12/2027: Tensile and compressive material properties of human ribs

Principal Investigator: Amanda M Agnew - The Ohio State University

Research Contract from Autoliv Development AB, Autoliv Research, Sweden

- \$2,026,528

7/2017 - 8/2019: Population specific thorax biomechanics

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$586,512

11/2015 - 3/2017: Mechanical properties of the human thoracic skeleton and contributions to vulnerable occupant injury

Principal Investigator: Amanda M Agnew, John H Bolte IV - The Ohio State University

AGNEW- CURRICULUM VITAE

Research Contract from Autoliv Development AB, Sweden

- \$239,510

11/2015 - 3/2021: Elderly side impact

Co-Principal Investigator: John H Bolte IV, Amanda M Agnew- The Ohio State University

Research Contract from Honda R & D America, Inc.

- \$1,409,409

3/2015 - 3/2018: Assessment of PMHS variability used for research in UBB in the context of quantifying bone quality for scaling response and injury

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Cooperative Agreement from US Army Research Lab (ARL)/Department of Defense (DoD)

- \$2,209,904

9/2014 - 10/2017: Pediatric injury biomechanics research task 2

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$335,870

6/2014 - 6/2019: The impact and injury response of male and female PMHS, Hybrid III fiftieth and fifth percentile ATDs, and WIAMan under blast-induced accelerative loading

Co-Principal Investigator: John H Bolte IV, Amanda M Agnew- The Ohio State University

Research Contract from Virginia Polytechnic Inst./US Army Research Lab

- \$1,064,888

6/2014 - 11/2014: Investigation of abdominal injury patterns, mechanisms and tolerances

Principal Investigator: Amanda M Agnew- The Ohio State University

Research Contract from Virginia Polytechnic Inst./Toyota Motor Company

- \$42,000

5/2014 - 4/2015: Quantifying CRS fit in the vehicle seat environment- focusing on incompatibilities

Principal Investigator: Amanda M Agnew- The Ohio State University

Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

- \$48,000

6/2013 - 9/2016: Warrior Injury Assessment MANikan (WIAMan) Project

Co-Principal Investigator: John H Bolte IV, Amanda M Agnew- The Ohio State University

Research Contract from Johns Hopkins University/ US ARMY and DoD

- \$2,563,316

5/2013 - 4/2015: Anthropometry Update: Is the 6 year old ATD representative of age-matched children?

Principal Investigator: Amanda M Agnew- The Ohio State University

Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

- \$51,215

5/2012 - 4/2013: Development and validation of a biofidelic pediatric ATD lower extremity

Principal Investigator: Amanda M Agnew- The Ohio State University

Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

- \$62,603

5/2012 - 4/2013: Quantifying CRS fit in the vehicle seat environment

Principal Investigator: Amanda M Agnew- The Ohio State University

Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

- \$50,000

1/2012 - 12/2012: Evaluation of pre-tensioning and force limiting used in novel seatbelt restraint systems

Principal Investigator: Amanda M Agnew- The Ohio State University
Research Contract from Virginia Polytechnic Inst./TRW Automotive

- \$100,000

10/2011 - 5/2012: Military biomechanics II-Generic hull testing 4.2

Co-Principal Investigator: John H Bolte IV, Amanda M Agnew- The Ohio State University
Research Contract from Virginia Polytechnic Inst./DoD and US ARMY

- \$333,434

3/2010 - 9/2014: Pediatric injury biomechanics research task 11

Principal Investigator: Amanda M Agnew- The Ohio State University
Research Contract from National Highway Traffic Safety Administration (NHTSA)

- \$556,304

1/2009 - 1/2010: The role of microfractures and cross-sectional geometry in bone fragility

Principal Investigator: Amanda M Agnew- The Ohio State University
Alumni Grant for Graduate Research and Scholarship (AGGRS), The Ohio State University

2009 - 2011: Pediatric rib study (Phase I & II)

Graduate Research Fellow: Amanda M Agnew- The Ohio State University
Dwight D Eisenhower Grants for Research Fellowship, Federal Highway Administration

2004 - 2025: Slavia Project

Collection Manager and Project Osteologist of the Giecz Skeletal Collection
Giecz, Poland (www.slavia.org)
The Slavia Foundation

CONTRIBUTING INVESTIGATOR

11/2025 - 5/2027: Injury assessment of PMHS in high-speed rear-facing frontal impacts - Co-Investigator

Research Contract from Hyundai Mobis
PI: Yun-Seok Kang - The Ohio State University

- \$543,452

7/2025 - 6/2026: Rear-impact trauma - Co-Investigator

Research Contract from National Highway Traffic and Safety Administration (NHTSA)
PI: Yun-Seok Kang - The Ohio State University

- \$389,110

7/2025 - 6/2026: Motorcycle helmet research - Co-Investigator

Research Contract from National Highway Traffic and Safety Administration (NHTSA)
PI: Yun-Seok Kang - The Ohio State University

- \$366,379

7/2025 - 6/2026: Elder mistreatment radiographic biomarkers in emergency department patients with rib fractures (EMBER) - Co-Investigator

SAEM Resident and Medical Student (RAMS) Research Grant
PIs: Sarah Hurley, Lauren Southerland L - The Ohio State University

- \$5,000

9/2024 - 6/2025: Rear-impact trauma - Co-Investigator

Research Contract from National Highway Traffic and Safety Administration (NHTSA)
PI: Yun-Seok Kang - The Ohio State University

- \$274,866

5/2024 - 4/2025: Variation in thoracic and abdominal shapes and their influence on posture and seat belt fit for adolescent females - *Co-Investigator*

Research Grant from Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

PI: Gretchen Baker - The Ohio State University

- \$63,524

6/2023 - 5/2024: Automated vehicle rear-facing safety - *Co-Investigator*

Research Contract from National Highway Traffic Safety Administration (NHTSA)

PI: Yun-Seok Kang - The Ohio State University

- \$429,648

10/2021 - 5/2022: Investigation of a new restraint system to reduce injury risk of reclined occupants in high-speed rear impacts - *Co-Investigator*

Research Contract from Hyundai Mobis

PI: Yun-Seok Kang - The Ohio State University

- \$330,035

10/2021 - 12/2022: PMHS responses and injuries in a continuous rear-facing seat condition at a high-speed frontal impact - *Co-Investigator*

Research Contract from Research Consortium for Crashworthiness in Automated Driving Systems (RCCADS)

PI: Yun-Seok Kang - The Ohio State University

- \$294,565

2/2019 - 2/2024: Influence of boot and foot characteristics on blast injury prevention - *Co-Investigator*

Research Cooperative Agreement from US Army Research Office (ARO)/Department of Defense (DoD)

PI: John H Bolte IV - The Ohio State University

- \$623,928

7/2020 - 12/2022: Biomechanics in AV Settings Phase II - *Co-Investigator*

Research Contract from National Highway Traffic Safety Administration (NHTSA)

PI: Yun-Seok Kang - The Ohio State University

- \$761,114

3/2018 - 6/2020: Biomechanics in AV Settings Phase I - *Co-Investigator*

Research Contract from National Highway Traffic Safety Administration (NHTSA)

PI: John H Bolte IV - The Ohio State University

- \$606,672

9/2014 - 8/2015: Mechanical and Compositional Analyses of Bone Tissue- *Co-Investigator*

Clinical and Translational Science (CTS) Pilot and Collaborative Studies Program, The Ohio State University Wexner Medical Center

PI: Do-Gyoon Kim - The Ohio State University

- \$30,000

7/2013 - 6/2014: Relationship of Mineral Distribution with Mechanical Properties of Oral Bone- *Co-Investigator*

BF Dewell Memorial Research Award in Biomedical Research, American Association of Orthodontists Foundation (AAOF)

PI: Do-Gyoon Kim - The Ohio State University

- \$25,000

12/2011 - 11/2012: Bone Mineralization Based Diagnosis of Oral Complications- *Co-Investigator*

Clinical and Translational Science (CTS) Pilot and Collaborative Studies Program, The Ohio State University Wexner Medical Center

PI: Do-Gyoon Kim - The Ohio State University

- \$30,000

9/2011 - 11/2011: Elderly Post-Mortem Human Subject Sled Testing- *Co-Investigator*

Research Contract from Hyundai Motor Co.

PI: John H Bolte IV- The Ohio State University

- \$224,269

9/2011 - 9/2012: Evaluation of Initial Stability of Trabecular Metal (TM) and Tapered Screw-Vent (TSV) Dental Implants- *Co-Investigator*

Corporate research Contract from Zimmer, Inc.

PI: Do-Gyoon Kim- The Ohio State University

- \$38,000

10/2011 - 5/2012: Military Biomechanics II- Generic Hull Testing- *Co-Investigator*

Research Contract from Virginia Polytechnic Inst/DoD and US ARMY

PI: John H Bolte IV- The Ohio State University

- \$51,823

3/2011 - 12/2011: Pediatric Injury Biomechanics Research- *Co-Investigator*

Research Contract from National Highway Traffic and Safety Administration (NHTSA)

PI: John H Bolte IV- The Ohio State University

- \$222,897

1/2010 - 4/2012: Facial Fracture Injury Risk Functions for Assessing the Performance of Improved Face and Eye Protection- *Co-Investigator*

Research Contract from Virginia Polytechnic Institute

PI: John H Bolte IV- The Ohio State University

- \$149,177

2009 - 2010: Knee Airbag Injury Risk Assessment for Children- *Co-Investigator*

Center for Child Injury Prevention Studies (CChIPS), National Science Foundation I/UCRC

PI: John H Bolte IV- The Ohio State University

- \$49,192

PEER-REVIEWED JOURNAL PUBLICATIONS (97)

1. Slusarska K, **Agnew AM**, Miciak M, Rychtarska M. IN PRESS, 2026. Lesion distribution in childhood scurvy among medieval subadults from Giecz (Site 10), Poland. International Journal of Osteoarchaeology.
2. Bolte JH, Carroll J, van Meter M, Tesny A, Meringolo D, Higinbotham E, Meng S, Kang Y-S, **Agnew AM**. IN PRESS, 2026. PTW rider injury mechanism from full-scale crash testing using PMHS. International Research Council on Biomechanics of Injury (IRCOBI). Paper IRC-26-##,
3. Albert DL, Hunter RL, Haverfield Z, **Agnew AM**. IN PRESS, 2026. Preliminary investigation of the tensile and compressive material properties of pelvis cortical bone guided by microstructural imaging. International Research Council on Biomechanics of Injury (IRCOBI). Paper IRC-26-##
4. Baker G, Kang Y-S, Marcallini A, Lang R, Hutter E, Moorhouse K, **Agnew AM**. IN PRESS, 2026. Female PMHS thoracic biomechanical response corridors and evaluation of the influence of breast tissue in frontal impacts. Stapp Car Crash Journal.
5. Kang Y-S, Baker GH, Marcallini A, Kwon HJ, Foster C, Moorhouse K, **Agnew AM**, Bolte JH. IN PRESS, 2026. Comparison of female and male post-mortem human subject kinematic responses and injuries in rear-facing seat configurations in high-speed frontal impacts. Stapp Car Crash Journal.

6. Goden CM, **Agnew AM**, Harden AL. IN PRESS, 2026. Relationships between human tibia diaphysis shape and experimental injury outcomes. *Journal of Forensic Sciences*.
7. Kang Y-S, Dewitt T, Wensink T, Marcallini A, Jung YH, Lee DG, Harm JJ, Hunter RL, **Agnew AM**. 2026. Biomechanical responses and injuries of male post-mortem human subjects in rear-facing frontal impacts with unreinforced airbag-equipped production seats. *International Journal of Transportation Safety*. 14(1), 549-580.
8. Hayden L, Rychtarska M, Hubbe M, **Agnew AM**. 2025. A case study of childhood metabolic stress in 11th - 12th century Giecz, Poland. *Studia Lednicka*. Vol XXIV, 143-163.
9. Kang Y-S, Baker GH, DeWitt T, Marcallini A, Pradhan V, Tesny A, Bendig A, **Agnew AM**, Bolte JH. 2025. Thoracic responses and injuries of male post-mortem human subjects in a homogeneous rear-facing seat during high-speed frontal impact. *Annals of Biomedical Engineering*. 53, 520-535.
10. Schaffer R, Kang Y-S, Marcallini A, Pipkorn B, Bolte JH, **Agnew AM**. 2024. Direct comparison of structural bending properties in human ribs with and without costal cartilage. *Stapp Car Crash Journal*. 68(1), 104-154. *Awarded 3rd place for best student paper/presentation of the 2024 Stapp Car Crash Conference.
11. Corrales MA, Holcombe S, **Agnew AM**, Kang Y-S, Cronin D. 2024. Isolated rib response and fracture prediction for young mid-size male, enabled by population specific material models and rib cross-sectional geometry. *Stapp Car Crash Journal*. 68(1), 89-103. *Awarded 1st place for best student paper/presentation of the 2024 Stapp Car Crash Conference.
12. Lopez-Valdes FJ, Mascareñas, **Agnew AM**, Crompton P, Kerrigan J, Masouros S, Schmitt K-U, Siegmund G. 2024. The ethics, applications, and contributions of cadaver testing in injury prevention research. *Traffic Injury Prevention*. 25(8), 1115-1128.
13. Haverfield Z, **Agnew AM**, Loftis K, Zhang J, Hayden LE, Hunter RL. 2024. Multi-site phantomless bone mineral density from clinical quantitative computed tomography in males. *Journal of Bone and Mineral Research Plus*. 8(10). ziae106.
14. **Agnew AM**, Baker G, Marcallini A, Bendig A, Moorhouse K, Rhule H, Bolte JH, Kang YS. 2024. Small female PMHS thoracic responses to simplified oblique and lateral loading. *International Research Council on Biomechanics of Injury (IRCOBI)*. Paper IRC-24-40, 274-291.
15. Kang YS, Pradhan V, Stammen J, Baker G, Hagedorn A, **Agnew AM**, Moorhouse K, Bolte JH. 2024. Pelvic responses and injuries to male post-mortem human subjects (PMHS) in rear-facing seat configurations in high-speed frontal impacts. *International Research Council on Biomechanics of Injury (IRCOBI)*. Paper IRC-24-30, 138-160.
16. Kang YS, Marcallini A, DeWitt T, Song J, Jung YH, Lee DG, Harm JJ, Ko S, Kim HJ, Baker G, Hunter RL, **Agnew AM**. 2024. Responses and injuries of male post-mortem human subjects (PMHS) seated in an unreinforced production seat in rear-facing frontal impacts. *International Research Council on Biomechanics of Injury (IRCOBI)*. Paper IRC-24-31, 161-193.
17. Hunter RL, Haverfield Z, Hayden L, Sun Z, **Agnew AM**. 2024. Preliminary investigation of bone mineral density differences between female and male post-mortem human subjects. *International Research Council on Biomechanics of Injury (IRCOBI)*. Paper IRC-24-44, 319-343.
18. Brzezinski ET, Hubbe M, Hunter RL, **Agnew AM**. 2024. Sex differences in workload in medieval Eastern Europe: Patterns of asymmetry and biomechanical adaptation in the upper limb at Giecz, Poland. *American Journal of Biological Anthropology* 183(2), e24886.
19. Tesny A, Fibbi C, Kang Y-S, **Agnew AM**, Baker GH, Zaragoza-Rivera Y, Shurtz B, Pipkorn B, Rhule H, Moorhouse K, Markusic C, Malcomb S, Bolte JH. 2023. Evaluation of 5th percentile female ATDs in near-side impact

- scenarios compared to elderly PMHS. International Research Council on Biomechanics of Injury (IRCOBI). IRC-23-27: 160-183.
20. Harden AL, Kang Y-S, Baker GH, Stull KE, **Agnew AM**. 2023. Exploring the effects of sex and size on dynamic tibia properties. International Research Council on Biomechanics of Injury (IRCOBI). IRC-23-53: 477-498.
 21. Hunter RL, Haverfield Z, Kang Y-S, **Agnew AM**. 2023. Potential consequences of contradictions in bone mineral density assessments in injury biomechanics. International Research Council on Biomechanics of Injury (IRCOBI). IRC-23-131: 1031-1047.
 22. Albert DL, Katzenberger MJ, Hunter RL, **Agnew AM**, Kemper AR. 2023. Effects of loading rate, age, and morphology on the material properties of human rib trabecular bone. *Journal of Biomechanics* 156, paper 111670.
 23. Kang Y-S, Stammen J, **Agnew AM**, Baker G, Pradhan V, Bendig A, Hagedorn A, Moorhouse K, Bolte JH. 2023. Thoracic responses and injuries to male postmortem human subjects (PMHS) in rear-facing seat configurations in high-speed frontal impacts. *Traffic Injury Prevention via Enhanced Safety of Vehicles (ESV)* 24(s1): S47-S54.
 24. Bolte JH, Fibbi C, Tesny A, Kang Y-S, **Agnew AM**, Shurtz B, Pipkorn B, Rhule H, Moorhouse K. 2023. Analysis of injury mechanism and thoracic response of elderly, small female PMHS in near-side impact scenarios. *Traffic Injury Prevention via Enhanced Safety of Vehicles (ESV)* 24(s1): S23-S31.
 25. Harden A, Bolte JH, Kang Y-S, Stull K, **Agnew AM**. 2023. Blunt force skeletal trauma research methods: A multi-disciplinary perspective. *Forensic Anthropology* 6(2): 79-91.
 26. Haverfield ZA, **Agnew AM**, Hunter RL. 2023. Differential cortical volumetric bone mineral density within the human rib. *Journal of Clinical Densitometry: Assessment & management of musculoskeletal health* 26(2), paper 101358.
 27. Kang Y-S, Bendig A, Stammen J, Hutter E, Moorhouse K, Bolte JH, **Agnew AM**. 2023. Comparison of small female PMHS thoracic responses to scaled response corridors in a frontal hub impact. *Traffic Injury Prevention* 24(1): 62-68.
 28. Rampersadh C, **Agnew AM**, Malcolm S, Gierczycka D, Iraeus J, Cronin DS. 2022. Factors affecting the numerical response and fracture location of the GHBMCM50 rib in dynamic anterior-posterior loading. *Journal of the Mechanical Behavior of Biomedical Materials* 136, paper 105527.
 29. Harden A, Kang Y-S, **Agnew AM**. 2022. Comparison of the effect of two dynamic loading rates on fracture characteristics of human ribs in bending: An experimental study. *Forensic Anthropology* 5(4): 292-301.
 30. Sreedhar A, **Agnew AM**, Bolte JH, Murach MM, Ramachandra R, Kang Y-S. 2022. Development of a strain-based model to predict eviscerated thoracic response from dynamic individual rib tests. *Journal of Biomechanical Engineering* 144(10), paper BIO-21-1441.
 31. Haverfield Z, Hunter RL, Loftis KL, **Agnew AM**. 2022. Skeletal site and method-dependent variability of bone mineral density in injury biomechanics research. International Research Council on Biomechanics of Injury (IRCOBI). IRC-22-49: 332-360.
 32. Cole ME, Stout SD, Dominguez V, **Agnew AM**. 2022. Pore Extractor 2D: An ImageJ toolkit for quantifying cortical pore morphometry on histological bone images, with application to intraskeletal and regional patterning. *American Journal of Biological Anthropology* 179(3): 365-385.
 33. Kang Y-S, Stammen J, Bendig A, **Agnew AM**, Hagedorn A, Thomas C, Ramachandra R, Kwon HJ, Moorhouse K, Bolte JH. 2022. Effects of seatback recline and belt restraint type on PMHS responses and injuries in rear-facing frontal impacts. *SAE International Journal of Transportation Safety* 10(2), paper 09-10-02-0012.

34. Miciak M, **Agnew AM**. 2021. Cmentarzysko wczesnośredniowieczne w Gieczu, stan. 10, woj. wielkopolskie - wyniki badań z lat 2014-2019. *Studia Lednicka*. Vol XX, 125-195.
35. Albert DL, Katzenberger MJ, **Agnew AM**, Kemper A. 2021. A comparison of rib cortical bone compressive and tensile material properties: Trends with age, sex, and loading rate. *Journal of Mechanical Behavior of Biomedical Materials* 122: 104668.
36. **Agnew AM**, Sreedhar A, Bolte JH, Kang Y-S. 2021. Exploratory comparison of human rib structural behavior in two dynamic loading scenarios. *International Research Council on Biomechanics of Injury (IRCOBI)*. IRC-21-92: 775-786.
37. Kawabuchi T, Sugaya H, Takahashi Y, **Agnew AM**, Kang Y-S, Bolte JH. 2021. Prediction of rib fractures to elderly female occupants by means of a combination of anterior-posterior and lateral deformation of the rib cage in a near-side crash. *International Research Council on Biomechanics of Injury (IRCOBI)*. Paper IRC-21-56: 521-531.
38. Hunter RL, Haverfield Z, **Agnew AM**. 2021. Investigation of sex-specific effects on variation in cortical bone morphometrics of the radius. *International Research Council on Biomechanics of Injury (IRCOBI)*. IRC-21-37: 288-307.
39. Harden AL, Kang Y-S, Hunter RL, Bendig A, Bolte JH, Eckstein NI, Smith AGF, **Agnew AM**. 2021. Preliminary sex-specific relationships between peak force and cortical bone morphometrics in human tibiae subjected to lateral loading". *International Research Council on Biomechanics of Injury (IRCOBI)*. IRC-21-33: 232-248.
40. Yates K, **Agnew AM**, Albert DL, Kemper A, Untaroiu CD. 2021. Subject-specific rib finite element models with material data derived from coupon tests under bending loading. *Journal of Mechanical Behavior of Biomedical Materials* 116: 104358.
41. Kang Y-S, Kwon HJ, Stammen J, Moorhouse K, **Agnew AM**. 2021. Biomechanical response targets of adult human ribs in frontal impacts. *Annals of Biomedical Engineering* 49: 900-911.
42. Dominguez VM, Harden A, Wascher M, **Agnew AM**. 2020. Rib variation at multiple locations and implications for histological age estimation. *Journal of Forensic Science* 65 (6): 2108-2111.
43. Kang Y-S, Stammen J, Ramachandra R, **Agnew AM**, Hagedorn A, Thomas C, Kwon HJ, Moorhouse K, Bolte JH. 2020. Biomechanical responses and injury assessment of post mortem human subjects in various rear-facing seating configurations. *Stapp Car Crash Journal* 64: 155-212.
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140. Reitsema LJ, Crews DE, Justus HM, **Agnew AM**. 2008. Stable carbon and nitrogen analysis of diet from the medieval cemetery at Giecz, Poland. *American Journal of Physical Anthropology* 46:179.
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PRESENTATIONS

LOCAL (19)

1. **Agnew AM**. 2022. Thoracic injury biomechanics. Presentation at School of Health and Rehabilitations Sciences Grand Rounds; Columbus, OH, United States. (Invited)
2. **Agnew AM**. 2018. The importance of tissue testing for vehicle safety. Presentation at Lifeline of Ohio to Lifeline of Ohio Medical Advisory Board; Columbus, OH, United States. (Invited)
3. **Agnew AM**. 2017. The importance of pediatric tissue testing in injury biomechanics. Presentation at Lifeline of Ohio; Columbus, OH, United States. (Invited)
4. **Agnew AM**. 2016. Skeletal response to dynamic impact: A case study in biomechanics. Presentation at School of Health and Rehabilitations Sciences Grand Rounds; Columbus, OH, United States. (Invited)
5. **Agnew AM**. 2014. Rib biomechanics. Presentation at Injury Biomechanics Research Center bi-annual research meeting; Columbus, OH, United States.
6. **Agnew AM**. 2015. Rib biomechanics update: Anatomy and dissection. Presentation to 'Lifeline of Ohio' staff; Columbus, OH, United States. (Invited)
7. **Agnew AM**. 2014. Rib biomechanics. Presentation at Injury Biomechanics Research Center bi-annual research meeting; Columbus, OH, United States.
8. **Agnew AM**. 2014. Pediatric thorax injury biomechanics. Presentation to 'Lifeline of Ohio' staff; Columbus, OH, United States. (Invited)

9. **Agnew AM.** 2013. Biomechanics of the human rib. Orthodontics Research Seminar, The Ohio State University College of Dentistry; Columbus, OH, United States. (Invited)
10. **Agnew AM.** 2013. Pediatric and elderly rib biomechanics. Presentation at Injury Biomechanics Research Center bi-annual research meeting; Columbus, OH, United States.
11. **Agnew AM.** 2012. Dynamic testing of pediatric and elderly ribs. Quarterly meeting presentation for NHTSA funded research at The Ohio State University; Columbus, OH, United States.
12. **Agnew AM.** 2012. Microstructure and biomechanics of the human rib. Skeletal Biology Seminar Series, The Ohio State University; Columbus, OH, United States. (Invited)
13. **Agnew AM.** 2010. Mechanical properties of pediatric and elderly ribs. Quarterly meeting presentation for NHTSA funded research at the Center for Automotive Research (CAR); Columbus, OH, United States.
14. **Agnew AM.** 2010. On the significance of pediatric tissue testing in Injury Biomechanics. Presentation to 'Lifeline of Ohio' staff; Columbus, OH, United States. (Invited)
15. **Agnew AM.** 2010. Mechanical properties of pediatric ribs. Quarterly meeting presentation for NHTSA funded research at the Center for Automotive Research (CAR); Columbus, OH, United States.
16. **Agnew AM.** 2009. Mechanical properties of pediatric ribs. Quarterly meeting presentation for NHTSA funded research at the Center for Automotive Research (CAR); Columbus, OH, United States.
17. **Agnew AM.** 2009. The relationship between microstructure and material properties of pediatric ribs. Department of Biomedical Informatics Research-in-Progress Seminar, The Ohio State University; Columbus, OH, United States. (Invited)
18. **Agnew A.** 2009. The relationship between microstructure and material properties of pediatric ribs. Podium and poster presentation at the 5th Annual Injury Biomechanics Symposium; Columbus OH, United States.
19. **Agnew AM.** 2009. The biomechanics of human pediatric ribs. Quarterly meeting presentation for NHTSA funded research at the Center for Automotive Research (CAR); Columbus, OH, United States.

NATIONAL (12)

1. **Agnew AM.** 2026. From Biology to Biomechanics: An interdisciplinary perspective on human injury. Invited presentation of the annual Clay Gabler Memorial Lecture. Virginia Tech University. Blacksburg, VA. (Invited)
2. **Agnew AM.** 2024. Thoracic biomechanics. Presented at the International Center for Automotive Medicine, University of Michigan, Ann Arbor, MI. (Invited)
3. **Agnew AM.** 2022. Thoracic biomechanics. International Center for Automotive Medicine, University of Michigan, Ann Arbor, MI. (Invited)
4. **Agnew AM.** 2018. Skeletal response to dynamic impact: Applied skeletal biology. Department of Biology Colloquium Series, University of Akron; Akron, OH, United States. (Invited)
5. **Agnew AM.** 2016. Skeletal response to dynamic impact: Thoracic injury biomechanics. Department of Anthropology Seminar Series, Pennsylvania State University; State College, PA, United States. (Invited)
6. **Agnew AM.** 2014. Homework to roadwork. Panel discussion at the Transportation Research Board Annual Meeting; District of Columbia, United States. (Invited)
7. **Agnew AM.** 2013. Current injury biomechanics research. Orthopaedics Research Lab Seminar, University of Michigan; Ann Arbor, MI, United States. (Invited)
8. **Agnew AM.** 2013. Human gross anatomy in engineering. Injury Biomechanics Symposium. Columbus, Ohio, United States. (Invited)

AGNEW - CURRICULUM VITAE

9. **Agnew AM.** 2013. Whole-body injury scaling using ribs. Presentation at WIAMan BioPT update. Aberdeen Proving Grounds, Aberdeen, Maryland, United States.
10. **Agnew AM.** 2012. Development and validation of a biofidelic pediatric ATD lower extremity- interim report. Presentation at National Science Foundation CCHIPS Industrial Advisory Board Meeting; Columbus, OH, United States.
11. **Agnew AM.** 2012. American Association of Anatomists Career Workshop. Panel discussion at the 81st annual American Association of Physical Anthropologists (AAPA) meeting; Portland, OR, United States. (Invited)

INTERNATIONAL (12)

1. **Agnew AM, Bolte JH.** 2026. Translating Injury Biomechanics Research into Global Impact. Presented at the Automotive Safety Council annual meeting, Bonita Springs, FL, USA. (Invited)
2. **Agnew AM, Bolte JH.** 2025. Vulnerability in motor vehicle crashes. Presented at the Automotive Safety Council annual meeting, Tuscon, AZ, USA. (Invited)
3. **Agnew AM, Arbogast K, Sunnevang C, Jermakian J, Tylko S.** 2024. Rear seat safety. Expert panelist and podium presentation at the Automotive Safety Council annual meeting, Bonita Springs, FL, United States. (Invited)
4. **Agnew AM, Kang Y-S, Bendig A, Bolte JH, Moorhouse K, Hutter E, Rhule H.** 2023. Thoracic response corridors of small female PMHS in simplified frontal and side impacts. Podium presentation at the Society of Automotive Engineers (SAE) Government/Industry Meeting. Washington DC, USA.
5. **Agnew AM, Bolte JH.** 2023. Vulnerability in motor vehicle crashes. Presented at the Automotive Safety Council (ASC) annual meeting, Orlando, FL, United States. (Invited)
6. **Agnew AM, Bolte JH, Kang Y-S.** 2022. Redefining thoracic vulnerability. Presented at the Insurance Institute for Highway Safety (IIHS) Seminar: Equity in Crash Safety, Ruckersville, VA, United States. (Invited)
7. **Agnew AM, Bolte JH, Kang Y-S.** 2022. Biological contributors to variability in human thoracic injury. Invited keynote lecture in 'High-Rate Injury Biomechanics' session. 9th World Congress of Biomechanics, Taipei, Taiwan. (Invited)
8. **Agnew AM.** 2021. Characterization of thoracic injury risk and outcomes. International Center for Automotive Medicine, University of Michigan; Ann Arbor, MI, United States. (Invited)
9. **Agnew AM.** 2021. Life and Death in Medieval Poland. Polish Studies Initiative Lecture Series, Center for Slavic and East European Studies - The Ohio State University. Virtual podium presentation with participants from the United States, Canada, and Poland. (Invited)
10. **Agnew AM.** 2019. Biological factors influencing rib fracture in dynamic loading events. International Center for Automotive Medicine, Case Review Series, University of Michigan; Ann Arbor, MI, United States. (Invited)
11. **Agnew AM.** 2015. Skeletal response to dynamic loading: Case studies in injury biomechanics. Bone and Joint Initiative Seminar Series. Western University; London, Canada. (Invited)
12. **Agnew AM, Justus HM.** 2013. Life and Death in Medieval Poland. Presented at Gród piastowski w Gieczu – geneza, funkcja, kontekst, Rezerwat Archeologiczny w Gieczu, Giecz, Poland. (Invited)

TEACHING EXPERIENCE

Introduction to Forensic Science 3211 - *Course Director, Instructor*
The Ohio State University, Department of Anthropology; Columbus, OH

Updated 13 June 2026

- 3 semester credits

Skeletal Biology 5608 - *Course Director, Instructor*

The Ohio State University, School of Health and Rehabilitation Sciences/Department of Anthropology; Columbus, OH

- 3 semester credits

Advanced Structure and Function of the Human Body 7410- *Course Director, Instructor*

The Ohio State University, School of Health and Rehabilitation Sciences; Columbus, OH

- 5 semester credits

Research in Biomedical Engineering 8999- *Course Director, Instructor*

The Ohio State University Department of Biomedical Engineering; Columbus, OH

- 1-3 semester credits

Gross Anatomy for Graduate Engineers 6220- *Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 5 semester credits

Graduate Human Gross Anatomy 6900- *Course Director, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 8 semester credits

Research in Health and Rehabilitation Sciences 7998, 7999, 8998, 8999- *Course Director, Instructor*

The Ohio State University, School of Health and Rehabilitation Sciences; Columbus, OH

- 1-3 semester credits

Research in Anatomy 8999- *Course Director, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 1-3 semester credits

Gross Anatomy for Medical Students- *Musculoskeletal Block Lead Instructor*

The Ohio State University, College of Medicine; Columbus, OH

- 3 semester credits

Research Seminar in Anatomy 7891- *Course Director, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 1 semester credit

Advanced Regional Anatomical Dissection- *Course Director, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 2-5 semester credits

Advanced Musculoskeletal Anatomy for PT/OT Students 6000- *Course Director, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 5 semester credits

Gross Anatomy for Dental Students 602/603- *Gross Anatomy Course Coordinator, Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 7 quarter credits

Gross Anatomy for Graduate Engineers 720- *Instructor*

The Ohio State University, Division of Anatomy; Columbus, OH

- 6 quarter credits

Gross Anatomy for Undergraduate Engineers 220- *Instructor*

AGNEW- CURRICULUM VITAE

The Ohio State University, Division of Anatomy; Columbus, OH

- 2 quarter credits

Med I Gross Human Anatomy 712- *Lab Instructor*

The Ohio State University, College of Medicine/Division of Anatomy; Columbus, OH

- 12 quarter credits

Introduction to Physical Anthropology- 200- *Instructor, Graduate Teaching Associate*

The Ohio State University, Department of Anthropology; Columbus, OH

- 5 quarter credits

Introduction to Cultural Anthropology 202- *Instructor, Graduate Teaching Associate*

The Ohio State University, Department of Anthropology; Marion and Columbus, OH

- 5 quarter credits

Human Osteoarchaeology in the Field and Lab - *Instructor and Site Osteoarchaeologist*

Field School in Mortuary Archaeology; The Slavia Project; Giecz, Poland (www.slavia.org)

The Ohio State University, Department of Anthropology; Columbus, OH

- ~1000 contact hours/summer, 4.5 credits

CONTINUING-EDUCATION TEACHING

2013 - 2014: Gross Anatomy Short-Course- *Instructor*

Injury Biomechanics Symposium

The Ohio State University, Columbus, OH

2011 - 2025, annually: Forensic Archaeology & Anthropology

Forensic Aspects of Death- *Course Coordinator and Lead Instructor*

Office of the Ohio Attorney General, Bureau of Criminal Investigation

Ohio Peace Officer Training Academy (OPOTA); London, OH

ADVISING & MENTORSHIP

VISTING SCHOLARS

2017 - 2018: Nawaporn Techataweewan, MD/PhD- *Supervisor*

Injury Biomechanics Research Center (IBRC), The Ohio State University, Columbus, OH, USA

POST-DOCTORAL RESEARCHERS (4)

2021- 2023: Mary Beth Cole, PhD in Biological Anthropology - *Supervisor*

Injury Biomechanics Research Center (IBRC), The Ohio State University, Columbus, OH, USA

2018: Victoria Dominguez, PhD in Anatomy - *Supervisor*

Injury Biomechanics Research Center (IBRC), The Ohio State University, Columbus, OH, USA

2014 - 2016: Timothy Gocha, PhD in Biological Anthropology - *Supervisor*

Injury Biomechanics Research Center (IBRC), The Ohio State University, Columbus, OH, USA

2013 - 2016: Hyunjung Kwon, PhD in Biomedical Engineering - *Supervisor*

Injury Biomechanics Research Center (IBRC), The Ohio State University, Columbus, OH, USA

DOCTORAL STUDENTS (*9 as advisor)

AGNEW - CURRICULUM VITAE

*2025 - present: **Yuyoung Kim** - *Doctoral co-advisor & GRA supervisor*
Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2025 - present: **Srinivas Anantharamakrishnan** - *Doctoral co-advisor & GRA supervisor*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

*2025 - present: **Reed Finfrock** - *Doctoral committee member*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

2024 - present: **Cristian Saenz-Betancourt** - *Doctoral committee member*
Mechanical Engineering, Ludwig-Maximilians University, Munich, Germany

2024: **Karen Cooke** - *External examiner*
Anthropology, The Australian National University, Canberra, Australia

*2023 - present: **Lauren Hayden** - *Doctoral co-advisor*
Anthropology, The Ohio State University, Columbus, OH, USA

*2021 - 2026: **Christopher Goden** - *Doctoral co-advisor & GRA supervisor*
Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2021 - 2025: **Zachary Haverfield** - *Doctoral advisor & GRA supervisor*
Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

2021 - 2025: **Rosalie Connell** - *Doctoral committee member*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

*2020 - present: **Emma Brzezinski** - *Doctoral co-advisor & GRA supervisor*
Anthropology, The Ohio State University, Columbus, OH, USA

2020 - 2023: **Justin Goldstein** - *Doctoral committee member*
Applied Anthropology, Texas State University, San Marcos, TX, USA

2019 - 2022: **Malorie Albee** - *Doctoral committee member*
Anthropology, The Ohio State University, Columbus, OH, USA

2019 - present: **Evonne Turner-Byfield** - *Doctoral committee member*
Anthropology, The Ohio State University, Columbus, OH, USA

2018 - 2019: **Rosie Pitfield** - *Doctoral committee member*
Human Skeletal Biology, University of Kent, Canterbury, UK

*2016 - 2021: **Angela Harden** - *Doctoral advisor & GRA supervisor*
Anatomy, The Ohio State University, Columbus, OH, USA

2016 - 2018: **Devon Albert** - *Doctoral committee member*
Biomedical Engineering, Virginia Polytechnic Institute, Blacksburg, VA, USA

2015 - 2020: **Tiffany Marulli** - *Doctoral committee member*
Anatomy, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Lauren Eichaker** - *Doctoral committee member*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Benjamin Shurtz** - *Doctoral committee member*
Mechanical and Aerospace Engineering, The Ohio State University, Columbus, OH, USA

AGNEW - CURRICULUM VITAE

2015 - 2016: **Zachariah Hubbell** - *Doctoral committee member*
Anthropology, The Ohio State University, Columbus, OH, USA

2014 - 2018: **Julie Bing (Mansfield)** - *Doctoral committee member*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2014 - 2019: **Mary Beth Cole** - *Doctoral committee member*
Anthropology, The Ohio State University, Columbus, OH, USA

2014 - 2016: **Amy Amabile** - *Doctoral committee member*
Anatomy, The Ohio State University, Columbus, OH, USA

*2013 - 2019: **Diana Messer** - *Doctoral advisor*
Anatomy, The Ohio State University, Columbus, OH, USA

*2012 - 2018: **Victoria Dominguez** - *Doctoral advisor & GRA supervisor*
Anatomy, The Ohio State University, Columbus, OH, USA

2012 - 2015: **Scott Crawford** - *Doctoral committee member*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2012 - 2014: **Timothy Gocha** - *Doctoral committee member & GRA supervisor*
Anthropology, The Ohio State University, Columbus, OH, USA

2011 - 2015: **Randee Hunter** - *Doctoral committee member*
Anthropology, The Ohio State University, Columbus, OH, USA

2011 - 2014: **Laura Boucher** - *Doctoral committee member*
Anatomy, The Ohio State University, Columbus, OH, USA

MASTER'S STUDENTS (*14 as thesis advisor)

2025 - 2026: **Jessica Drake** - *Master's committee member (thesis)*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

*2024 - 2026: **Pasindu Wanigarathne** - *Master's advisor & GRA supervisor (thesis)*
Health & Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2024 - 2026: **Jack Spangler** - *Master's co-advisor & GRA supervisor (thesis)*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2024 - 2025: **Christopher Lopez** - *Master's committee member (thesis)*
Biomedical Engineering and Mechanics, Virginia Polytechnic Institute, Blacksburg, VA, USA

2023 - 2025: **Caitlyn Picard** - *Master's advisor (non-thesis)*
Health & Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

2023 - 2025: **Collin Rogus** - *Master's committee member (thesis)*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

*2023 - 2025: **Daniel Meringolo** - *Master's co-advisor & GRA supervisor (thesis)*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

*2023 - 2025: **Ryan Lang** - *Master's co-advisor & GRA supervisor (thesis)*

AGNEW - CURRICULUM VITAE

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2023 - 2024: **Julia Damron** - *Master's committee member (thesis)*

Biomedical Engineering and Mechanics, Virginia Polytechnic Institute, Blacksburg, VA, USA

*2022 - 2024: **Rose Schaffer** - *Master's co-advisor & GRA supervisor (thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2022 - 2023: **Ashleigh Williams** - *Master's committee member (thesis)*

Health & Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2021 - 2022: **Kelila Thomsen** - *Master's advisor (thesis)*

Slavic & East European Studies, The Ohio State University, Columbus, OH, USA

2021 - 2022: **Hannah Nowinski** - *Master's committee member (thesis)*

Biomedical Engineering and Mechanics, Virginia Polytechnic Institute, Blacksburg, VA, USA

*2019 - 2021: **Molly Tillis** - *Master's co-advisor & GRA supervisor (thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

*2019 - 2021: **Akshara Sreedhar** - *Masters's co-advisor & GRA supervisor (thesis)*

Mechanical Engineering, The Ohio State University, Columbus, OH, USA

2019 - 2021: **Zachary Haverfield** - *Master's committee member (thesis)*

Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2018 - 2020: **Emma Brzezinski** - *Master's co-advisor*

Anthropology, The Ohio State University, Columbus, OH, USA

2018 - 2019: **Michael Katzenberger** - *Master's committee member (thesis)*

Biomedical Engineering and Mechanics, Virginia Polytechnic Institute, Blacksburg, VA, USA

2017 - 2018: **Brianna Marselle** - *Master's advisor (non-thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2017 - 2018: **Elizabeth Appleton** - *Master's committee member (thesis)*

Medical Dietetics, The Ohio State University, Columbus, OH, USA

*2015 - 2017: **Michelle Murach** - *Master's advisor & GRA supervisor (thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Alaine Whetli** - *Master's committee member (thesis)*

Mechanical Engineering, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Stephanie Johnston** - *Master's committee member (thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

*2015 - 2017: **Nicole Crowe** - *Master's advisor (thesis)*

Anatomy, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Allison Yard** - *Master's advisor & GRA supervisor (non-thesis)*

Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2014 - 2016: **Alyssa Greenwell** - *Master's advisor (non-thesis)*

Anatomy, The Ohio State University, Columbus, OH, USA

AGNEW - CURRICULUM VITAE

2014 - 2016: **Julie Doll** - *Master's advisor (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2014 - 2016: **Yeonsu Ryu** - *Master's committee member (thesis)*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2013 - 2015: **Jenna Butz** - *Master's committee member (thesis)*
Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH, USA

*2013 - 2015: **Michelle Schafman** - *Research advisor (thesis)*
Mechanical and Aerospace Engineering, The Ohio State University, Columbus, OH, USA

*2013 - 2015: **Meghan Flannery** - *Master's advisor (thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Rachel Wise** - *Master's committee member (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Obed Paundralingga** - *Master's advisor (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Leah Hunter** - *Master's advisor (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Rishav Aggarwal** - *Master's committee member (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Claudia Foulk** - *Master's committee member (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2013: **Erica Villa** - *Master's advisor (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2012 - 2014: **Sarah Caupp** - *Master's committee member (thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2012 - 2014: **Mary Beth Cole** - *Master's committee member (thesis)*
Anthropology, The Ohio State University, Columbus, OH, USA

*2012 - 2013: **Jennifer Jing** - *Master's advisor (thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

2011 - 2012: **Lyndsy Wolff** - *Master's advisor (non-thesis)*
Anatomy, The Ohio State University, Columbus, OH, USA

UNDERGRADUATE HONORS/RESEARCH STUDENTS

2020 - 2022: **Carla Goldsmith** - *Research advisor & supervisor*
Biomedical Sciences, The Ohio State University, Columbus, OH, USA

2018 - 2021: **Nicole Fye** - *Research advisor & supervisor*
Microbiology and Forensics, The Ohio State University, Columbus, OH, USA

2018 - 2020: **Regan Di Iorio** - *Research advisor & supervisor*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

AGNEW - CURRICULUM VITAE

2018 - 2020: **Rachel McNulty** - *Research advisor & supervisor*
Biology and Forensics, The Ohio State University, Columbus, OH, USA

2017 - 2019: **Scott Stuckey** - *Research advisor & supervisor*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2016 - 2019: **Katie Lane** - *Research co-advisor & supervisor*
Biomedical Sciences, The Ohio State University, Columbus, OH, USA

2016 - 2018: **Akshara Sreedhar** - *Research advisor & supervisor*
Materials Science and Engineering, The Ohio State University, Columbus, OH, USA

2015 - 2017: **Elina Misicka** - *Research advisor & supervisor*
Biomedical Sciences, The Ohio State University, Columbus, OH, USA

2015 - 2016: **Katie Stemmer** - *Honors committee member (thesis)*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2014 - 2016: **Samuel Goldman** - *Research advisor*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2013 - 2015: **Michelle Murach** - *Research advisor*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2013 - 2014: **Yeonsu Ryu** - *Honors committee member (thesis)*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2013: **Matt Reynolds** - *Research advisor*
Biomedical Engineering, The Ohio State University, Columbus, OH, USA

2011 - 2013: **Amie Draper** - *Honors thesis advisor (thesis)*
Biomedical Sciences, The Ohio State University, Columbus, OH, USA

2011 - 2012: **Chris Dooley** - *Honors committee member (thesis)*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

2009 - 2011: **Anthony Vergis** - *Research advisor & Honors committee member (thesis)*
Physics, The Ohio State University, Columbus, OH, USA

2009 - 2010: **David Cagle** - *Honors committee member (thesis)*
Mechanical Engineering, The Ohio State University, Columbus, OH, USA

HONORS AND AWARDS

2026: Ellis R Kerley Research Award for the best anthropology research of the 2026 American Academy of Forensic Sciences conference for “*A new, flexible, and accurate methods for histological age estimation from the femoral midshaft*”. Co-author.

2023: Ellis R Kerley Research Award for the best anthropology research of the 2023 American Academy of Forensic Sciences conference for “*Preliminary investigation of relationships between cortical porosity and fracture type in human tibia*”. Co-author.

2022: John Paul Stapp Award for the best scientific paper of 2019

For manuscript Kang et al, 2019: A novel approach to scaling age-, sex-, and body size-dependent thoracic responses using structural properties of human ribs. Stapp Car Crash Journal 63: 307-329.

2021: Excellence in Undergraduate Research Mentoring Award

Undergraduate Research and Creative Inquiry Office, The Ohio State University, Columbus, OH

2020: Outstanding Senior Investigator Award for Research

School of Health and Rehabilitation Sciences, The Ohio State University, Columbus, OH

2019: John Paul Stapp Award for the best scientific paper of 2018

For manuscript Agnew et al, 2018: "Sources of variability in structural bending response of pediatric and adult human ribs in dynamic frontal impacts", Stapp Car Crash Journal 62: 119-192.

2017: Distinguished Undergraduate Research Mentor - *Nominee*

Undergraduate Research Office, The Ohio State University, Columbus, OH

2014: Distinguished Undergraduate Research Mentor - *Nominee*

Undergraduate Research Office, The Ohio State University, Columbus, OH

SERVICE ACTIVITIES

JOURNAL REVIEWS

Frontiers in Biomechanics - *Editorial Review Board & Manuscript reviewer*

International Research Council of Biomechanics of Injury (IRCOBI) - *Associate Editor & Manuscript reviewer*

Journal of Biomechanical Engineering - *Manuscript reviewer*

Journal of Biomechanics - *Manuscript reviewer*

Journal of Bone and Mineral Research - *Manuscript reviewer*

American Journal of Biological Anthropology - *Manuscript reviewer*

Scientific Reports (Nature) - *Manuscript reviewer*

PLoS ONE - *Manuscript reviewer*

Journal of the Mechanical Behavior of Biomedical Materials - *Manuscript Reviewer*

Computers in Biology and Medicine - *Manuscript reviewer*

Traffic Injury Prevention - *Manuscript Reviewer*

Journal of Anatomy - *Manuscript Reviewer*

Journal of Morphology - *Manuscript reviewer*

Journal of Forensic Sciences - *Manuscript reviewer*

International Journal of Osteoarchaeology - *Manuscript reviewer*

International Journal of Paleopathology - *Manuscript reviewer*

Micron - *Manuscript reviewer*

Journal of Orthopaedic Trauma - *Manuscript reviewer*

Clinical Case Reports - *Manuscript reviewer*

Journal of Theoretical and Applied Mechanics - *Manuscript reviewer*

Advances in Mechanical Engineering - *Manuscript reviewer*

International Journal for Numerical Methods in Biomedical Engineering - *Manuscript reviewer*

UNIT/SCHOOL/COLLEGE

2019 - 2024: Graduate Studies - *Director*

Health and Rehabilitation Sciences Graduate Programs (MS, PhD, MRT, MDN, OTD, DPT, MAT), The Ohio State University

2019: Search Committee for Occupational Therapy Faculty- *Member*

School of Health and Rehabilitation Sciences, The Ohio State University

Updated 13 June 2026

2018 - 2022: Faculty Council- *Elected HRS Representative*

College of Medicine, The Ohio State University

2018 - 2019: Student Services Committee- *Member*

School of Health and Rehabilitation Sciences, The Ohio State University

2018: Search Committee for Occupational Therapy Director- *Member*

School of Health and Rehabilitation Sciences, The Ohio State University

2015 - 2018: Graduate Studies Committee- *Member*

Health & Rehabilitation Graduate Program, The Ohio State University

2015: Search Committee for Occupational Therapy Director- *Member*

School of Health and Rehabilitation Sciences, The Ohio State University

2013 - 2015: Graduate Studies Committee- *Chair*

Anatomy Graduate Program (MS and PhD), The Ohio State University

2012 - 2015: Honors and Research Committee- *Member*

School of Health and Rehabilitation Sciences, The Ohio State University

2012 - 2016: Body Donation Program Advisory Committee- *Member*

Division of Anatomy, The Ohio State University

2011 - 2016: Graduate Studies Committee- *Member*

Anatomy Graduate Program, The Ohio State University

NATIONAL/INTERNATIONAL

2024 - present: Vice President, Board of Directors - *Elected member (3 year terms)*

International Research Council on Biomechanics of Injury (IRCOBI)

2023: National Science Centre (NSC) of Poland- *OPUS-25 Grant Review*

Section: HS- Arts, Humanities, and Social Sciences / HS3 - Study of the human past

2021: Natural Sciences and Engineering Research Council of Canada (NSERC)- *Discovery Grant Review*

Section: Biological Systems and Functions

2021: Smart-RCS External Advisory Board. Consortium partners emotion3D (Vienna, Austria), Veoneer (Stockholm, Sweden), and AVL Global (Graz, Austria). <https://smart-rcs.eu>

2020: Natural Sciences and Engineering Research Council of Canada (NSERC)- *Discovery Grant Review*

Section: Biological Systems and Functions

2020: National Science Foundation (NSF) Graduate Research Fellowship (GRF)- *Panelist/Proposal Reviewer*

Section: Anthropology and Archaeology

2020 - present: Advisory Council and Associate Editor - *Elected member (2 terms)*

International Research Council on Biomechanics of Injury (IRCOBI)

2019: Austrian Academy of Sciences, Doctoral Fellowship Program - *Panelist/Proposal Reviewer*

European Union

2019 - 2021: Scientific Program Committee- *Invited*

American Academy of Forensic Sciences (AAFS), Anthropology Section

2018 - 2020: Scientific Program Committee- *Elected member (3 year term)*

American Association of Physical Anthropologists (AAPA)

2017 - 2019: Scientific Review Committee- *Elected member*
International Research Council on Biomechanics of Injury (IRCOBI)

2017 - National Science Foundation (NSF) Doctoral Dissertation Research Improvement Grant (BA-DDRIG)- *Grant reviewer*
Section: Biological Anthropology Program

2016 - 2022: Board of Directors- *Elected member (2nd 3 year term)*
Association for the Advancement of Automotive Medicine (AAAM)

2016 - present: Center of Emphasis, Center for Injury Research and Prevention- *Invited Associate Fellow*
The Children's Hospital of Philadelphia

2015 - 2019: Scientific Program Committee- *Elected member*
Association for the Advancement of Automotive Medicine (AAAM)
2017 - 2019: Educational Program Sub-Committee- *Chair*
Association for the Advancement of Automotive Medicine (AAAM)

2015: National Science Foundation (NSF) Graduate Research Fellowship (GRF)- *Panelist/Proposal Reviewer*
Section: Biomedical Engineering

2014: Army Research Lab Core Broad Agency Announcement for Basic and Applied Scientific Research- *Proposal Reviewer*

2014: Homework to Roadwork- *Invited panelist*
Transportation Research Board Annual Meeting, Washington DC

2013-2017: WIAMan Scaling working group- *Invited member*
Department of Defense, US Army Research Laboratory, Aberdeen Proving Grounds, MD

2013: Skeletal Biology and Forensic Anthropology: - *Invited Poster Session Chair*
American Association of Physical Anthropologists 82nd Annual Meeting, Knoxville, TN

2012 - 2015: Membership and Credentials Committee- *Elected member*
Association for the Advancement of Automotive Medicine (AAAM)

STUDENT AFFAIRS

2016, March: College of Engineering Undergraduate Research Forum- *Poster Judge*
Biomedical Engineering, The Ohio State University

2015, Sept: Association for the Advancement of Automotive Medicine Student Mentoring Event- *Invited Professional/Academic Mentor*
AAAM annual meeting, Philadelphia, PA

2015, April: Undergraduate Honors Thesis Committee Member- *HRS Research Committee Representative*
Santino Cua- School of Health and Rehabilitation Sciences, The Ohio State University
Jessica Stewart- School of Health and Rehabilitation Sciences, The Ohio State University
Evan Sommer- School of Health and Rehabilitation Sciences, The Ohio State University

2015, April: American Association of Physical Anthropologists (AAPA)- *American Association of Anatomists Anatomy student award Judge*
84th annual AAPA meeting, St. Louis, MI

2014, Sept: Association for the Advancement of Automotive Medicine Student Mentoring Event- *Invited Professional/Academic Mentor*
AAAM annual meeting, Munich, Germany

2014, April: Undergraduate Honors Thesis Committee Member- *HRS Research Committee Representative*
Tyler Siekmann- Department of Biomedical Sciences, The Ohio State University
Mark Rudolph- Department of Biomedical Sciences, The Ohio State University

2013, April: American Association of Physical Anthropologists (AAPA)- *American Association of Anatomists Anatomy student award Judge*
82nd annual AAPA meeting, Knoxville, TN

2013, April: Undergraduate Honors Thesis Committee Member- *HRS Research Committee Representative*
Chelsie O'Neill- School of Health and Rehabilitation Sciences, The Ohio State University
Nick Denton- Department of Biomedical Sciences, The Ohio State University

2013: Edward Hayes Forum for Graduate Research- *Abstract Judge*
Ohio Union, The Ohio State University

2012: Doctoral Committee Member- *Graduate Faculty Representative*
Sharon Schreiber- Department of Biomedical Engineering, The Ohio State University

2012: American Association of Anatomists (AAA), Anatomy Career Workshop- *Invited panelist*
81st annual American Association of Physical Anthropology (AAPA) meeting, Portland, OR

2012: American Association of Physical Anthropologists (AAPA)- *American Association of Anatomists Anatomy student award Judge*
81st annual AAPA meeting, Portland, OR

2012: Edward Hayes Forum for Graduate Research- *Presentation Judge*
Ohio Union, The Ohio State University

2011 - present: Forensic Anthropology Case Team (FACT)- *Co-Director & Team Leader*
Graduate student group in the Department of Anthropology, The Ohio State University

OTHER PROFESSIONAL EXPERIENCE

2020 - present: Certified Abbreviated Injury Scale Specialist (CAISS)
• <https://www.aaam.org/abbreviated-injury-scale-ais/>

2008 - present: Kenyon International Emergency Services- *Team Member*
(www.kenyoninternational.com)
• Mortuary Technician and Forensic Anthropologist

2008, March-April: Giza Plateau Mapping Project (GPMP)- *Osteoarchaeologist*
Giza, Egypt (www.aeraweb.org/gpmp_home.asp)
PI: Mark Lehner- Ancient Egypt Research Associates (AERA)
• Excavated and analyzed human skeletal remains from the Giza Plateau

2006 - present: Forensic Anthropology Consultations - *Forensic Anthropology Expert*
• Specializations in human skeletal anatomy, skeletal trauma, juvenile osteology, skeletal histomorphometry, human remains excavation
• Collaboration and consultation with US Dept of Homeland Security, FBI, BCI, and various police departments, medical examiner's and coroner's offices, crime labs, and K-9 search and recovery units throughout the state

of Ohio, across the US and North America in the recovery and analysis of human skeletal remains in the medico-legal context

- 50+ forensic case contributions
- 1000+ skeletal assessments completed
- 1 expert testimony (homicide)

2005: Disaster Mortuary Operational Response Team (DMORT) training workshop- *Trainee*
Columbus, OH

- Training for the identification and reassembly of human remains in mass disaster events

PROFESSIONAL MEMBERSHIPS & SERVICE

International Research Council on Biomechanics of Injury (IRCOBI)

- Vice President, Board of Directors (2024-present)
- Financial Auditor (2024-2026)
- Council (2020-present)

American Society for Bone and Mineral Research (ASBMR) (2012-present)

Association for the Advancement of Automotive Medicine (AAAM) (2009-present)

- Board of Directors (2016-2022)
- Scientific Program Committee (2015-2019)
 - Educational Program Subcommittee Chair (2017-2019)
- Membership and Credentials Committee (2012-2015)

American Academy of Forensic Sciences (AAFS) - Fellow (2025), Anthropology section (2005-present)

- Scientific Program Committee (2019-2021)

American Association of Biological Anthropologists (AABA) (2004-present)

- Scientific Program Committee (2018-2020)

Paleopathology Association (PPA) (2007-2017)