ORS OPEN DOOR 2023 SPEAKERS CONTACT INFORMATION

Meghan McGee-Lawrence, PhD
Medical College of Georgia at Augusta University, Augusta, GA

Meghan McGee-Lawrence is an associate professor in the Medical College of Georgia at Augusta University. Her laboratory studies the effects of aging and exercise in bone cells, and is working to understand the ways the skeleton interacts ("crosstalk") with other organs in the body. She has been engaged in musculoskeletal research since beginning as an undergraduate research assistant, studying bone in hibernating bears. Current research in her lab makes extensive use of genetically altered mouse models, human and mouse cell culture, and drug therapies. Her favorite part of her job is mentoring students who work in her laboratory. When she is not teaching or working in the lab, she likes to go camping and hiking as much as possible.

Contact Meghan for questions about: getting involved in research, higher education (undergraduate, graduate, or medical school), or science advocacy. **Science keywords**: bone, aging, exercise, tissue crosstalk, hormones

Email address: mmcgeelawrence@augusta.edu

John Drazan, PhD
Fairfield University, Fairfield, CT

John Drazan is an assistant professor at Fairfield University. He studies the relationship between muscle structure and function to understand how muscles remodel in response to aging, injury, or training. His biomedical engineering research builds mobile research tools to collect data outside the traditional lab to perform more representative musculoskeletal research. As a former collegiate basketball player whose love of basketball motivated his scientific career, John has developed innovative STEM (Science, Technology, Engineering, Math) outreach to engage youth basketball players to STEM through sports performance training. His programs have reached over 10,000 students across the country with partners such as the NBA Summer League in Las Vegas, Columbia University, and Beyond Sports.

Contact John for questions about: science in professional sports, engineering design in sports, athletic injuries, biomedical engineering, and getting into college. **Science keywords**: orthopedics, biomechanics, sport science, STEM Education

Email address: jdrazan@fairfield.edu

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Eva Gabriela (Gaby) Baylon, PhD
Abbott Laboratories, Irving, TX

Gaby Baylon is a research & development engineer at Abbott Laboratories in Irving, TX. As a member of the Diagnostics division, Dr. Baylon's work focuses on translating customer needs into engineering requirements and ensuring products are safe to use through an engineering process called design validation. Her academic training was on Orthopaedic biomechanics, first while pursuing a PhD in Mechanical Engineering at Stanford University studying cartilage and meniscus tissue mechanics and then as a postdoctoral scholar in Orthopaedic surgery at the University of California, San Francisco studying osteocyte mechanotransduction. In her spare time, she enjoys spending time with her family (especially her two kids), dancing, and cycling.

Contact Gaby for questions about: being a 1st generation college student, transferring from community college, undergraduate research/internships, working in industry and academia, being a Latina engineer/scientist. **Science keywords**: cartilage, meniscus, bone

Email address: egbaylon@alumni.stanford.edu

Robin Queen, PhD
Virginia Tech, Blacksburg, VA

Robin Queen is a professor of biomedical engineering and orthopaedic surgery at Virginia Tech in Blacksburg, VA. She is a recovering collegiate diver who has merged her passion for sport with her research interests. Her lab studies how to prevent leg injuries as well as how to improve the rehabilitation process to decrease the risk of another injury. She has been involved with movement-based research since she was an undergraduate research assistant, studying how different running shoes could lead to lower leg injuries. The favorite part of her day is working with students and seeing their love for the work they are doing, and knowing that this work will help someone else be able to get back to doing what they love. Outside of the lab, she enjoys spending time with her kids, running, playing soccer and being outside skiing or hiking.

Contact Robin for questions about: deciding on college, mentoring, sports science, being a scientist. **Science keywords**: sports performance, injury prevention, biomechanics, joint replacement, anterior cruciate ligament (ACL) injury and recovery

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Donna Pacicca, MD
Connecticut Children's Medical Center, Hartford, CT

Donna Pacicca is a pediatric orthopaedic surgeon-scientist at Connecticut Children's Medical Center, specializing in sports medicine and fracture care. Her laboratory work has focused on the effects of diabetes on osteocytes, and more recently on establishing a single-cell atlas of developing human bone and cartilage. Her interest in research began in high school when she attended the Columbia Science Honors Program and learned about molecular biology. Her favorite part of her job is fixing patients in the operating room and seeing them get back to playing their sport. She is passionate about mentoring students who are interested in science and medicine, and encourages her patients to think about orthopaedic surgery as a career. When she's not working, she enjoys running, cooking, going to shows and spending time with family and friends.

Contact Donna for questions about: getting involved in research, higher education (undergraduate, graduate, or medical school), or science advocacy. **Science keywords**: osteocytes, diabetes, bone, cartilage

Email address: dpacicca@connecticutchildrens.org

Hugo Giambini, PhD
UT San Antonio, San Antonio, TX

Hugo Giambini's research addresses mechanical and biomechanical factors influencing hard and soft tissue integrity and performance, as well as non-invasive tissue assessment and modeling using medical imaging. His interests lie in using biomechanics and imaging tools to predict and better understand the progression of musculoskeletal conditions. The long-term goal of his research is to develop clinical tools to enable earlier diagnosis, prescribe effective interventions, and assess outcomes for individuals with musculoskeletal disorders. The laboratory is involved in both basic science and translational research, collaborating with clinicians and scientists in many areas including radiology, orthopedics, mechanical and biomedical engineering.

Contact Hugo for questions about: getting involved in research, higher education (undergraduate, graduate, or medical school) or science advocacy. **Science keywords:** shoulder, spine, musculoskeletal modeling, aging

Email address: hugo.giambini@utsa.edu

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Paula Hernandez, PhD
UT Southwestern, Dallas, TX

Paula Hernandez is a Research Instructor in Orthopaedic Surgery. She received her Ph.D. in Molecular, Cell Biology, and Neuroscience from the University of Chile. Her transition to MSK sciences happened later in her career, during her postdoctoral training at UCONN and Cambridge University (UK). She currently studies how the cytoskeleton inside cells of the articular cartilage react to mechanical loading and injury, and whether their behavior is different in male versus female tissue. Paula enjoys teaching and sharing her love for science with students, and participating in outreach events, especially for underserved communities. She has been involved in scientific activities from Pre-K to college level. In her spare time, she loves gardening and birdwatching.

Contact Paula for questions about: Being a 1st generation college student, Latina scientist, STEM outreach.

Science keywords: cartilage biology, mechanobiology, cytoskeleton

Email address: paula.hernandez2@utsouthwestern.edu

Sade Williams Clayton, PhD
Washington University School of Medicine in St Louis, St. Louis, MO

Sade Williams Clayton is a postdoctoral research fellow and spine biologist at the Washington University School of Medicine in St. Louis. She uses cell and molecular biology techniques to study how the immune system affects tissue repair and wound healing in the spine after injury or degeneration. She uses her expertise in developmental biology to discover the key signaling molecules and cell types that stimulate regeneration of damaged intervertebral discs in the spinal column using mouse and chick model systems. She is a highly trained researcher, involved in organizational leadership, and passionate about outreach and advocacy

Contact Sade for questions about: Spine development and regeneration, science communication, science advocacy.

Science keywords: spine biology, intervertebral disc regeneration, inflammation

Email address: sade@wustl.edu

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Sharon Smith-Terry, MBA, CDM
Orthopaedic Research Society, Rosemont, IL

Sharon Smith-Terry is the executive director for the Orthopaedic Research Society. Among her many duties in this role, she provides management oversight to a society of 3700 members, oversees board governance, and leads strategic planning, operations, business development, and client relations. Sharon has more than 30 years of marketing, operations, grant writing, and business development experience. For the past 23 years, Sharon has been a member of the adjunct faculty at Columbia College of Missouri where she teaches a variety of junior and senior-level marketing and management courses. Sharon is very passionate about her community. Among her many outreach activities, she is the Connection and Social Action Committee Chairman (the advocacy and public policy arm) of the Alpha Kappa Alpha Sorority, Inc., Lambda Nu Omega Graduate Chapter, a board member of the Black Chamber of Commerce of Lake County, and the secretary and co-founder of the Association of Minority Contractors of Lake County.

Contact Sharon for questions about: professional societies, advocacy/outreach, leadership, networking with scientific professionals

Email address: smithterry@ors.org

Carolyn Chlebek, PhD
Maine MaineHealth Institute for Research, Scarborough, ME

Carolyn is an engineer interested in musculoskeletal biology currently working as a Postdoctoral Research Fellow at the Maine Medical Center Research Institute. She recently defended her PhD thesis at Cornell University, containing a body of work using transcriptomics (expression of genes) to identify novel pathways involved in bone mechanotransduction. She has experience in orthopaedic biomechanics, bone mechanobiology, and next generation sequencing. At Cornell University, she led several independent research projects and managed undergraduate research assistants.

Contact Carolyn for questions about: starting in research as an undergraduate or high school student, science social media, engineering, influence of diet on bone health

Science keywords: bone, gene expression, mechanical engineering, metabolism.

Email address: carolyn.chlebek@gmail.com

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Lara Pferdehirt, PhD
Bain & Company, Houston, TX

Lara Pferdehirt earned her PhD in biomedical engineering at Washington University in St. Louis. Her research involved cell-based therapies, genetic engineering, and synthetic biology. During her PhD she helped develop new fields of mechanogenetics and chronogenetics. During the third year of her PhD, she worked on building startups with venture capital firms. This experience taught her that she enjoyed fast-paced environments where she can work on different things, which led her to consulting (which is what she does with Bain & Company today). Outside of work, she enjoys trying new restaurants/cuisines, skiing, and scuba diving.

Contact Lara for questions about: entering into a PhD, transitioning from academia to industry.

Science keywords: gene therapy, synthetic biology, inflammation, cartilage, circadian biology

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Hope Welhaven, BA
Montana State University, Bozeman, MT

Hope Welhaven is a third-year PhD candidate at Montana State University in Bozeman, MT. Here, she focuses on the metabolism of musculoskeletal tissues including bone, cartilage, synovial fluid, and others during times of health, disease, injury, and aging. One of the highlights of Hope's research career was working for NASA and studying what happens to astronauts' joints during spaceflight to improve their health on earth and in space. When Hope isn't in the lab, you would likely find her hiking in the mountains with her dog Stevie.

Contact Hope with questions about: pursuing graduate school, what it's like to be a first generation student, metabolism, or astronaut joint health. **Science keywords*:*** osteoarthritis, metabolism, cartilage

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Lara Varden, PhD
Clarkson University, Potsdam, NY

Lara Varden is Co-Founder and CEO of Sacred Genomics, LLC, an in-house clinician with The DNA Company, and Adjunct Professor in the Biology Department at Clarkson University. Her scientific research has included regenerative techniques and treatment models for degenerative disc disease, water toxicology, and engineering human ferritins. Utilizing her background in cellular biology, genetics, biochemistry, neuroscience, and functional nutrition, she currently has a private practice as a Functional & Integrative Health Coach and is a Functional Genomics Practitioner with The DNA Company. She is passionate about educating and empowering people with information not readily available to increase energy, strengthen the immune system, and heal from chronic conditions, optimizing epigenetics through shifts in nutrition and lifestyle integrating the mind-body-spirit connection.

Contact Lara for questions about: functional nutrition and lifestyle, how genetics provides insight into clinically relevant action steps, science advocacy, higher education, or STEM education and outreach. **Science keywords**: spine biology, degenerative disc disease, inflammation, metabolic dysfunction, functional nutrition, functional genomics

Email address: dr.lara.varden@gmail.com

Marjolein van der Meulen, PhD
Cornell University, Ithaca NY

Marjolein van der Meulen is the Director of the Meinig School of Biomedical Engineering at Cornell University in Ithaca, NY. Her research is in modulating musculoskeletal tissues such as bone and cartilage with mechanical loading, and in how geometry and material properties contribute to the form and function of the skeleton. Marjolein loves being a faculty member because students are inspiring and give her confidence in our future. Based on her own experiences, she is particularly passionate about helping women succeed in science and engineering. Outside the lab, you can find her hiking, playing golf, enjoying good food and traveling.

Contact Marjolein for questions about: getting involved in research, higher education (undergraduate or graduate school), or women in STEM.

Science keywords: mechanical loading, bone, cartilage, osteoarthritis

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