This Wednesday, ORS Membership Renewal Opens

This Wednesday, October 4, members will be able to renew membership for 2024 so they can continue to take advantage of all the benefits that come from being a part of the ORS. These benefits include: significantly reduced admission to the 2024 Annual Meeting which takes place February 2-4 in Long Beach, CA; eligibility for awards and grants; access to members-only events and information; discounts on LearnORS online educational resources; career building opportunities; numerous chances to network with other members who share a passion for musculoskeletal research; and much more. Keep a lookout for emails with renewal links, billing info, etc. in the coming weeks.

Preparing for the 2024 Annual Meeting

Be a part of history when ORS celebrates 70 Years of Advancing Research to Keep the World Moving at the 2024 ORS Annual Meeting, February 2-6 in Long Beach, CA. The meeting brings the
orthopaedic community together for five days of workshops, learning sessions, networking, and advocacy. Attendees from many disciplines and career levels will network and learn about the latest innovations in orthopaedics.

Be sure to check out the recently announced [lineup of spotlight speakers and their topics](#).

**Business Innovation Competition**

The ORS Business Innovation Competition will take place at the Annual Meeting. The event provides the opportunity for early-stage companies, clinicians, researchers, and students who have a great idea or technology to present their concepts to benefit the field of musculoskeletal research. The winner will participate in a program with mentors who will help them bring their idea "from bench to market" by validating the market potential of their idea, and then developing a commercialization plan. For more information or to submit your application, please see the link below. **The summary deadline is this Friday, October 6.**

[Apply for the Business Innovation Competition](#)

**Award with Complimentary Registration for Qualifying Students**

In an effort to help the next generation of musculoskeletal researchers from underrepresented backgrounds, the ORS will offer complimentary registration for up to two undergraduate students from participating institutions to attend the Annual Meeting. The students must currently be enrolled in an undergraduate program in a STEM major, have an interest in orthopaedic research and/or medicine, should not have attended a past ORS Annual Meeting, and they should be in the geographical area of the nominating institution. The ideal candidate for this award must identify as a member of at least one underrepresented group in Science, Technology, Engineering, or Math (STEM) as follows:

- Race and ethnicity: American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or other Pacific Islanders
- Other factors include:
  - Disability
  - LGBTQIA+
  - Gender identity and expression
  - Veteran status
  - First generation college
  - Socioeconomic status

This program is a nationwide expansion of a successful initiative of the McKay Orthopaedic Research Laboratory at the University of Pennsylvania.

**Please contact Karey Hyland of ORS at hyland@ors.org by Tonight, Monday, October 2** for any questions or if you would like to nominate a student to be part of this program.
Exhibit at the Annual Meeting
If you or someone you know is a member of an organization that could benefit from showcasing its products, resources, or services in front of 2,500 highly engaged orthopaedic researchers and professionals, there is a great opportunity to exhibit at the 2024 ORS Annual Meeting. The exhibit hall will have regular heavy traffic of researchers, biologists, and engineers who are attending the event. For more information or to book a booth space, please click the link below. Booth selection is on a first come basis.

Hotel Reservations and Registration
Hotel reservations for the Annual Meeting are open now. Event registration will open next week on October 10.

Award Spotlight

The following award submissions will be due in the coming weeks.

**ORS/OREF Distinguished Investigator Award** (Deadline for nominations has been extended to October 15, 2023)
The ORS/OREF Distinguished Investigator Award will honor an individual with a long-standing, productive career in orthopaedic research. [CLICK HERE](#) for more information or to submit a nomination

**Dr. Peter Roughley Award** (Deadline for submissions: October 16, 2023)
This award will preserve Dr. Roughley’s legacy in training the future generations of scientists by sponsoring a trainee and mentor exchange to enhance a trainee’s knowledge in spine, disc and cartilage biology. [CLICK HERE](#) for more information or to submit a nomination.
Wednesday Webinar: Imaging and Mechanics of Collagenous Tissue Using Preclinical Models

This Wednesday, join us for a Virtual Scientific Session which will cover multiple imaging modalities for collagen and the mechanics of collagenous tissues, with emphasis on the tendon. Motivated by changes to healthy and diseased collagenous tissues, we will discuss second-harmonic generation imaging of collagen, a high-resolution optical imaging modality, which directly images collagen without dye, and provides quantitative 3D descriptions of collagen microstructure. Diffusion tensor magnetic resonance imaging uses the directional diffusion of water to provide quantitative inferences of the structural barriers that drive diffusion. These techniques provide complimentary data that can be used to identify determinants of tissue quality and how they change in different biological contexts.

Imaging and Mechanics of Collagenous Tissue Using Preclinical Models
This Wednesday, October 4, 2023
12:00 pm - 1:00 pm Central Time

Speakers:
Amy Wagoner Johnson, PhD
Professor and Anderson Faculty Scholar, Department of Mechanical Science and Engineering, University of Illinois Urbana-Champaign; Head, Department of Biomedical and Translational Sciences, Carle Illinois College of Medicine

Mariana Kersh, PhD
Associate Professor, Department of Mechanical Science and Engineering, University of Illinois Urbana-Champaign; Health Innovation Professor, Carle Illinois College of Medicine

Organizers:
Aimee Colbath, DVM, MS, PhD, DACVS; Chair, Preclinical Models Section; and
Annette McCoy, DVM, MS, PhD, DACVS; Assistant Chair, Preclinical Models Section
LearnORS, the online education platform from the ORS, offers a complete learning experience in a format designed to meet learners’ educational needs. Each LearnORS course delivers eLearning training materials from one online location. ORS Members receive a discounted rate for all courses.

Users can now purchase multiple licenses without immediately identifying courses. This is a great new option for lab purchases.

Residency programs and newly matched medical students are encouraged to take advantage of our special LearnORS Residency Bundle. This is a bulk option for a residency program to purchase discount access to all LearnORS courses for as many residents as they have in their program. Individuals can also purchase the courses offered in the Residency Bundle, or create a custom bundle to fit their specific educational needs at a discounted price.

Check out the article about LearnORS that was featured in the August/September issue of AAOS Now.

**Editor’s Pick**

*Finite Element Modeling with Subject-Specific Mechanical Properties to Assess Knee Osteoarthritis Initiation and Progression*

*Journal of Orthopaedic Research*, Volume 41, Issue 1, January 2023, Pages 72-83

Finite element models of the knee can be used to identify regions at risk of mechanical failure in studies of osteoarthritis. Models of the knee often implement joint geometry obtained from magnetic resonance imaging (MRI) or gait kinematics from motion capture to increase model specificity for a given subject. However, differences exist in cartilage material properties regionally as well as between subjects. This paper presents a method to create subject-specific finite element models of the knee that assigns cartilage material properties from T2 relaxometry. We compared our T2-refined model to identical models with homogeneous material properties. When tested on three subjects from the Osteoarthritis Initiative data set, we found the T2-refined models estimated higher principal stresses and shear strains in most cartilage regions and corresponded better to increases in KL grade in follow-ups compared to their corresponding homogeneous material models.

Find Your Next Opportunity at the ORS Career Center
Check out the ORS Career Center to post jobs, post a resume, create a profile, find jobs, apply, or sign up for job alerts. The Career Center offers: Career Coaching, Resume Writing, Reference Testing, and a Career Learning Center. Check out this important resource today.

Visit the ORS Career Center

Connect with ORS on Social Media

STAY UPDATED ON YOUR Global Orthopaedic Research Community

Keep up with the latest on the ORS and the orthopaedic community by connecting with us on social media. The ORS posts regularly on Facebook, Instagram, Twitter (X), LinkedIn, and TikTok. Please follow us, share our posts with your connections, invite others, and tag us when you have good information to share. Together we can help spread the word far and wide about the importance of orthopaedic research.

Find or Post Events on the Orthopaedic Events Calendar
An orthopaedic events calendar has been added to the ORS website. The events listed are of potential interest to those in the orthopaedic community. ORS Members are welcome to submit applicable events at no charge through the Submit Event button at the top of the calendar on the site. Institutions or sponsors interested in posting an event are welcome to do so in exchange for a donation to ORS. For information, please email ors@ors.org.

This November, the ORS will host the inaugural ORS Turkey Trot Virtual Race to Research. Participants from any location are encouraged to walk or run to raise money for orthopaedic research. Gather with your family, friends, lab, or other team members to join this fun event to help improve the quality of life for those with musculoskeletal disorders. Your Race to Research should take place between Sunday, November 19, 2023, and Sunday, November 26, 2023. Prizes and bragging rights will go to the successful individual and team that complete the race in the best time.

Mark Your Calendar!

ORS 2024 Annual Meeting
Nominations Due for Complimentary ORS Annual Meeting Registration for Undergraduate, Underrepresented STEM students
Tonight, October 2, 2023

ORS Membership Renewal Opens
This Wednesday, October 4, 2023

LearnORS Presents a Virtual Scientific Session:
Imaging and Mechanics of Collagenous Tissue Using Preclinical Models
This Wednesday, October 4, 2023
ORS 2024 Annual Meeting
Business Innovation Competition Summary Deadline Closes
This Friday, October 6, 2023

ORS 2024 Annual Meeting
Registration Opens
October 10, 2023

ORS 2024 Annual Meeting
Call for Late Breaking Abstracts
October 16, 2023

NASS 2023 Annual Spine Meeting
October 18-21, 2023
Los Angeles, CA

LearnORS Presents a Virtual Scientific Session:
A Virtual Scientific Session: Ball & Socket Breakdown: A Beginner’s Guide to Hip and Shoulder Arthroplasty – An Interactive Q&A Session with Surgeons
October 18, 2023
12:00 pm – 1:00 pm Central Time

LearnORS Presents a Virtual Scientific Session:
Navigating the NIH Diversity Supplement: Tips and Tricks for a Successful Application from Program Officers and Prior Awardees
October 25, 2023
12:00 pm – 1:30 pm Central Time

2023 Philadelphia Spine Research Society (PSRS) Symposium
November 3, 2023
Drexel University, Philadelphia, PA

ORS Turkey Trot Virtual Race to Research
November 19 - 26, 2023

ORS 2024 Annual Meeting
February 2 - 6, 2024
Long Beach, California
Information and Registration Coming Soon

ORS Tendon Conference 2024: Mechanism to Therapy – Emerging Technologies and Therapeutic Outcomes
May 30 - June 1, 2024
Mayo Clinic, Rochester, MN

Dates, Events, and People in Orthopaedic History
We would like to continue to note important people, dates, and accomplishments in the history of orthopaedics in ORS Connect. If you have something or someone that should be recognized,
particularly around days, weeks, or months of a specific dedication, please click here to submit your information.