



All times listed are United States Pacific Time

Friday, February 12, 2021

[ORS Global Networking Lounge](#)

(Open throughout the Annual Meeting)

8:00 AM - 11:00 AM

[Meniscus Section Scientific Meeting](#)*

[ORS International Fracture Repair \(ISFR\) Section Scientific Meeting](#)*

11:30 AM - 12:30 PM

[Career Development:](#)

New ORS Member/First Time Attendee Social *

12:00 PM - 1:00 PM

[Career Development:](#)

Early Career Meet-Up: Speed Collaborating*

1:00 PM - 2:00 PM

[Research Interest Group](#) (RIG):

Foot and Ankle*

Saturday, February 13, 2021

ALL DAY

Exhibitor Spotlight Sessions

6:00 AM - 11:59 AM

Poster Sessions *(all posters are available for viewing and chat 24/7)*

6:00 AM - 7:00 AM

Podium Sessions *(Podiums featured at this time are available on-demand, 24/7)*

Hip/Knee Arthroplasty-Clinical Outcomes

Bone-Injury and Healing

Intervertebral Disc-Degeneration

Biomaterials-Drug Delivery

(Podium Sessions continued)

Tendon and Ligament-Cellular and Molecular Regulation in Growth and Development
Clinical Research-Big Data

7:00 AM - 8:00 AM

[ORS Opening Session](#) featuring Keynote Speaker, Terry Virts

8:00 AM - 9:30 AM

[Clinical Research Forum](#):

Session 1: Big Data, Risk Calculators, P-values, and Bayesian Analyses

8:15 AM - 8:45 AM

[Spotlight](#):

Understanding the Genetic Regulation of Bone Mineral Density
(Cheryl Ackert-Bicknell, PhD)

8:15 AM – 9:45 AM

[Tendon Section Scientific Meeting Part 1](#) *

8:15 AM - 11:15 AM

[Orthopaedic Implants Section Scientific Meeting](#) *

9:45 AM - 11:15 AM

[Career Development](#):

The Art and Practice of Reviewing (*Journal of Orthopaedic Research*® Workshop)

[Workshops](#):

Designing and Implementing Multi-centered Clinical Research Programs

Redefining Hip Dysplasia and Instability Mechanics Using Biomechanical Metrics

The Role of Portable Ultrasound in Musculoskeletal Disease

Machine Learning to Artificial Intelligence - Basic Concepts and Techniques for Orthopaedic Researchers, Clinicians and Surgeons

12:00 PM - 1:00 PM

Podium Sessions: (*Podiums featured at this time are available on-demand, 24/7*)

NIRA-Biomaterials/Materials

NIRA-Bone/Perisoteum/Tendon

NIRA-Infection/Inflammation

NIRA-Intervertebral Disc/Spine

NIRA-Osteoarthritis/Arthritis

NIRA-Progenitor Cells/Regeneration/Repair

[Career Development:](#)

Exploring Funding Mechanisms Part 1: Beyond NIH and Exploring Funding Sources*

12:00 PM - 12:30 PM

[Spotlights:](#)

Skeletal Metastatology Interactions Between Metastatic Cancers and Bone
(Francis Lee, MD, PhD)

Tendon Structure, Function Relationships: The Importance of the Interfascicular Matrix in
Tendon Health Disease & Aging (Hazel Screen, PhD)

1:30 PM - 2:30 PM

[Career Development:](#)

Exploring Funding Mechanisms Part 2: Meet the Program Officers*

1:30 PM - 3:00 PM

[Clinical Research Forum:](#)

Session 2: The Anatomy of An Info-epidemic: Lessons Learned from COVID-19

[Research Interest Group \(RIG\):](#)

Musculoskeletal Infection Research *

[Symposium:](#)

The Unmet Clinical Need in Hip and Knee Reconstruction: From Bedside to Benchside
(AAHKS)

2:45 PM - 3:45 PM

[Career Development:](#)

Future Faculty Poster Session*

3:00 PM – 5:00 PM

[ORS Virtual Reception*](#)

6:00 PM - 7:00 PM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

Hip-Growth and Dysplasia

Cartilage and Synovium-Structure, Function and Mechanics

Spine

Bone-Growth, Development and Aging

Clinical Research-Methods and Machine Learning

Resident/Fellow Research Competition

Sunday, February 14, 2021

ALL DAY

Exhibitor Spotlight Sessions

6:00 AM – Midnight

Poster Sessions (*all posters are available for viewing and chat 24/7*)

6:00 AM - 7:00 AM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

Knee-Gait and Kinematics

Shoulder and Elbow-Surgery and Arthroplasty

Biomaterials-Metal Implants

Clinical Research-Randomized Studies and Systematic Reviews

Cartilage and Synovium-Different Influences on the Chondrocytes

Imaging-Advanced Imaging and Analysis

6:30 AM – 7:15 AM

[Plenary Session:](#)

ORS Presidential Address & State of the Association

7:15 AM - 8:00 AM

[Plenary Session:](#)

Presentation of the following Outstanding Achievement Awards: Women's Leadership Forum, Boskey, Mentoring, Distinguished Investigator, Urist and Shands

8:15 AM - 9:45 AM

[Symposium:](#)

3D Models for Regenerative Medicine in Orthopaedics

8:15 AM - 8:45 AM

[Spotlight:](#)

Big Data for Mobility Research (Scott Delp, PhD)

8:15 AM - 9:15 AM

[Innovation & Commercialization:](#)

Managing Intellectual Property in Research Collaborations*

8:15 AM - 11:15 AM

[Spine Section/Preclinical Models Section](#)*

9:45 AM - 11:15 AM

[Workshops:](#)

Measuring Skeletal and Implant Arthrokinematics In-Vivo

(Workshops continued)

Biomechanics of Forearm Instability

9:45 AM - 10:45 AM

[Innovation & Commercialization:](#)

Clinical Trials 101: Cultivating the Next Generation of Young Investigators*

12:00 PM - 1:00 PM

Podium Sessions *(Podiums featured at this time are available on-demand, 24/7)*

Foot-Kinematics/Kinetics

Bone-Disease and Disorders

Clinical Research-Observational Studies

Hip-Clinical

Tendon and Ligament-Injury and Therapeutics

Infection-Therapeutic Treatments and Diagnosis

12:00 PM - 12:30 PM

[Spotlights:](#)

Novel Treatment for Intervertebral Disc Degeneration (Fackson Mwale, PhD)

How Close Are We to an Ideal Cartilage Repair? (Byoung Hyun Min, MD, PhD)

12:00 PM - 1:00 PM

[Bench to Bedside:](#)

New Insights into Molecular and Functional Pathways Reveal Novel Mechanism-based Approaches for Targeting Osteoarthritis Pain

[Innovation & Commercialization:](#)

Industry Connect - An Ongoing Discourse with the FDA: Changes to the HCT/P Regulatory Environment that Impact the Orthopaedics Industry *

1:30 PM - 3:00 PM

[Workshop:](#)

Clinical Applications of Stem Cells (Guest Nation)

1:30 PM - 2:30 PM

[Innovation & Commercialization:](#)

Manufacturing Orthopaedic Products for Clinical Evaluation: A Practical Guide*

2:45 PM - 3:45 PM

[Innovation & Commercialization:](#)

Uncovering Meaningful Unmet Clinical Needs in Orthopedics: A Discussion with Physician and Business Experts*

6:00 PM - 7:00 PM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

- Cartilage and Synovium-Mechanobiology
- Hand and Wrist
- Hip/Knee Arthroplasty-Complications/Infections
- Tendon and Ligament-Mechanics
- Skeletal Muscle
- A Focus on Translational Research

Monday, February 15, 2021

ALL DAY

Exhibitor Spotlight Session

6:00 AM – Midnight

Poster Sessions (*all posters are available for viewing and chat 24/7*)

6:00 AM - 7:00 AM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

- Shoulder and Elbow-Biology and Biologics
- Bone-Treatment and Therapeutics
- Intervertebral Disc-Homeostasis and Development
- Hip/Knee Arthroplasty-Implants
- Tendon and Ligament-Tissue Engineering and Mechanobiology
- Cartilage and Synovium-Different Pathways for the Development of Osteoarthritis

7:00 AM - 8:00 AM

Plenary Session:

- Collaborations: Collaborations featuring ORS Fellows, Harris Award, Stryker/ORS Women's Research Fellowship, JOR and JOR Spine Awards and ON Foundation Keynote Speaker William Taylor Award Presentations

8:15 AM - 8:45 AM

Spotlights:

- Application of the Imaging Techniques to the Study of In vivo Knee Function
(Louis DeFrate, PhD)

- Circadian Clocks and Musculoskeletal Tissues (Karyn Esser, PhD)

8:15 AM - 9:45 AM

Symposium:

- Cellular Senescence as a Driver of Osteoarthritis: The Roles of Aging, Obesity and the Immune System

8:15 AM - 9:15 AM

[Innovation & Commercialization:](#)

Ready, Set, Pitch: Learn How to Effectively Communicate a Great Idea*

9:30 AM - 11:00 AM

[Tendon Section Scientific Meeting Part 2*](#)

9:45 AM - 11:15 AM

[Workshops:](#)

Intersection of Fracture Healing and Infection

Applications of Machine Learning from Diagnostics to Prognostics

Additively Manufactured Implants - Cool Parts, but How Far Have We Advanced on Material Safety and Characterization?

Exosomes in Musculoskeletal Applications

[Career Development:](#)

WLF/DEI: Inclusion of Gender and Ethnic Diversity Promotes Scientific Progress: The Rosalind Franklin Paradox*

12:00 PM - 1:00 PM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

Hip/Knee Arthroplasty-Kinematics and Computational Modeling

Meniscus

Spine-Disease

Hip-Function and Mechanics

Tumors-Treatment

Knee-Ligament Reconstruction and Mechanics

12:00 PM - 12:30 PM

[Spotlights:](#)

Interactions of Bone and Blood in Health and Disease (Joy Wu, MD, PhD)

Hydrogel Implants for Orthopaedics: The Softer Side of Joints
(Michele Marcolongo, PhD)

12:00 PM - 1:30 PM

[Career Development:](#)

Mastering Research Finances for Career Advancement in Academia*

1:00 PM - 2:30 PM

[Career Development:](#)

Imposter Syndrome: It's Not Just You!!!*

1:30 PM - 2:30 PM

[Back to Basics:](#)

Gait and Joint Mechanics: The Next Steps Towards Understanding Musculoskeletal Pathology
(Thomas Andriacchi)

[AAOS Kappa Delta & OREF Paper Presentations](#)

1:45 PM - 2:45 PM

[Career Development:](#)

Building Your Research Portfolio*

3:00 PM - 4:30 PM

[Research Interest Groups](#) (RIG):

Clinical Translation of Physics-Based Models in Orthopaedics: Promises and Pitfalls*

Bridging Disciplines to Find Solutions for Osteoarthritis

5:00 PM – 6:00 PM

[Meet & Greet: Junior Faculty Investigators/PostDocs*](#)

6:00 PM - 7:00 PM

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

Clinical Research-Omics, Biomarkers Genetics

Hip/Knee Arthroplasty-Materials, Fixation and Wear

Cartilage and Synovium- Treatment and Therapeutics

Bone-Mechanics

Knee-Biomarkers and Diagnostics

Biomaterials--Bone Tissue Repair

Tuesday, February 16, 2021

ALL DAY

Exhibitor Spotlight Sessions

6:00 AM - 7:00 AM

Poster Sessions (*all posters are available for viewing and chat 24/7*)

Podium Sessions (*Podiums featured at this time are available on-demand, 24/7*)

Imaging-Soft Tissue Imaging

Shoulder and Elbow-Biomechanics and Experimental Considerations

(Podium Sessions continued)

Hip/Knee Arthroplasty-Robotics and AI
Foot and Ankle-Diagnosis, Imaging and Disorders
Intervertebral Disc-Degeneration and Regeneration
Late Breaking - Biological and Physical Mechanisms

7:00 AM - 8:00 AM

[ORS Debate:](#)

Artificial Intelligence will Lead to the Obsolescence of Orthopaedic Radiologists*

8:15 AM - 9:45 AM

[Symposia:](#)

Challenges and Opportunities in Musculoskeletal Infections

Translational Tendinopathy – from Bench to Bedside and Back Again

8:15 AM - 8:45 AM

[Spotlights:](#)

Precision Medicine in Cartilage Tissue Regeneration (Rhima Coleman, PhD)

Accelerating Translation of Bone Tissue Engineering Strategies
(Robert Guldberg, PhD)

8:15 AM - 9:15 AM

[Career Development:](#)

How to Craft a High Impact NIH Biosketch*

9:30 AM - 11:00 AM

[Research Interest Group](#) (RIG):

The Cellular Orchestration of Muscle Regeneration*

10:00 AM - 11:00 AM

[Back to Basics:](#)

Cartilage Biomechanics and Mechanobiology (Alan Grodzinsky)

12:00 PM - 1:00 PM

Podium Sessions *(Podiums featured at this time are available on-demand, 24/7)*

Biomaterials-Soft Tissue Engineering and Repair
Bone-Mechanobiology
Cartilage and Synovium-Diseases and Disorders
Knee-Osteoarthritis and Therapeutics
Late Breaking - Biologic Therapies

1:00 PM - 2:00 PM

[Plenary Session:](#)

Closing Session featuring Inauguration of Incoming ORS President, presentation of ON Orthoregeneration Award, NIRA Awards and Research Section Awards*

***Programs marked with a " * " will be held LIVE via ZOOM (Pacific Time). If you are not able to join us LIVE, these sessions will be recorded and available for viewing the following day.**

Schedule subject to change.