

**Western Orthopaedic Association
Scientific Program
Grand Wailea, Maui, HI
August 4th – 6th, 2022**

Thursday, August 4th

6:00 am – 7:00 am **Scientific Poster Session** (Presenters are available to answer questions)

6:55 am – 7:00 am **Welcome, Announcements and Overview**
WOA President: William J. Maloney Jr., MD, Stanford University

Co-Program Chair:
Geoffrey D. Abrams, MD, Stanford University

Symposium 1 – Surviving Weekend Call

Moderator: Jonathan G. Eastman, MD, *University of Texas, Houston*

7:00 am – 8:00am Challenging Cases You Can't Avoid
Panel: *Timothy S. Achor, MD, University of Texas, Houston*
Julius A. Bishop, MD, Stanford University
Michael J. Gardner, MD, Stanford University
Justin M. Haller, MD, University of Utah
Conor P. Kleweno, MD, Harborview Medical Center
James R. Learned, MD, University of California, Irvine
Carol A. Lin, MD, Cedars Sinai Medical Center
Milton T. Little, MD, Cedars Sinai Medical Center
John A. Scolaro, MD, University of California, Irvine

8:01 am – 8:10 am **First Business Meeting**
William J. Maloney, MD, Stanford University

8:11 am – 8:30 am **Special Session 1** (CME not available)
Entrepreneurship in Orthopaedic Surgery
Moderator: William J. Maloney, MD, *Stanford University*
Panel: *Mike J. Gardner, MD, Stanford University*
Robert C. Cohen, MS, Stryker Orthopaedics
Stephen E. White, Depuy Synthes

8:30 am – 9:00 am **Focused Breakfast Presentation** (CME not available)

Concurrent Session 1 – Allied Health

Moderator: Theodore W. Coates, PA, *University of California, Davis*

9:00 am – 10:00 am

Pediatrics

Holly Leshikar, MD, MPH, University of California, Davis

Rapid Fire Session 1A – Management and Leadership

Moderators: Robert Barrack, MD, *Washington University St. Louis*

Jay R. Lieberman, MD, *Keck School of Medicine of USC*

9:05 am – 9:09 am

336 - The Effects of Positive Incentive on OITE Performance

Christopher Kurnik, MD, University of New Mexico

9:09 am – 9:13 am

489 - The Other Side of Conflict: Examining the Challenges of Female Orthopaedic Surgeons in the Workplace

Maria S. Kammire, BS, University of North Carolina School of Medicine

9:13 am – 9:17 am

495 - Female Resident Attrition in Orthopaedic Surgery

Xi Chen, BS, California University of Science and Medicine

9:17 am – 9:22 am

Discussion

9:22 am – 9:26 am

539 - Factors Impacting Orthopaedic Rank Lists During the Virtual Interview Cycle

Max R. Haffner, MD, University of California, Davis Health

9:26 am – 9:30 am

496 - Attrition in Male and Female Residents of Surgical Specialties

Xi Chen, BS, California University of Science and Medicine

9:30 am – 9:35 am

Discussion

Rapid Fire Session 1B – Pediatrics

Moderators: Steven Frick, MD, *Stanford University*

Selina Silva, MD, *University of New Mexico*

9:05 am – 9:09 am

323 - Iliac Crest Growth Inhibition after Open Treatment of Developmental Dysplasia of the Hip: A Quantitative Analysis

Kirsten N. Norrell, MD, Stanford University

9:09 am – 9:13 am

17 - Incidence of Glenohumeral Injury and Risk Factors for Recurrent Instability Following Shoulder Stabilization

Diana G. Douleh, MD, University of Colorado, Aurora

- 9:13 am – 9:17 am 440 - Gabapentinoids Do Not Clinically Decrease Opioid Use in a Database Review of Spinal Fusion in AIS
Selina Poon, MD, Shriners for Children Medical Center, Pasadena
- 9:17 am – 9:22 am Discussion
- 9:22 am – 9:26 am 283 - Predictive Factors of Failed Closed Treatment of Pediatric Forearm Fractures
Nakul Talathi, MD, University of California, Los Angeles
- 9:26 am – 9:30 am 153 - Kaplan Fiber Injury in Pediatric Anterior Cruciate Ligament (ACL) Tears
Brendan Y. Shi, MD, University of California, Los Angeles
- 9:30 am – 9:35 am Discussion

Rapid Fire Session 1C – Arthroplasty – Infection

Moderators: Stefano A. Bini, MD, *University of California, San Francisco*
Theodore Stringer, MD, *Colorado Springs Orthopaedic Group*

- 9:05 am – 9:09 am 501 - 1.5-Stage Exchange for Infected TKA: Fewer Operations, Improved Function
Derek F. Amanatullah, MD, PhD, Stanford University
**Presented by Kingsley A. Oladeji, MD*
- 9:09 am – 9:13 am 678 - The Utility of Synovial Alpha-Defensin Test for Periprosthetic Joint Infections
Nathanael D. Heckmann, MD, Keck School of Medicine, University of Southern California
- 9:13 am – 9:17 am 478 - Infection Risk of Intra-Articular Corticosteroid Injections after Total Knee Arthroplasty
Sean S. Rajae, MD, MS, Cedars-Sinai Medical Center
- 9:17 am – 9:22 am Discussion
- 9:22 am – 9:26 am 499 – Rates and Risk Factors for Multiple Periprosthetic Joint Infections in Patients with Multiple Arthroplasties
Kingsley A. Oladeji, MD, Stanford University
- 9:26 am – 9:30 am 108 - The Sensitivity and Specificity of Plasma D-dimer and Fibrinogen for Diagnosing Orthopedic Infection
Juston Fan, DO, Riverside University Health Systems

9:30 am – 9:35 am Discussion

Rapid Fire Session 1D – Arthroplasty - Hip

Moderators: Nathanael D. Heckmann, MD, *Keck School of Medicine*
William J. Maloney, MD, *Stanford University*

9:05 am – 9:09 am 190 - Should MELD Scores Be Used to Guide Hip Fracture Treatment?
Peter P. Hsiue, MD, University of California, Los Angeles

9:09 am – 9:13 am 432 - Functional Outcomes Following Total Hip Arthroplasty
Clayton D. Foster, University of Colorado Hospital
**Presented by Michael R. Dayton, MD*

9:13 am – 9:17 am 128 - Pre-Operative Depression is Not Associated with Inferior Outcomes following THA
Connor Byrne, MD, Cedars Sinai

9:17 am – 9:22 am Discussion

9:22 am – 9:26 am 172 - Lower Rates of Ceramic Femoral Head Use in Non-in the United States, a National Registry Study
Alex Upfill-Brown, MD, MSc, David Geffen School of Medicine, University of California, Los Angeles

9:26 am – 9:30 am 278 - Sacral Slope Change from Standing to Relaxed-Seated Grossly Overpredicts the Presence of a Stiff Spine
Abhinav K. Sharma, MD, University of California, Irvine

9:30 am – 9:35 am Discussion

Rapid Fire Session 1E – Spine

Moderators: Hai V. Le, MD, MPH, *University of California, Davis*
John S. Vorhies, MD, *Stanford University*

9:05 am – 9:09 am 511 - Is Routine Use of External Spinal Orthoses Necessary After Operative Stabilization of Cervical Spine Injuries?
Mark Prasarn, MD, The University of Texas Health Science Center at Houston

9:09 am – 9:13 am 614 - Vertebral Compression Fractures and Subsequent Hip Fractures
Thomas D. Alter, University of Southern California

- 9:13 am – 9:17 am 653 - Maintenance of Sacral Kyphosis after Open and Percutaneous Lumbopelvic Fixation
Clark Dorman, MD, University of Texas-Houston
- 9:17 am – 9:22 am Discussion
- 9:22 am – 9:26 am 2 - Cervical Disc Arthroplasty as Treatment for Adjacent Level Disc Degeneration
Robert F. McLain, MD, St Vincent Charity Medical Center
- 9:26 am – 9:30 am 162 - Management of Lumbar Spondylolysis in the Adolescent Athlete
Jeffrey Choi, MD, University of California, Irvine
- 9:30 am – 9:35 am Discussion
- 9:35 am – 9:55 am Break – Please Visit Exhibits

General Session 1 – OREF/WOF Young Investigator Awards

Moderator: Geoffrey D. Abrams, MD, *Stanford University*

- 9:55 am – 10:02 am 12 - Articular Fragment Restoration is Critical to Mitigate Post-Traumatic Osteoarthritis
Justin Haller, MD, University of Utah
- 10:02 am – 10:09 am 487 - Intraoperative 3D Navigation and Post-Operative Infection in Thoracolumbar Fusion
Ananth Eleswarapu, MD, Montefiore Medical Center
- 10:09 am – 10:16 am 237 - Adolescent Shoulder Instability Arthroscopic Management: Knotless versus Knotted Suture Anchors
Richard Michelin, DO, Riverside University Health System Medical Center
- 10:16 am – 10:24 am Discussion

Symposium 2 – Orthobiologics in Today's Practice

Moderator: Marc Safran, MD, *Stanford University*

- 10:25 am – 10:55 am **Panel:** *Geoffrey D. Abrams, MD, Stanford University*
C. Benjamin Ma, MD, University of California, San Francisco
David R. McAllister, MD, University of California Los Angeles
Marc Safran, MD, Stanford University
Felix "Buddy" Savoie III, MD, Tulane University

10:55 am – 11:15 am Break – Please Visit Exhibits

General Session 2 – Howard Steel Lecture

11:15 am – 11:20 am Introduction
William J. Maloney, MD, Stanford University

11:20 am – 12:20 pm Howard Steel Lecture
John O’Meara, PhD, Chief Scientist, WM Keck Observatory, Kamuela, Hawaii

12:20am – 12:50 pm **Focused Lunch Presentation** (CME not available)

Rapid Fire Session 2A – Trauma

Moderator: Jonathan G. Eastman, MD, *University of Texas, Houston*

12:55 pm – 12:59 pm 527 - Quantifying Perfusion Changes in Staged Fixation of Pilon Fractures
Pelle V. Wall, BA, University of California, San Diego
**Presented by Matthew Y. Siow, MD*

12:59 pm – 1:03 pm 491 - The Effects of E-Cigarettes on Fracture Healing
Mark Prasarn, MD, The University of Texas Health Science Center at Houston

1:03 pm – 1:07 pm 505 - Clinician-Integrated Optimization of Orthopaedic Trauma Implant Pricing
Michael J. Gardner, MD, Stanford University

1:07 pm – 1:12 pm Discussion

1:12 pm – 1:16 pm 608 - Varus Malreduction Drives Cut-Out after Cephalomedullary Nailing of Intertrochanteric Fractures
Christian Gonzalez, BS, University of Reno, Nevada School of Medicine
**Presented by Noelle L. Van Rysselberghe, MD*

1:16 pm – 1:20 pm 654 - Is Regular Milk Consumption Associated with Lower Risks of Osteoporosis and Fracture?
Henry Hoang, BS, Montefiore Medical Center

1:20 pm – 1:25 pm Discussion

Rapid Fire Session 2B – Arthroplasty - Outcomes

Moderators: Jennifer van Warmerdam, MD, *Dignity Health*

Erik N. Zeegen, MD, *University of California, Los Angeles*

- 12:55 pm – 12:59 pm 430 - Total Joint Arthroplasty after Solid Organ Transplant
– Is it Safe?
James Lendrum, MD, MPH, University of Colorado
- 12:59 pm – 1:03 pm 404 - Service Site Disparity for Total Joint Arthroplasty by
Insurance Type
*Chelsea Leversedge, MPH, University of California, San
Francisco*
- 1:03 pm – 1:07 pm 475 - A PearlDiver Analysis of Two-Year Complication
Rates After Patellofemoral Arthroplasty
Sean S. Rajaei, MD, MS, Cedars-Sinai Medical Center
- 1:07 pm – 1:12 pm Discussion
- 1:12 pm – 1:16 pm 78 - Operative Time Confounds Obesity-Related Short-
Term Outcomes in Arthroplasty
*Maveric K.I.L. Abella, BS, University of Hawaii John A.
Burns School of Medicine*
- 1:16 pm – 1:20 pm 599 - Surgeon-Built 3D Printed Bone Models for Planning
Complex Arthroplasty
*Max R. Haffner, MD, University of California, Davis
Health*
- 1:20 pm – 1:25 pm Discussion

Rapid Fire Session 2C – Arthroplasty - Pain

Moderators: Erik N. Hansen, MD, *University of California, San Francisco*
Ryland P. Kagan, MD, *Oregon Health & Sciences University*

- 12:55 pm – 12:59 pm 183 - A Collaborative Multimodal Pathway Reduces
Opioids after Total Hip and Knee Arthroplasty
Leah Esposito, BA, Oregon Health & Science University
- 12:59 pm – 1:03 pm 248 - Repeat High-Dose Dexamethasone May Improve
Recovery 48 Hours After Total Hip Arthroplasty
Brandon E. Lung, MD, University of California, Irvine
- 1:03 pm – 1:07 pm 417 - Intraoperative Dexamethasone on Opioid
Consumption After Total Joint Arthroplasty
Brandon Yoshida, University of Southern California
- 1:07 pm – 1:12 pm Discussion

1:12 pm – 1:16 pm 502 - Postoperative Complications of Non-Steroidal Anti-Inflammatory Usage After Total Joint Arthroplasty
Haley Nakata, MD, Keck School of Medicine of University of Southern California

1:16 pm – 1:20 pm 633 - Duloxetine for Postoperative Pain Control Following Knee and Hip Arthroplasty
Arad Talehakimi, MS, Kansas City University College of Osteopathic Medicine

1:20 pm – 1:25 pm Discussion

Rapid Fire Session 2D – Foot & Ankle

Moderators: Christian K. Kikuchi, MD, *Orthopedic Associates Hawaii*
 Christopher D. Kreulen, MD, *University of California, Davis*

12:55 pm – 12:59 pm 284 - Safety Profile of Short-Duration Flight Travel After Foot and Ankle Surgery
Victoria Scala, MD, John A. Burns School of Medicine, University of Hawai'i, Department of Surgery

12:59 pm – 1:03 pm TBD

1:03 pm – 1:07 pm 603 - Chronic Exertional Compartment Syndrome Incidence in the United States Military
John P. Waggoner, MD, MPH, MAS, MA, BS, Naval Medical Center San Diego

1:07 pm – 1:12 pm Discussion

1:12 pm – 1:16 pm 669 - Trends in Total Ankle Arthroplasty and Fusion for Tibiotalar Osteoarthritis
Noorulain Paracha, BS, Maimonides Medical Center

1:16 pm – 1:20 pm 370 - Tantalum Spacer Augmentation in Hindfoot Arthrodesis of Large Bony Defects
Connor Delman, MD, University of California, Davis

1:20 pm – 1:25 pm Discussion

Rapid Fire Session 2E – Spine

Moderators: Nitin A. Bhatia, MD, *University of California, Irvine*
 John S. Vorhies, MD, *Stanford University*

12:55 pm – 12:59 pm	96 - Gender, Racial, and Ethnic Differences in the Utilization of Cervical Disc Replacement for Cervical Radiculopathy <i>Hai V. Le, MD, MPH, University of California, Davis</i>
12:59 pm – 1:03 pm	87 - Laminoplasty Versus Laminectomy with Fusion for Treating Cervical Spondylotic Myelopathy <i>Oussama Bakr, UC Davis School of Medicine</i>
1:03 pm – 1:07 pm	546 - Reporting on Postoperative Complications in Pyogenic Spinal Infections using ACS-NSQIP <i>Sarah Oyadomari, BS, University of California, Irvine</i>
1:07 pm – 1:12 pm	Discussion
1:12 pm – 1:16 pm	701 - Socioeconomic Disparities in Pediatric Scoliosis Surgery <i>Zachary L. Boozé, BS, UC Davis School of Medicine</i>
1:16 pm – 1:20 pm	258 - Epidural Steroid Injection and Infection Risk Following Posterior Cervical Surgery <i>Tara Shelby, University of Southern California</i>
1:20 pm – 1:25 pm	Discussion
Symposium 3 – Controversies in Primary Hip and Knee Arthroplasty	
Moderators: Adam A. Sassoon, MD, <i>University of California, Los Angeles</i> Robert Barrack, MD, <i>Washington University St. Louis</i>	
Debate: “Navigating” Knee Replacements	
1:30 pm – 1:36 pm	All You Need is Conventional Instrumentation <i>Erik N. Hansen, MD, University of California, San Francisco</i>
1:37 pm – 1:43 pm	Considerations when Using Accelerometry <i>Ryland P. Kagan, MD, Oregon Health & Sciences University</i>
1:44 pm – 1:50 pm	Robotics is the Future <i>Erik N. Zeegen, MD, University of California, Los Angeles</i>
1:51 pm – 1:57 pm	Questions and Discussion
Keynote Address	
1:58 pm – 2:07 pm	Robotics Fast Becoming the Standard for Unicompartamental Knee Replacement

Robert Barrack, MD, *Washington University St. Louis*

Debate: Using Dual Mobility Bearings

2:08 pm – 2:15 pm

Everyone, Every Time

Stefano A. Bini, MD, University of California, San Francisco

2:15 pm – 2:21 pm

Everything in Moderation

Nathanael D. Heckmann, MD, University of Southern California

2:22 pm – 2:28 pm

Questions and Discussion

Debate: To Cement or to Not Cement a Total Knee? That is the Question

2:29 pm – 2:35 pm

Always Cement a Total Knee Arthroplasty

Mark J. Spangehl, MD, Mayo Clinic Arizona

2:36 pm – 2:42 pm

Cement Not Needed for Total Knee Arthroplasty

Jeff R. Petrie, MD, Rothman Orthopaedics

2:43 pm – 2:50 pm

Questions and Discussion

Rapid Fire Session 3A – Basic Science

Moderators: Marc Safran, MD, *Stanford University*

Michelle L. Wolcott, MD, *University of Colorado*

2:55 pm – 2:59 pm

6 - Hydroxyapatite Effect on Pedicle Screw Resistance: An Electrical Model

John P. Walsh, MD, Valley Hospital Medical Center

2:59 pm – 3:03 pm

693 - The Effects of Autologous Mesenchymal Stem Cells from Bone Marrow and Adipose Tissue on Patients with Knee Osteoarthritis

Paul E. Hughes, MD, Hughes Orthopedics

3:03 pm – 3:07 pm

385 - The “Second Hit” of Rotator Cuff Repair in a Chronic Tear Rabbit Model

Isabella T. Wu, MD, MPH, University of California, San Diego

3:07 pm – 3:10 pm

Discussion

3:10 pm – 3:14 pm

374 - Office Orthobiologics: Optimizing Your Results

Thomas Grace, MD, Academy Orthopaedic Clinic

3:14 pm – 3:18 pm 176 - The Long-Term Effects of Bupivacaine on the Mechanical Properties of Articular Cartilage Explants
Dean Wang, MD, University of California Irvine

3:18 pm – 3:22 pm 621 - Mobile-Device Based 3D Scanning Accurately Detects Sarcopenia
Clayton Maschhoff, BS, Stanford University

3:22 pm – 3:25 pm Discussion

Rapid Fire Session 3B – Hand/Elbow/Wrist

Moderators: P. Kaveh Mansuripur, MD, *Kaiser Permanente*
Lauren A. Shapiro, MD, *University of California, San Francisco*

2:55 pm – 2:59 pm 16 - Volar Radiocarpal Arthrotomy: An Anatomical and Biomechanical Feasibility Analysis of a Novel Approach for Use in Distal Radius Fracture Repair
Diana G. Douleh, MD, University of Colorado, Aurora

2:59 pm – 3:03 pm 100 - The Effect of Marijuana Use on Surgical Site Infection
David Ruckle, MD, Loma Linda University

3:03 pm – 3:07 pm 319 - The Effect of Bridge Plate Fixation for Distal Radius Fractures on Wrist Bone Mineral Density
Sofia Bougioukli, MD, PhD, Keck School of Medicine at University of Southern California

3:07 pm – 3:10 pm Discussion

3:10 pm – 3:14 pm 704 - Association Between HgbA1c and Post-Operative Infections in Elective Hand Surgery
Meagan E. Womack, MD, UT Health San Antonio

3:14 pm – 3:18 pm 132 - Effect of CURES Legislation on Narcotic Prescriptions after Hand Surgery
Conor Spady, Loma Linda University

3:18 pm – 3:22 pm 59 - Safety and Efficacy of In-Office Hand Procedures
Brandon W. Knopp, BS, Florida Atlantic University
Charles E. Schmidt College of Medicine

3:22 pm – 3:25 pm Discussion

Rapid Fire Session 3C – Trauma

Moderators: Michael J. Gardner, MD, *Stanford University*

Jeffrey M. Nakano, MD, *Grand Junction Veterans Hospital*

- 2:55 pm – 2:59 pm 663 - High-Performance Outcome after Tibial Plafond Fracture: The Significant Factors
John C. Wheelwright, BS, University of Utah
- 2:59 pm – 3:03 pm 270 - Ambulation Distance Within 72 Hours is a Predictor of 90-Day Ambulatory Capacity in Elderly Patients
Canhngi Ta, University of California, San Diego
- 3:03 pm – 3:07 pm 3 - Mortality or Conversion to Transfemoral Amputation Following Transtibial Amputation Risk
Liam H. Wong, BS, Oregon Health and Science University
- 3:07 pm – 3:10 pm Discussion
- 3:10 pm – 3:14 pm 519 - Acetabular Morphology in Patients with Failed Femoral Neck Fracture Fixation
Tram L. Tran, MD, University of Arizona Phoenix/Banner University Medical Center
- 3:14 pm – 3:18 pm 661 - Medullary Air Presence in Open Tibia Fractures Increases Amputation Risk
Heba Ahmad, BS, McGovern Medical School at UT Health Houston
- 3:18 pm – 3:22 pm 175 - Arthroscopic vs. Open Washout for Native Knee Septic Arthritis
Alex Upfill-Brown, MD, MSc, David Geffen School of Medicine, University of California, Los Angeles
- 3:22 pm – 3:25 pm Discussion

Rapid Fire Session 3D – Arthroplasty - Knee

Moderators: Adam A. Sassoon, MD, *University of California, Los Angeles*
Kathryn Schabel, MD, *Oregon Health & Science University*

- 2:55 pm – 2:59 pm 98 - Staging Bilateral Total Knee Arthroplasties Reduces Alignment Outliers
Matthew A. Follett, MD, Stanford University Medical Center
- 2:59 pm – 3:03 pm 451 - Resiliency and Immediate Post-Operative Impairment Following Unilateral and Bilateral TKA
Ryan T. Nguyen, BS, John A. Burns School of Medicine

3:03 pm – 3:07 pm 65 - The Swing Deviation Index: Quantifying Golf Swing with Metrics Derivable from Wearable Sensors
Joanne Zhou, MD, Stanford University

3:07 pm – 3:12 pm Discussion

3:12 pm – 3:16 pm 413 - Robotic, Computer Nativated, and Conventional Total Knee Arthroplasty: Comparative Analysis
Jennifer C. Wang, BS, Keck School of Medicine, University of Southern California

3:16 pm – 3:20 pm 681 - Computer-Assisted Navigation in Simultaneous Bilateral Knee Arthroplasty
Anoop R. Galivanche, BS, Yale School of Medicine

3:20 pm – 3:25 pm Discussion

Rapid Fire Session 3E – Sports Medicine

Moderators: C. Benjamin Ma, MD, *University of California, San Francisco*
Colin Mansfield, MD, *Kaiser, The Permanente Medical Group*

2:55 pm – 2:59 pm 436 - Accuracy of Needle Placement for Landmark Guided Intraarticular Glenohumeral Injections
Douglas W. Bartels, MD, Stanford University
**Presented by Tim Wang, MD*

2:59 pm – 3:03 pm 86 - Spin in Quadriceps Tendon ACL Reconstruction Research
Matthew T. Gulbrandsen, MD, Loma Linda University

3:03 pm – 3:10 pm Discussion

3:10 pm – 3:14 pm 179 - Trends in Polyethylene Design and Manufacturing Characteristics for Total Knee Arthroplasty: an Analysis From the American Joint Replacement Registry
Jamil Kendall, MD, Oregon Health & Science University

3:14 pm – 3:18 pm 240 - Patellar Resurfacing is Not Associated with Patella Baja in Total Knee Arthroplasty
Kade S. McQuivey, MD, Mayo Clinic Arizona

3:18 pm – 3:25 pm Discussion

3:25 pm – 4:25 pm **Scientific Poster Session** (Presenters are available to answer questions)

Friday, August 5th

6:00 am – 7:00 am **Scientific Poster Session** (Presenters are available to answer questions)

6:55 am – 7:00 am **Announcements**
Geoffrey D. Abrams, MD, Stanford University

Symposium 4 – Sports Medicine of the Knee

Moderator: David R. McAllister, MD, *University of California, Los Angeles*

7:00 am – 7:10 am Tunnel Position for Successful ACL Reconstruction
David R. McAllister, MD, University of California, Los Angeles

7:11 am – 7:21 am What’s New in ACL Reconstruction Surgery?
Craig R. Bottoni, MD, Tripler Army Medical Center

7:22 am – 7:32 am Collateral Ligament Injuries and Treatment
Anikar Chhabra, MD, Mayo Clinic Arizona

7:33 am – 7:43 am Meniscus Repair: Current Indications and Techniques
Michelle L. Wolcott, MD, University of Colorado

7:44 am – 7:54 am Management of Articular Cartilages Defects
Marc Safran, MD, Stanford University

7:55 am – 8:05 am Questions and Discussion

8:06 am – 8:35 am **Special Session 2** (CME not available)
Leadership in Orthopaedic Surgery
Moderator: Steven Frick, MD, *Stanford University*

Panel: *Nitin A. Bhatia, MD, University of California, Irvine*
Jay R. Lieberman, MD, University of Southern California
William J. Maloney, MD, Stanford University
Felix “Buddy” Savoie III, MD, Tulane University

8:35 am – 9:05 am **Focused Breakfast Presentation** (CME not available)

Rapid Fire Session 4A – Management and Leadership

Moderators: Nitin N. Bhatia, MD, *University of California, Irvine*
Felix “Buddy” Savoie III, MD, *Tulane University*

9:10 am – 9:14 am 694 - Will Orthopaedic Surgeons Survive without USMLE Step 1 Scores for Residency Savoie/Battia Selection?

Maddison McLellan, BA, UC Irvine School of Medicine

- 9:14 am – 9:18 am 186 - Disparities in Resident Attrition in Orthopaedics and Surgical Subspecialties
Lee Haruno, MD, Cedars-Sinai Medical Center
**Presented by Selina Poon, MD*
- 9:18 am – 9:25 am Discussion
- 9:25 am – 9:29 am 598 - Coronavirus: A New "Virtual" Era of Resident Didactics
Harin B. Parikh, MD, Cedars-Sinai Medical Center
- 9:29 am – 9:33 am 212 - Social Media in Orthopedic Surgery: Perspectives from Residency Applicants
Joseph Brinkman, MD, Mayo Clinic Arizona
- 9:33 am – 9:40 am Discussion

Rapid Fire Session 4B – Pediatrics

Moderators: Kali Tileston, MD, *Stanford University*
 James G. Gamble, MD, PhD, *Stanford University Medical Center*

- 9:10 am – 9:14 am 185 - Adjunct Perioperative Blood Conservation Strategy: Use of Intraoperative Blood Recovery
Thomas Cahir, University Orthopedic Specialists
- 9:14 am – 9:18 am 145 - Particulate Production After Use of Different Surgical Scrubbing Methods
John A. Schlechter, DO, Children's Hospital Orange County / Pediatric Orthopedic Specialists of Orange County
- 9:18 am – 9:22 am 542 - Graft Choice and Return to Sport After Adolescent ACL Reconstruction
Brendan Y. Shi, MD, University of California, Los Angeles
- 9:22 am – 9:27 am Discussion
- 9:27 am – 9:31 am 615 - The FEAR Index and its Utility in Predicting Contralateral SCFE
Richard Hwang, MD, David Geffen School of Medicine at University of California, Los Angeles
- 9:31 am – 9:35 am 645 - Return to Activity After Anterior Thoracic Posterior Lumbar Tethering

Hao-Hua Wu, MD, University of California, San Francisco

9:35 am – 9:40 am

Discussion

Rapid Fire Session 4C – Spine

Moderators: Steven Frick, MD, *Stanford University*

Robert F. McLain, MD, *St. Vincent Charity Medical Center*

9:10 am – 9:14 am

142 - Accuracy of Dermatomes in Localization of Lumbar Disc Herniations: A Systematic Review
Connor Zale, MD, Tripler Army Medical Center

9:14 am – 9:18 am

528 - Progression of Kyphosis Following Acute Traumatic Vertebral Compression Fractures
Sarah Oyadomari, BS, University of California Irvine

9:18 am – 9:22 am

530 - Decreased Hip Motion is Associated with Inferior Spine Outcomes
Emily S. Mills, MD, University of Southern California

9:22 am – 9:27 am

Discussion

9:27 am – 9:31 am

552 - Erector Spinae Plane Blocks After PSF Do Not Affect Neuromonitoring
John S. Vorhies, MD, Stanford University

9:31 am – 9:35 am

593 - Mobile Device-Based 3D Scanning As A Diagnostic Tool in Adolescent Idiopathic Scoliosis
Yousi A. Oquendo, MSE, Stanford University

9:35 am – 9:40 am

Discussion

Rapid Fire Session 4D – Tumor

Moderator: Cynthia M. Kelly, MD, *OrthoOne*

9:10 am – 9:14 am

174 - Pedicled Vastus Lateralis Myocutaneous Flap for Sacropelvic Defects after Radical Oncologic Resection: Surgical Technique and Outcomes
Akash A. Shah, MD, University of California, Los Angeles

9:14 am – 9:18 am

46 - Durability of Proximal Femur Replacements: A Forty Year Experience
Rishi Trikha, MD, University of California, Los Angeles

- 9:18 am – 9:22 am 342 - Survival of Proximal Tibial Endoprostheses using Compressive-Osseointegration: Multi-Institution Retrospective Study
Yesenia Day, BS, University of California San Francisco
- 9:22 am – 9:27 am Discussion
- 9:27 am – 9:31 am 111 - Mobile Spine Sarcoma Survival is Associated with Access to Evidence-Based, Histology-Specific Treatment Protocols
Sarah Stroud, MD, University of California, San Francisco
**Presented by Rosanna L. Wustrack, MD*
- 9:31 am – 9:35 am 675 - Percutaneous Stabilization of Pathologic Fracture of the Pelvis and Sacrum
Makena Schutz, BS, Colorado Limb Consultants
- 9:35 am – 9:40 am Discussion
- Rapid Fire Session 4E – Arthroplasty – Infection**
- Moderators: Robert Barrack, MD, *Washington University School of Medicine*
Nathanael D. Heckmann, MD, *Keck School of Medicine, University of Southern California*
- 9:10 am – 9:14 am 600 - Aseptic Loosening in Single-Stage Revision Arthroplasty for Periprosthetic Joint Infection
Connor Delman, MD, University of California, Davis
- 9:14 am – 9:18 am 348 - Pseudo-Arthrodesis Antibiotic Spacers for Periprosthetic Joint Infection in the Setting of Ligamentous Compromise of the Knee
Harsh Shah, Mayo Clinic Alix School of Medicine
**Presented by Shay Warren, MD*
- 9:18 am – 9:22 am 253 - Modifiable Preoperative Risk Factors Predict Postoperative Complications in Revision Joint Arthroplasty with Antibiotic- Loaded Spacers
Brandon E. Lung, MD, University of California, Irvine
- 9:22 am – 9:27 am Discussion
- 9:27 am – 9:31 am 686 - Is Prednisone associated with Periprosthetic Joint Infection Following Total Joint Arthroplasty
Amit S. Piple, MD, Keck School of Medicine at University of Southern California

9:31 am – 9:35 am 154 - Effect of Medically Treated Rheumatoid Arthritis on Periprosthetic Joint Infection
Rishi Trikha, MD, University of California, Los Angeles

9:35 am – 9:40 am Discussion

Concurrent Session 2 – Allied Health

Moderator: Theodore W. Coates, PA, *University of California, Davis*

9:10 am – 10:00 am Foot and Ankle
Christopher D. Kreulen, MD, University of California, Davis

9:40 am – 10:00 am Break – Please Visit Exhibits

Symposium 5 – President’s Symposium Technology and the Future of Orthopaedic Surgery

Moderator: William J. Maloney, MD, *Stanford University*

10:00 am – 10:05 am Introduction
William J. Maloney, MD, Stanford University

10:06 am – 10:21 am The Effect of Orthopaedic Technology on Your Practice
Stefano A. Bini, MD, University of California, San Francisco

10:22 am – 10:37 am Robotics and “Navigating” Orthopaedic Surgery
Robert C. Cohen, MS, Stryker Orthopaedics

10:38 am – 10:45 am Technologies and Innovation: A Forward Look
Stephen E. White, Depuy Synthes

10:46 am – 11:05 am Questions and Discussion

11:05 am – 11:25 am Break – Please Visit Exhibits

General Session 3 – Academy and Board Reports

Moderator: William J. Maloney, MD, *Stanford University*

11:25 am – 11:30 am OREF Report

11:30 am – 11:40 am ABOS Report
Lisa A. Taitzman, MD, MPH, University of Washington

11:40 am – 11:55 am AAOS Report
Felix “Buddy” Savoie III, MD, Tulane University, President, AAOS

11:55 am – 12:25 pm **Focused Lunch Presentation (CME not available)**

Rapid Fire Sessions 5A – Sports Medicine

Moderators: Kimberly L. Furry, MD, *Mercy Orthopedics Associates*
David R. McAllister, MD, *University of California, Los Angeles*

12:30 pm – 12:34 pm 485 - The Statistical Fragility of Platelet-Rich Plasma Utilization in Knee Osteoarthritis: A Systematic Review of Randomized Controlled Trials
Justin Chan, MD, University of California, Irvine

12:34 pm – 12:38 pm 660 - Do Revision Rates Differ Between Cemented and Cementless Total Knee Arthroplasty?
Alan K. Li, BS, David Geffen School of Medicine at University of California, Los Angeles

12:38 pm – 12:42 pm 68 - Evaluation of Pre-Operative Imaging for Cam-Deformity in Femoroacetabular Impingement
Jonathan C. Horng, MD, University of Hawaii

12:42 pm – 12:47 pm Discussion

12:47 pm – 12:51 pm 538 - Sex Differences in Patellar Anatomy and Development
Kirsten N. Norrell, MD, Stanford University

12:51 pm – 12:55 pm 582 - Minimum 2-Year Outcomes of Endoscopic Proximal Hamstring Repair
Trevor Shelton, MD, MS, The Steadman Clinic

12:55 pm – 1:00 pm Discussion

Rapid Fire Sessions 5B – Arthroplasty – Outcomes

Moderators: Stefano A. Bini, MD, *University of California, San Francisco*
Jeff R. Petrie, MD, *Rothman Orthopaedics*

12:30 pm – 12:34 pm 365 - Higher Complication Risk Associated with Prior COVID-19 Infection in Patients Undergoing Elective Total Joint Arthroplasty
Justin Than, DO, Cedars-Sinai Medical Center

12:34 pm – 12:38 pm **William J. Maloney, MD Travel Grant**
380 - Statistical Fragility of Venous Thromboembolism Prophylaxis following Total Joint Arthroplasty
Sean Sequeira, BS, Union Memorial Hospital

- 12:38 pm – 12:42 pm 131 - Outpatient Total Joint Arthroplasty Performed in a Safety Net Hospital
Robert D. Kay, MD, University of California, Los Angeles
- 12:42 pm – 12:47 pm Discussion
- 12:47 pm – 12:51 pm 377 - Is It Reasonable to Expect Same Day Discharge for Older Patients following Unicompartmental Knee Arthroplasty?
Piueti Maka, BA, John A. Burns School of Medicine
- 12:51 pm – 12:55 pm 655 - Effect of Insurance Status and COVID-19 on Access to Adult Arthroplasty Surgery
Kylen Soriano, BS, University of California, San Francisco
- 12:55 pm – 1:00 pm Discussion

Rapid Fire Sessions 5C – Arthroplasty – Knee

Moderators: Adam A. Sassoon, MD, *University of California, Los Angeles*
Mark J. Spangehl, MD, *Mayo Clinic Arizona*

- 12:30 pm – 12:34 pm 79 - Supine Knee Positioning does not Interfere with Mobile Bearing UKA Performance
John C. Bonano, MD, Stanford University
**Presented by Adam J. Murrietta, MD, Stanford University*
- 12:34 pm – 12:38 pm 670 - Renal Transplant Patients Undergoing Total Knee Arthroplasty Display Better Outcomes Compared to End Stage Renal Disease Patients
Alan K. Li, BS, David Geffen School of Medicine at University of California, Los Angeles
- 12:38 pm – 12:42 pm 191 - Cementless Total Knee Arthroplasty is Associated with Increased Perioperative Complications
Peter P. Hsiue, MD, University of California, Los Angeles
- 12:42 pm – 12:47 pm Discussion
- 12:47 pm – 12:51 pm 500 - TKA Templating Does Not Predict Radiographic or Clinical Outcomes
Derek F. Amanatullah, MD, PhD, Stanford University
**Presented by Adam J. Murrietta, MD*
- 12:51 pm – 12:55 pm 700 - Does Resilience Predict Same Day Discharge Following Total Knee Arthroplasty?

Kassidy Kanja, BA, BS, John A. Burns School of Medicine

12:55 pm – 1:00 pm

Discussion

Rapid Fire Sessions 5D – Arthroplasty – Hip

Moderators: Kathryn Schabel, MD, *Oregon Health & Science University*
Erik N. Zeegen, MD, *University of California, Los Angeles*

12:30 pm – 12:34 pm

329 - Digital X-Ray Navigation Improves Precision of Implant Placement during Posterior THA
Evan Nigh, MD, Cedars-Sinai Medical Center

12:34 pm – 12:38 pm

102 - Compensated Heart Failure Predicts an Early Death after Total Hip Arthroplasty for a Femoral Neck Fracture
Raj M. Amin, MD, University of California, San Francisco/Fresno, CCFMG

12:38 pm – 12:42 pm

611 - Return to Surfing Following Hip Arthroplasty
Garrett K. Berger, MD, PharmD, University of California, San Diego

12:42 pm – 12:47 pm

Discussion

12:47 pm – 12:51 pm

465 - A Novel Fracture-Risk-Based Classification System for Hip Arthroplasty Femoral Stems
Sean S. Rajaei, MD, MS, Cedars-Sinai Medical Center

12:51 pm – 12:55 pm

123 - Safety of Bilateral Total Hip Arthroplasty in Patients Age >70
Landon Morikawa, MA, University of Hawaii - John A. Burns School of Medicine

12:55 pm – 1:00 pm

Discussion

Rapid Fire Sessions 5E – Foot & Ankle

Moderators: Kenneth J. Hunt, MD, *University of Colorado*
David Oji, MD, *Stanford University*

12:30 pm – 12:34 pm

325 - Outcomes and Patient Satisfaction following Synthetic Cartilage Implant for Hallux Rigidus
Mary C. Hamati, MD, University of Colorado

12:34 pm – 12:38 pm

52 - Effects of Demographic and Socioeconomic Factors on Clubfoot Relapse Treatment
Kali R. Tileston, MD, Stanford University

- 12:38 pm – 12:42 pm 401 - Compression of a Midfoot Osteotomy using a Circular External Fixator: What is the Ideal Pin Configuration?
Tyler R. Freeman, MD, University of Colorado
- 12:42 pm – 12:47 pm Discussion
- 12:47 pm – 12:51 pm 443 - Dynamic Nitinol Compression vs. Static Compression in Tibiotalocalcaneal Nail Fusion
William H. Ip, MD, University of California, Davis
- 12:51 pm – 12:55 pm 210 - Treatment of Moderate to Severe Hallux Valgus without Osteotomy or Arthrodesis
David G. Deckey, MD, Mayo Clinic Arizona

12:55 pm – 1:00 pm

Discussion

Concurrent Session 3 – Allied Health

Moderator: Theodore W. Coates, PA, *University of California, Davis*

12:45 pm – 2:15 pm

TBD

David E. Leshikar, MD, University of California, Davis

Symposium 6 – Foot and Ankle Controversies

Moderator: Christopher D. Kreulen, MD, *University of California, Davis*

Debate: Achilles Tendon Repair

1:05 pm – 1:11 pm

Open Surgical Treatment

Gregory A. Lundeen, MD, Reno Orthopedic Center

1:11 pm – 1:17 pm

Percutaneous Surgical Treatment

Christian K. Kikuchi, MD, Orthopedic Associates Hawaii

1:18 pm – 1:24 pm

What About Closed Treatment with Functional Rehab

David E. Oji, MD, Stanford University

1:25 pm -1:30 pm

Questions and Discussion

Debate: Posterior Malleolus Fractures

1:31 pm – 1:37 pm

Why Even Fix It?

Eric W. Tan, MD, University of Southern California

1:38 pm – 1:44 pm

Aggressive Surgical Treatment is the Way to Go!

Thomas G. Harris, MD, Harbor UCLA and Congress Orthopaedics

1:45 pm – 1:51 pm Questions and Discussion

Debate: Fixing the Syndesmosis: Screw vs. Tightrope

1:52 pm – 1:58 pm Screws are Tried and True
David E. Oji, MD, *Stanford University*

1:59 pm – 2:05 pm Be Flexible – It's Optimal!
Kenneth J. Hunt, MD, *University of Colorado*

2:05 pm – 2:11 pm Questions and Discussion

Keynote Address: Ankle Arthroplasty: Current State of the Art

2:12 pm – 2:22 pm Ankle Arthroplasty: Current State of the Art
Kenneth J. Hunt, MD, University of Colorado

2:22 pm – 2:30 pm Questions and Discussion

General Session 4 – Western Orthopaedic Foundation

Moderator: Robert R. Slater Jr., MD, *Folsom, CA*

2:35 pm – 2:41 pm **William J. Maloney, MD Travel Grant**
130 - Robotics in Arthroplasty: Bacterial Contamination
Assessed by Colony Forming Units
Kingsley A. Oladeji, MD, Stanford University

2:41 pm – 2:47 pm **Nitin N. Bhatia, MD Travel Grant**
642 - Return to Sport for Anterior Tethering vs. Posterior
Spinal Fusion
Hao-Hua Wu, MD, University of California, San Francisco
**Presented by Jennifer M. O'Donnell, MD*

2:47 pm – 2:53 pm **Kimberly Furry, MD Travel Grant**
544 - Single-Incision Fasciotomy Decreases Infection Risk
Compared to Dual-Incision Fasciotomy in Treatment of
Tibial Plateau Fractures with Acute Compartment
Syndrome
Eli W. Bunzel, MD, University of Washington

2:53 pm – 2:59 pm **Jeffrey Krygier, MD Travel Grant**
109 - Reliability of Semi-Automated Spinal Measurement
Software
*Matthew A. Follett, MD, Stanford University Medical
Center*

- 2:59 pm – 3:05 pm Discussion
- 3:05 pm – 3:11 pm **David Mansfield, MD Travel Grant**
509 - Spondylolisthesis and Mismatch Deformity Affect Outcomes After Total Knee Arthroplasty
William L. Sheppard, MD, MPH, University of California, Los Angeles
- 3:11 pm – 3:17 pm **Jeffrey M. Nakano, MD Travel Grant**
85 - Recommending Surgery Increases Patient Satisfaction with Arthroplasty
Adam J. Murrietta, MD, Stanford University
- 3:17 pm – 3:23 pm **Robert R. Slater Jr., MD Travel Grant**
189 - Hamstring Autograft vs. Hybrid Anterior Cruciate Ligament Reconstruction: Size is All That Matters
Alec C. Egan, MD, MS, Madigan Army Medical Center
- 3:23 pm – 3:29 pm **Robert R. Slater Jr., MD Travel Grant**
241 - Should Medicare Surgeon Reimbursement for Arthroplasty Be Risk-Adjusted for Patient Complexity?
Jack M. Haglin, MD, Mayo Clinic School of Medicine
- 3:29 pm – 3:35 pm Discussion
- 3:35 pm – 4:35 pm **Scientific Poster Session** (Presenters are available to answer questions)

Saturday, August 6th

- 6:00 am – 7:00 am **Scientific Poster Session**
- 6:55 am – 7:00 am **Announcements**
Geoffrey D. Abrams, MD, Stanford University

Symposium 7 – “Hand”-ling the Snakes in the Grass Moderator: Robin N. Kamal, MD, *Stanford University*

- 7:00 am – 7:09 am Be Prepared for Any Distal Radius Fracture
Robert J. Medoff, MD, University of Hawaii
- 7:10 am – 7:19 am Work-Up and Treatment of Primary and Recurrent Carpal Tunnel Syndrome
Jeffery Yao, MD, Stanford University

7:20 am – 7:29 am	Metacarpal Fractures: Tried and True vs. Emerging Techniques <i>Lauren A. Shapiro, MD, University of California, San Francisco</i>
7:30 am – 7:39 am	Office-Based Surgery Improves Quality and Value P. Kaveh Mansuripur, MD, Kaiser Permanente
7:40 am – 7:49 am	Pearls for Treating Fracture-Dislocations of the Wrist Jerry I. Huang, MD, University of Washington
7:50 am – 7:59 am	Summary and Case Review <i>Robin N. Kamal, MD, Stanford University</i>
8:00 am – 8:29 am	Special Session 3 Measuring Patient-Reported Outcomes: A Necessary Step in a Value-Driven World (CME not available) <i>Robin N. Kamal, MD, Stanford University</i> Panel: <i>Jay R. Lieberman, MD, University of Southern California</i> <i>Nitin A. Bhatia, MD, University of California, Irvine</i> <i>Felix “Buddy” Savoie III, MD, Tulane University</i>
8:30 am – 9:00 am	Focused Breakfast Presentation (CME not available)
	Rapid Fire Session 6A – Trauma Moderators: Michael J. Gardner, MD, <i>Stanford University</i> Milton T. M. Little, MD, <i>Cedars Sinai Medical Center</i>
9:05 am – 9:09 am	275 - Periprosthetic Distal Femur Fractures: What is Too Distal to Nail? <i>Noelle L. Van Rysselberghe, MD, Stanford University</i>
9:09 am – 9:13 am	391 - Fixation of Extra-Articular Proximal Tibia Fractures: Biomechanical Comparison of Single and Dual-Implant Constructs <i>Wilson C Lai, MD, University of California, Irvine Medical Center</i>
9:13 am – 9:20 am	Discussion
9:20 am – 9:24 am	421 - Postoperative Complications in Trauma Patients Receiving VTE Prophylaxis

Paulo Castaneda, BSE, University of Arizona College of Medicine, Phoenix

9:24 am – 9:28 am 513 - Infection Rate after ORIF Pelvic Ring with Concomitant Bladder Repair
Conor Kleweno, MD, Harborview Medical Center, University of Washington

9:28 am – 9:35 am Discussion

Rapid Fire Session 6B – Arthroplasty – Outcomes

Moderators: Stefano A. Bini, MD, *University of California, San Francisco*
 William J. Maloney, *Stanford University*

9:05 am – 9:09 am 213 - Patient Interest in Robotic Total Joint Arthroplasty is Exponential: A 10-Year Google Trends Analysis
Joseph Brinkman, MD, Mayo Clinic Arizona

9:09 am – 9:13 am 311 - Patient Characteristics Influence Pre-Operative Patient Reported Outcomes for Total Knee and Hip Arthroplasty
Saskia Leonard, BS, John A. Burns School of Medicine

9:13 am – 9:20 am Discussion

9:20 am – 9:24 am 412 - Is Intraoperative Dexamethasone During Total Joint Arthroplasty Safe in Diabetics?
Kareem Kebaish, Keck School of Medicine, University of Southern California

9:24 am – 9:28 am 419 - Robotic, Computer Nativated, and Conventional Total Hip Arthroplasty: Outcome Differences
Alexander B. Christ, MD, Keck School of Medicine at University of Southern California
**Presented by Alexander B. Christ, MD*

9:28 am – 9:35 am Discussion

Rapid Fire Session 6C – Spine

Moderators: Nitin N. Bhatia, MD, *University of California, Irvine*
 John S. Vorhies, MD, *Stanford University*

9:05 am – 9:09 am 684 - Use of Radio-Lucent Carbon Fiber Instrumentation for Spine Tumors
Ran Lador, MD, UT McGovern Medical School

- 9:09 am – 9:13 am 32 - Cervical Spine Interbody Fusion Rate for Anterior-Only vs. Anteroposterior Fixation
Ekamjeet S. Dhillon, MD, University of Washington
- 9:13 am – 9:20 am Discussion
- 9:20 am – 9:24 am 140 - Obtaining Neutral Craniocervical Alignment in Trauma Patients with Craniocervical Dissociation
Ekamjeet S. Dhillon, MD, University of Washington
- 9:24 am – 9:28 am 201 - Novel Patient Factors for Implant-Related Complications After Instrumented Spinal Fusion
Akash A. Shah, MD, University of California, Los Angeles
- 9:28 am – 9:35 am Discussion

Rapid Fire Session 6D – Pediatrics

Moderator: Holly Leshikar, MD, MPH, *University of California, Davis*

- 9:05 am – 9:09 am 169 - Pediatric Elbow Fractures: Correct Diagnosis and Treatment among Residents of Various Specialties
Bryce N. Clinger, MD, University of New Mexico
- 9:09 am – 9:13 am 43 - Symptomatic Retro-Patellar Tendon Ossicles and Type VII Tubercle Fractures
James G. Gamble, MD, PhD, Stanford University Medical Center
- 9:13 am – 9:20 am Discussion
- 9:20 am – 9:24 am 120 - Changes in Pediatric Operative Fracture Mechanisms During COVID-19
John A. Schlechter, DO, Children's Hospital Orange County / Pediatric Orthopedic Specialists of Orange County
- 9:24 am – 9:28 am 286 - Failed Closed Pediatric Forearm Reduction- Think Arm Size, not BMI
Nakul Talathi, MD, University of California, Los Angeles
- 9:28 am – 9:35 am Discussion

Rapid Fire Session 6E – Hand/Elbow/Wrist

Moderators: Basil R. Besh, MD, *Fremont Orthopaedic & Rehabilitative Medicine*
Robin N. Kamal, MD, *Stanford University*

9:05 am – 9:09 am	TBD
9:09 am – 9:13 am	104 - Efficacy of Thread Carpal Tunnel Release in Workers' Compensation Patients <i>Erik B. Gerlach, MD, Northwestern University</i>
9:13 am – 9:20 am	Discussion
9:20 am – 9:24 am	446 - Relationship between changes in Metacarpal Bone Density and Age and Sex <i>Joseph J. Bigham, BS, University of Washington</i>
9:24 am – 9:28 am	483 - Platelet Rich Plasma Augmentation of Surgical Treatment of Lateral Epicondylitis <i>Christopher S. Frey, MD, Stanford University</i>
9:28 am – 9:35 am	Discussion

Concurrent Session 4 – Allied Health

Moderator: Theodore W. Coates, PA, *University of California, Davis*

9:05 am – 10:00 am	Adult Hip <i>Brian M. Haus, MD, University of California, Davis</i>
9:35 am – 10:00 am	Break – Please visit Exhibits

General Session 5 – WOF Endowed Resident and Fellows Awards

Moderator: Geoffrey D. Abrams, MD, *Stanford University*

10:00 am – 10:06 am	209 - Spinoplevic Deformity is Associated with Femoral Retroversion in THA <i>David G. Deckey, MD, Mayo Clinic Arizona</i>
10:06 am – 10:12 am	13 - High Energy Pilon Fractures Result in Significant Tibia and Talus Chondrocyte Cell Death <i>Graham J. DeKeyser, MD, University of Washington</i>
10:12 am – 10:18 am	363 - Loose Body vs. Trochlear Biopsy MACI Outcomes in Pediatric Patients <i>Connor Delman, MD, University of California, Davis</i>
10:18 am – 10:24 am	493 - Blood Flow Restriction Training Following ACL Reconstruction in Collegiate Athletes <i>Sai K. Devana, MD, University of California, Los Angeles</i> <i>*Presented by Alex Upfill-Brown, MD, MSc</i>

10:24 am – 10:30 am	Discussion
10:30 am – 10:36 am	569 - Opioid Prescriptions Following Total Joint Arthroplasty in California: Do Government Regulations Work? <i>Ashish Mittal, MD, San Francisco Orthopaedic Residency Program</i> <i>*Presented by Pierre Tamer, MD</i>
10:36 am – 10:42 am	203 -Machine Learning-Driven Prediction of Perioperative Complications After Instrumented Lumbar Fusion <i>Akash A. Shah, MD, University of California, Los Angeles</i>
10:42 am – 10:48 am	34 - Immune Checkpoint Upregulation in Periprosthetic Joint Infection <i>Shay Warren, MD, Stanford University</i>
10:48 am – 10:54 am	400 - Bacteria Do Not Acquire Resistance Across Stage of Re-Implantation or Number of Spacers <i>Joanne Zhou, MD, Stanford University</i>
10:54 am – 11:00 am	Discussion

Symposium 8 – The Rotator Cuff

Moderator: Peter N. Chalmers, MD, *University of Utah*

11:01 am – 11:10 am	Surgical Indications <i>Peter N. Chalmers, MD, University of Utah</i>
11:11 am – 11:20 am	Biologics in Rotator Cuff Surgery <i>C. Benjamin Ma, MD, University of California, San Francisco</i>
11:21 am – 11:30 am	Tendon Transfers <i>Reza Omid, MD, University of Southern California</i>
11:31 am – 11:40 am	Subacromial Spacers <i>Michael T. Freehill, MD, Stanford University</i>
11:41 am – 11:50 am	Superior Capsular Reconstructions <i>Thomas J. Noonan, MD, University of Colorado</i>
11:51 am – 12:00 pm	Reverse Total Shoulder Arthroplasty <i>Jason E. Hsu, MD, University of Washington</i>
12:01 pm – 12:11 pm	Questions and Case-Based Discussion

General Session 6 – WOF Report, BOC Report, Second Business Meeting

Moderator: William J. Maloney, MD, *Stanford University*

- 12:12 pm – 12:17 pm Report of the Western Orthopaedic Foundation
Robert R. Slater Jr., MD, Folsom, CA
- 12:17 pm – 12:22 pm BOC Report
Kathryn Schabel, MD, Oregon Health & Science University
- 12:22 pm – 12:35 pm Second Business Meeting
- 12:35 pm – 1:05 pm **Focused Lunch Presentation (CME not available)**

Rapid Fire Session 7A – Management and Leadership

Moderator: William J. Maloney, MD, *Stanford University*

- 1:10 pm – 1:14 pm 407 - Race and Sex Representation Trends Amongst Entering Orthopaedic Surgery Residents
Jennifer C. Wang, BS, Keck School of Medicine, University of Southern California
- 1:14 pm – 1:18 pm 295 - #OrthoTwitter: Does Twitter Activity Influence Number of Manuscript Citations? An Analysis of the 2018 Orthopaedic Surgery Literature
Ryan T. Halvorson, MD, University of California San Francisco
- 1:18 pm – 1:22 pm 462 - Comparison of Responsiveness and MCID of PROMS In Orthopedic Literature
Haroon Kisana, MS, University of Arizona College of Medicine, Phoenix
- 1:22 pm – 1:27 pm Discussion
- 1:27 pm – 1:31 pm 61 - Provider Treatment Recommendations for Childbirth Following Pelvic Ring Injuries
Jasmine A. Scott, MD, JD, Naval Medical Center San Diego
- 1:31 pm – 1:35 pm 214 - Orthopaedic Surgery Away Rotations: Current Issues and Lessons Learned
Joseph Brinkman, MD, Mayo Clinic Arizona
- 1:35 pm – 1:40 pm Discussion

Rapid Fire Session 7B – Arthroplasty – Hip

Moderators: Erik N. Hansen, MD, *University of California, San Francisco*
Jennifer van Warmerdam, MD, *Dignity Health*

- 1:10 pm – 1:14 pm 182 - Risk of Revision and Complications after Total Hip Arthroplasty for Acute Acetabular Fracture
Mackenzie Kelly, MD, Oregon Health & Science University
- 1:14 pm – 1:18 pm 129 - Robotic Assisted TKA Improves Outcomes for Low-Volume Surgeons
Connor Byrne, MD, Cedars Sinai
- 1:18 pm – 1:22 pm 410 - AP Pelvis Radiographic Findings that Correlate with Sagittal Spinopelvic Motion
Emily S. Mills, MD, University of Southern California
- 1:22 pm – 1:27 pm Discussion
- 1:27 pm – 1:31 pm 35 - An Intraoperative External Acetabular Alignment Guide Decreases Positional Variability
Shay Warren, MD, Stanford University
- 1:31 pm – 1:35 pm 357 - Comparison of THA Outcomes Between Hemodialysis and Renal Transplant Patients
Seth Ahlquist, MD, University of California, Los Angeles
- 1:35 pm – 1:40 pm Discussion

Rapid Fire Session 7C – Arthroplasty – Infection

Moderators: Adam A. Sassoon, MD, *University of California, Los Angeles*
Theodore Stringer, MD, *Colorado Springs Orthopaedic Group*

- 1:10 pm – 1:14 pm 155 - Strikingly High Rates of PJI following Revision THA for Periprosthetic Fractures Regardless of Surgery Timing
Nathaneal D. Heckmann, MD, University of Washington
- 1:14 pm – 1:18 pm 151 - Injuries Affecting Intercollegiate Water Polo Athletes: A Descriptive Epidemiologic Study
Brendan Y. Shi, MD, University of California, Los Angeles
- 1:18 pm – 1:22 pm 318 - Impact of Modern Plasma Technology on Biofilm Eradication in Revision Arthroplasty
Moritz J. Sharabianlou Korth, MD, Stanford University
**Presented by Joanne Zhou, MD*
- 1:22 pm – 1:27 pm Discussion

1:27 pm – 1:31 pm 398 - Recurrent Prosthetic Joint Infection is Associated with Host Grade and Infecting Bacteria
Joanne Zhou, MD, Stanford University

1:31 pm – 1:35 pm 226 - National Trends In Lumbar Disc Replacement from 2010 to 2019
Alex Upfill-Brown, MD, MSc, David Geffen School of Medicine, University of California, Los Angeles

1:35 pm – 1:40 pm Discussion

Rapid Fire Session 7D – Spine

Moderator: Robert F. McLain, MD, *St Vincent Charity Medical Center*

1:10 pm – 1:14 pm 250 - Refracture Rate in Osteoporotic Compression Fractures
Emily S. Mills, MD, University of Southern California

1:14 pm – 1:18 pm 445 - The Learning Curve in Robotic-Assisted Pediatric Spine Surgery
Graham Albert, MD, University of Colorado Orthopedic Residency Program

1:18 pm – 1:22 pm 541 - Osteoporosis and Outcomes in Patients Undergoing Adult Spinal Deformity Surgery
Max R. Haffner, MD, University of California, Davis Health

1:22 pm – 1:27 pm Discussion

1:27 pm – 1:31 pm 613 - Anti-Osteoporotic Medication Prescription Patterns in Patients with Vertebral Compression Fractures
Jennifer Alter Bell, MD, University of Southern California

1:31 pm – 1:35 pm 664 - The Association of Opioid Use Disorder on Postoperative Outcomes Following Lumbar Laminectomy
Adem Idrizi, SUNY Downstate Health Sciences University

1:35 pm – 1:40 pm Discussion

Rapid Fire Session 7E – Trauma

Moderator: Geoffrey D. Abrams, MD, *Stanford University*

1:10 pm – 1:14 pm 113 - Insurance Type Influences Treatment and Outcomes of Proximal Humerus Fractures

Lauren Shapiro, MD, MS, University of California, San Francisco

1:14 pm – 1:18 pm

42 - Geriatric Distal Femur Fractures Treated with Distal Femoral Replacement Are Associated with Higher Rates of Complications

Justin Haller, MD, University of Utah

1:18 pm – 1:22 pm

161 - Chronic Opioid Use following Geriatric Hip Fracture Surgery: Risk Factors, Trends and Outcomes

Julia M. Stone, BS, California University of Science and Medicine

1:22 pm – 1:27 pm

Discussion

1:27 pm – 1:31 pm

167 - Outcomes following Free Tissue Transfer for Gustilo-Anderson Type IIIB/IIIC TIBIA Fractures

Harin B. Parikh, MD, Cedars-Sinai Medical Center

1:31 pm – 1:35 pm

526 - Increased Risk of Periprosthetic Femur Fracture with Cementless Hemiarthroplasty

Frank Rodgers, MD, Oregon Health & Science University

1:35 pm – 1:40 pm

Discussion

1:40 pm – 3:00 pm

Scientific Poster Session (Presenters are available to answer questions)