

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

**Thursday, August 4<sup>th</sup>**

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, 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, McGovern Medical School*

*Julius A. Bishop, MD, Stanford University*

*Michael J. Gardner, MD, Stanford University*

*Michael F. Githens, MD, Harborview Medical Center*

*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*

*David L. Rothberg, MD, University of Utah*

*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*

*Todd Alamin, MD, Stanford University*

*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: Jay R. Lieberman, MD, *Keck School of Medicine of USC*  
Robert Barrack, MD, *Washington University St. Louis*

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: Selina Silva, MD, *University of New Mexico*  
Steven Frick, MD, *Stanford University*

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

- 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*
- 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. Rajaei, 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: William J. Maloney, MD, *Stanford University*

9:05 am – 9:09 am

357 - Comparison of THA Outcomes Between Hemodialysis and Renal Transplant Patients  
*Seth Ahlquist, 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*

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: Todd Alamin, MD, *Stanford Hospital and Clinics*

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**

Moderators: 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

*Henry Hoang, BS, 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 – 12:00 pm Title TBD  
*John O’Meara, PhD, Chief Scientist, WM Keck Observatory, Kamuela, Hawaii*
- 12:00 am – 12:30 pm **Focused Lunch Presentation** (CME not available)

## **Rapid Fire Session 2A – Trauma**

Moderators: Jonathan G. Eastman, MD, *University of California, Davis*  
Geoffrey Marecek, MD, *Cedars-Sinai Medical Center*

- 12:35 pm – 12:39 pm 527 - Quantifying Perfusion Changes in Staged Fixation of Pilon Fractures  
*Pelle V. Wall, BA, University of California, San Diego*
- 12:39 pm – 12:43 pm 491 - The Effects of E-Cigarettes on Fracture Healing  
*Mark Prasarn, MD, The University of Texas Health Science Center at Houston*
- 12:43 pm – 12:47 pm 505 - Clinician-Integrated Optimization of Orthopaedic Trauma Implant Pricing  
*Michael J. Gardner, MD, Stanford University*
- 12:47 pm – 12:52 pm Discussion
- 12:52 pm – 12:56 pm 608 - Varus Malreduction Drives Cut-Out after Cephalomedullary Nailing of Intertrochanteric Fractures  
*Christian Gonzalez, BS, University of Reno, Nevada School of Medicine*
- 12:56 pm – 1:00 pm 654 - Is Regular Milk Consumption Associated with Lower Risks of Osteoporosis and Fracture?  
*Henry Hoang, BS, Montefiore Medical Center*
- 1:00 pm – 1:05 pm Discussion

## **Rapid Fire Session 2B – Arthroplasty - Outcomes**

Moderators: Jennifer van Warmerdam, MD, *Dignity Health*  
Erik N. Zeegan, MD, *University of California, Los Angeles*

- 12:35 pm – 12:39 pm 430 - Total Joint Arthroplasty after Solid Organ Transplant – Is it Safe?  
*James Lendrum, MD, MPH, University of Colorado*
- 12:39 pm – 12:43 pm 404 - Service Site Disparity for Total Joint Arthroplasty by Insurance Type  
*Chelsea Leversedge, MPH, University of California, San Francisco*
- 12:43 pm – 12:47 pm 475 - A PearlDiver Analysis of Two-Year Complication Rates After Patellofemoral Arthroplasty  
*Sean S. Rajaei, MD, MS, Cedars-Sinai Medical Center*
- 12:47 pm – 12:52 pm Discussion
- 12:52 pm – 12:56 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*
- 12:56 pm – 1:00 pm 599 - Surgeon-Built 3D Printed Bone Models for Planning Complex Arthroplasty  
*Max R. Haffner, MD, University of California, Davis Health*
- 1:00 pm – 1:05 pm Discussion

### **Rapid Fire Session 2C – Arthroplasty - Pain**

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

- 12:35 pm – 12:39 pm 183 - A Collaborative Multimodal Pathway Reduces Opioids after Total Hip and Knee Arthroplasty  
*Leah Esposito, BA, Oregon Health & Science University*
- 12:39 pm – 12:43 pm 248 - Repeat High-Dose Dexamethasone May Improve Recovery 48 Hours After Total Hip Arthroplasty  
*Brandon E. Lung, MD, University of California, Irvine*
- 12:43 pm – 12:47 pm 417 - Intraoperative Dexamethasone on Opioid Consumption After Total Joint Arthroplasty  
*Brandon Yoshida, University of Southern California*
- 12:47 pm – 12:52 pm Discussion

12:52 pm – 12:56 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*

12:56 pm – 1:00 pm 633 - Duloxetine for Postoperative Pain Control Following Knee and Hip Arthroplasty  
*Arad Talehakimi, MS, Kansas City University College of Osteopathic Medicine*

1:00 pm – 1:05 pm Discussion

### **Rapid Fire Session 2D – Foot & Ankle**

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

12:35 pm – 12:39 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*

12:39 pm – 12:43 pm 545 - Impact of Pre-Operative PROMIS Depression Scores on Total Ankle Replacement Outcomes  
*Daniel K. Moon, MD, University of Colorado School of Medicine*

12:43 pm – 12:47 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*

12:47 pm – 12:52 pm Discussion

12:52 pm – 12:56 pm 669 - Trends in Total Ankle Arthroplasty and Fusion for Tibiotalar Osteoarthritis  
*Noorulain Paracha, BS, Maimonides Medical Center*

12:56 pm – 1:00 pm 370 - Tantalum Spacer Augmentation in Hindfoot Arthrodesis of Large Bony Defects  
*Connor Delman, MD, University of California, Davis*

1:00 pm – 1:05 pm Discussion

### **Rapid Fire Session 2E – Spine**

Moderators: Nitin A. Bhatia, MD, *University of California, Irvine*



|                     |  |
|---------------------|--|
| 12:35 pm – 12:39 pm | 96 - Gender, Racial, and Ethnic Differences in the Utilization of Cervical Disc Replacement for Cervical Radiculopathy<br><i>Hai V. Le, MD, MPH, University of California, Davis</i> |
| 12:39 pm – 12:43 pm | 87 - Laminoplasty Versus Laminectomy with Fusion for Treating Cervical Spondylotic Myelopathy<br><i>Oussama Bakr, UC Davis School of Medicine</i>                                    |
| 12:43 pm – 12:47 pm | 546 - Reporting on Postoperative Complications in Pyogenic Spinal Infections using ACS-NSQIP<br><i>Sarah Oyadomari, BS, University of California, Irvine</i>                         |
| 12:47 pm – 12:52 pm | Discussion   |
| 12:52 pm – 12:56 pm | 701 - Socioeconomic Disparities in Pediatric Scoliosis Surgery<br><i>Zachary L. Boozé, BS, UC Davis School of Medicine</i>   |
| 12:56 pm – 1:00 pm  | 258 - Epidural Steroid Injection and Infection Risk Following Posterior Cervical Surgery<br><i>Tara Shelby, University of Southern California</i>                                    |
| 1:00 pm – 1:05 pm   | Discussion   |

### **Symposium 3 – Controversies in Primary Hip and Knee Arthroplasty**

Moderators: Adam A. Sassoon, MD, *University of California, Los Angeles*  
Robert Barrack, MD, *Washington University St. Louis*

### **Debate: “Navigating” Knee Replacements**

|                   |  |
|-------------------|--|
| 1:10 pm – 1:16 pm | All You Need is Conventional Instrumentation<br><i>Erik N. Hansen, MD, University of California, San Francisco</i> |
| 1:17 pm – 1:23 pm | Considerations when Using Accelerometry<br><i>Ryland P. Kagen, MD, Oregon Health &amp; Sciences University</i>     |
| 1:24 pm – 1:30 pm | Robotics is the Future<br><i>Erik N. Zeegan, MD, University of California, Los Angeles</i>                         |
| 1:31 pm – 1:37 pm | Questions and Discussion   |

### **Keynote Address**

|                   |  |
|-------------------|--|
| 1:38 pm – 1:47 pm | Robotics Fast Becoming the Standard for Unicompartamental Knee Replacement |
|-------------------|--|

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

**Debate: Using Dual Mobility Bearings**

1:48 pm – 1:54 pm

Everyone, Every Time

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

1:55 pm – 2:01 pm

Everything in Moderation

*Nathaniel D. Heckmann, MD, University of Southern California*

2:02 pm – 2:08 pm

Questions and Discussion

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

2:09 pm – 2:15 pm

Always Cement a Total Knee Arthroplasty

*Mark J. Spanghel, MD, Mayo Clinic Arizona*

2:16 pm – 2:22 pm

Cement Not Needed for Total Knee Arthroplasty

*Jeff R. Petrie, MD, Rothman Orthopaedics*

2:23 pm – 2:30 pm

Questions and Discussion

**Rapid Fire Session 3A – Basic Science**

Moderators: TBD

2:35 pm – 2:39 pm

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

*John P. Walsh, MD, Valley Hospital Medical Center*

2:39 pm – 2:43 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*

2:43 pm – 2:47 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*

2:47 pm – 2:50 pm

Discussion

2:50 pm – 2:54 pm

374 - Office Orthobiologics: Optimizing Your Results

*Thomas Grace, MD, Academy Orthopaedic Clinic*

2:54 pm – 2:58 pm

176 - The Long-Term Effects of Bupivacaine on the Mechanical Properties of Articular Cartilage Explants

*Dean Wang, MD, University of California Irvine*

2:58 pm – 3:02 pm                      621 - Mobile-Device Based 3D Scanning Accurately  
Detects Sarcopenia  
*Clayton Maschhoff, BS, Stanford University*

3:02 pm – 3:05 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*

2:35 pm – 2:39 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*

2:39 pm – 2:43 pm                      100 - The Effect of Marijuana Use on Surgical Site  
Infection  
*David Ruckle, MD, Loma Linda University*

2:43 pm – 2:47 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*

2:47 pm – 2:50 pm                      Discussion

2:50 pm – 2:54 pm                      704 - Association Between HgbA1c and Post-Operative  
Infections in Elective Hand Surgery  
*Meagan E. Womack, MD, UT Health San Antonio*

2:54 pm – 2:58 pm                      132 - Effect of CURES Legislation on Narcotic  
Prescriptions after Hand Surgery  
*Conor Spady, Loma Linda University*

2:58 pm – 3:02 pm                      59 - Safety and Efficacy of In-Office Hand Procedures  
*Brandon W. Knopp, BS, Florida Atlantic University*  
*Charles E. Schmidt College of Medicine*

3:02 pm – 3:05 pm                      Discussion

**Rapid Fire Session 3C – Trauma**

Moderators:    Michael J. Gardner, MD, *Stanford University*  
                      Jeffrey M. Nakano, MD, *Grand Junction Veterans Hospital*

- 2:35 pm – 2:39 pm 663 - High-Performance Outcome after Tibial Plafond Fracture: The Significant Factors  
*John C. Wheelwright, BS, University of Utah*
- 2:39 pm – 2:43 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*
- 2:43 pm – 2:47 pm 3 - Mortality or Conversion to Transfemoral Amputation Following Transtibial Amputation Risk  
*Liam H. Wong, BS, Oregon Health and Science University*
- 2:47 pm – 2:50 pm Discussion
- 2:50 pm – 2:54 pm 519 - Acetabular Morphology in Patients with Failed Femoral Neck Fracture Fixation  
*Tram L. Tran, MD, University of Arizona Phoenix/Banner University Medical Center*
- 2:54 pm – 2:58 pm 661 - Medullary Air Presence in Open Tibia Fractures Increases Amputation Risk  
*Heba Ahmad, BS, McGovern Medical School at UT Health Houston*
- 2:58 pm – 3:02 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*
- 3:02 pm – 3:05 pm Discussion

### **Rapid Fire Session 3D – Arthroplasty - Knee**

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

- 2:35 pm – 2:39 pm 98 - Staging Bilateral Total Knee Arthroplasties Reduces Alignment Outliers  
*Matthew A. Follett, MD, Stanford University Medical Center*
- 2:39 pm – 2:43 pm 451 - Resiliency and Immediate Post-Operative Impairment Following Unilateral and Bilateral TKA  
*Ryan T. Nguyen, BS, John A. Burns School of Medicine*
- 2:43 pm – 2:47 pm 65 - The Swing Deviation Index: Quantifying Golf Swing with Metrics Derivable from Wearable Sensors

*Joanne Zhou, MD, Stanford University*

2:47 pm – 2:50 pm

Discussion

2:50 pm – 2:54 pm

585 - Similar 20-Year Survivorship for Single and Bilateral Total Knee Arthroplasty  
*Christina Liu, MA, Mass General Brigham/Harvard Combined Orthopaedic Residency Program*

2:54 pm – 2:58 pm

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

2:58 pm – 3:02 pm

681 - Computer-Assisted Navigation in Simultaneous Bilateral Knee Arthroplasty  
*Anoop R. Galivanche, BS, Yale School of Medicine*

3:02 pm – 3:05 pm

Discussion

### **Rapid Fire Session 3E – Sports Medicine**

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

2:35 pm – 2:39 pm

436 - Accuracy of Needle Placement for Landmark Guided Intraarticular Glenohumeral Injections  
*Douglas W. Bartels, MD, Stanford University*

2:39 pm – 2:43 pm

471 - Anterior Cruciate Ligament Repair with Suture Tape Augmentation Demonstrates Poor Failure Rates in an Active-Duty Military Population.  
*Christian Cruz, MD, Tripler Army Medical Center*

2:43 pm – 2:47 pm

86 - Spin in Quadriceps Tendon ACL Reconstruction Research  
*Matthew Gulbrandsen, BS, University of Arizona*

2:47 pm – 2:52 pm

Discussion

2:52 pm – 2:56 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*

2:56 pm – 3:00 pm

240 - Patellar Resurfacing is Not Associated with Patella Baja in Total Knee Arthroplasty

*Kade S. McQuivey, MD, Mayo Clinic Arizona*

3:00 pm – 3:05 pm

Discussion

3:05 pm – 4:00 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: Felix “Buddy” Savoie III, MD, *Tulane University*  
Nitin N. Bhatia, MD, *University of California, Irvine*

- 9:10 am – 9:14 am                      694 - Will Orthopaedic Surgeons Survive without USMLE Step 1 Scores for Residency Savioe/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*
- 9:18 am – 9:22 am                      583 - Critical Care Gaps in Management of Osteoporosis in Male Patients  
*Christina Liu, MA, Mass General Brigham/Harvard Combined Orthopaedic Residency Program*
- 9:22 am – 9:27 am                      Discussion
- 9:27 am – 9:31 am                      598 - Coronavirus: A New "Virtual" Era of Resident Didactics  
*Harin B. Parikh, MD, Cedars-Sinai Medical Center*
- 9:31 am – 9:35 am                      212 - Social Media in Orthopedic Surgery: Perspectives from Residency Applicants  
*Joseph Brinkman, MD, Mayo Clinic Arizona*
- 9:35 am – 9:40 am                      Discussion

### **Rapid Fire Session 4B – Pediatrics**

Moderators: Kali Tileston, MD, *Stanford University*

- 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: Todd Alamin, MD, *Stanford University*

- 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**

Moderators: Cynthia M. Kelly, MD, *OrthoOne*  
Raffi S. Avedian, MD, *Stanford Medicine*



- 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 Erik J. Geiger, 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*
- 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<br><i>Lisa A. Taitzman, MD, MPH, University of Washington</i>              |
| 11:40 am – 11:55 am | AAOS Report<br><i>Felix “Buddy” Savoie III, MD, Tulane University, President, AAOS</i> |
| 11:55 am – 12:25 pm | <b>Focused Lunch Presentation</b> (CME not available)                                  |

### **Rapid Fire Sessions 5A – Sports Medicine**

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

|                     |   |
|---------------------|---|
| 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<br><i>Justin Chan, MD, University of California, Irvine</i> |
| 12:34 pm – 12:38 pm | 660 - Do Revision Rates Differ Between Cemented and Cementless Total Knee Arthroplasty?<br><i>Alan K. Li, BS, David Geffen School of Medicine at University of California, Los Angeles</i>                  |
| 12:38 pm – 12:42 pm | 68 - Evaluation of Pre-Operative Imaging for Cam-Deformity in Femoroacetabular Impingement<br><i>Jonathan C. Horng, MD, University of Hawaii</i>  |
| 12:42 pm – 12:47 pm | Discussion  |
| 12:47 pm – 12:51 pm | 538 - Sex Differences in Patellar Anatomy and Development<br><i>Kirsten N. Norrell, MD, Stanford University</i>   |
| 12:51 pm – 12:55 pm | 582 - Minimum 2-Year Outcomes of Endoscopic Proximal Hamstring Repair<br><i>Trevor Shelton, MD, MS, The Steadman Clinic</i>   |
| 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 Donor Award**  
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: Mark J. Spanghel, MD, *Mayo Clinic Arizona*  
Adam A. Sassoon, MD, *University of California, Los Angeles*

12:30 pm – 12:34 pm 79 - Supine Knee Positioning does not Interfere with Mobile Bearing UKA Performance  
*John C. Bonano, 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*

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. Zeegan, 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<br><i>Mary C. Hamati, MD, University of Colorado</i>                   |
| 12:34 pm – 12:38 pm | 52 - Effects of Demographic and Socioeconomic Factors on Clubfoot Relapse Treatment<br><i>Kali R. Tileston, MD, Stanford University</i>                                 |
| 12:38 pm – 12:42 pm | 401 - Compression of a Midfoot Osteotomy using a Circular External Fixator: What is the Ideal Pin Configuration?<br><i>Tyler R. Freeman, MD, University of Colorado</i> |
| 12:42 pm – 12:47 pm | Discussion  |
| 12:47 pm – 12:51 pm | 443 - Dynamic Nitinol Compression vs. Static Compression in Tibiotalocalcaneal Nail Fusion<br><i>William H. Ip, MD, University of California, Davis</i>                 |
| 12:51 pm – 12:55 pm | 210 - Treatment of Moderate to Severe Hallux Valgus without Osteotomy or Arthrodesis<br><i>David G. Deckey, MD, Mayo Clinic Arizona</i>                                 |
| 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 | Title TBD<br><i>Speaker TBD</i> |
|--------------------|---------------------------------|

### **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<br><i>Gregory A. Lundeen, MD, Reno Orthopedic Center</i>  |
| 1:11 pm – 1:17 pm | Percutaneous Surgical Treatment<br><i>Christian K. Kikuchi, MD, Orthopedic Associates Hawaii</i>                        |
| 1:18 pm – 1:24 pm | What About Closed Treatment with Functional Rehab<br><i>Christopher D. Kreulen, MD, University of California, Davis</i> |
| 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 Donor Award**  
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 Donor Award**  
642 - Return to Sport for Anterior Tethering vs. Posterior  
Spinal Fusion  
*Hao-Hua Wu, MD, University of California, San Francisco*
- 2:47 pm – 2:53 pm                      **Kimberly Furry, MD Donor Award**  
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 Donor Award**  
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 Donor Award**  
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 Donor Award**  
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 Donor Award**  
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 Donor Award**  
241 - Should Medicare Surgeon Reimbursement for Arthroplasty Be Risk-Adjusted for Patient Complexity?  
*Jack M. Haglin, BS, 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  
*Lauren A. Shapiro, MD, University of California, San Francisco*
- 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  
*Robin N. Kamal, MD, Stanford University*
- 8:00 am – 8:29 am **Special Session 3**  
**Measuring Patient-Reported Outcomes: A Necessary Step in a Value-Driven World** (CME not available)  
Robin N. Kamal, MD, *Stanford University*
- Panel: *Jay R. Lieberman, MD, University of Southern California*  
*Nitin A. Bhatia, MD, University of California, Irvine*  
*Felix “Buddy” Savoie III, MD, Tulane University*
- 8:30 am – 9:00 am **Focused Breakfast Presentation** (CME not available)
- Rapid Fire Session 6A – Trauma**  
Moderators: Milton T. M. Little, MD, *Cedars Sinai Medical Center*  
Michael J. Gardner, MD, *Stanford University*
- 9:05 am – 9:09 am 275 - Periprosthetic Distal Femur Fractures: What is Too Distal to Nail?  
*Noelle L. Van Rysselberghe, MD, Stanford University*
- 9:09 am – 9:13 am 391 - Fixation of Extra-Articular Proximal Tibia Fractures: Biomechanical Comparison of Single and Dual-Implant Constructs

*Wilson C Lai, MD, University of California, Irvine Medical Center*

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 3**

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

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*

9:28 am – 9:35 am

Discussion

### **Rapid Fire Session 6C – Spine 4**

Moderators: Nitin N. Bhatia, MD, *University of California, Irvine*

- 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 3**

**Moderators:** Meghan N. Imrie, MD, *Stanford Children's Health*

- 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 2**

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

- 9:05 am – 9:09 am                      379 - Biomechanical Evaluation of the Elbow Medial Ulnar Collateral Ligament Stretching and Recovery  
*Thay Q. Lee, PhD, Orthopaedic Biomechanics Laboratory, Congress Medical Foundation*
- 9:09 am – 9:13 am                      104 - Efficacy of Thread Carpal Tunnel Release in Workers' Compensation Patients  
*Erik B. Gerlach, MD, Northwestern University*
- 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  
*Joseph J. Bigham, BS, University of Washington*
- 9:24 am – 9:28 am                      483 - Platelet Rich Plasma Augmentation of Surgical Treatment of Lateral Epicondylitis  
*Christopher S. Frey, MD, Stanford University*
- 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                      Title TBD  
*Speaker TBD*
- 9:35 am – 10:00 am                      Break – Please visit Exhibits

### **General Session 5 – WOF Endowed Resident and Fellows Awards**

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

- 10:00 am – 10:06 am                      209 - Spinoplevic Deformity is Associated with Femoral Retroversion in THA  
*David G. Deckey, MD, Mayo Clinic Arizona*
- 10:06 am – 10:12 am                      13 - High Energy Pilon Fractures Result in Significant Tibia and Talus Chondrocyte Cell Death  
*Graham J. DeKeyser, MD, University of Washington*

- 10:12 am – 10:18 am      363 - Loose Body vs. Trochlear Biopsy MACI Outcomes in Pediatric Patients  
*Connor Delman, MD, University of California, Davis*
- 10:18 am – 10:24 am      493 - Blood Flow Restriction Training Following ACL Reconstruction in Collegiate Athletes  
*Sai K. Devana, MD, University of California, Los Angeles*
- 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?  
*Ashish Mittal, MD, San Francisco Orthopaedic Residency Program*
- 10:36 am – 10:42 am      203 -Machine Learning-Driven Prediction of Perioperative Complications After Instrumented Lumbar Fusion  
*Akash A. Shah, MD, University of California, Los Angeles*
- 10:42 am – 10:48 am      34 - Immune Checkpoint Upregulation in Periprosthetic Joint Infection  
*Shay Warren, MD, Stanford University*
- 10:48 am – 10:54 am      400 - Bacteria Do Not Acquire Resistance Across Stage of Re-Implantation or Number of Spacers  
*Joanne Zhou, MD, Stanford University*
- 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  
*Peter N. Chalmers, MD, University of Utah*
- 11:11 am – 11:20 am      Biologics in Rotator Cuff Surgery  
*C. Benjamin Ma, MD, University of California, San Francisco*
- 11:21 am – 11:30 am      Tendon Transfers  
*Reza Omid, MD, University of Southern California*
- 11:31 am – 11:40 am      Subacromial Spacers  
*Michael T. Freehill, MD, Stanford University*
- 11:41 am – 11:50 am      Superior Capsular Reconstructions

*Thomas J. Noonan, MD, University of Colorado*

11:51 am – 12:00 pm

Reverse Total Shoulder Arthroplasty  
*Jason E. Hsu, MD, University of Washington*

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**

Moderators: William J. Maloney, MD, *Stanford University*  
Jay R. Lieberman, MD, *University of Southern California*

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

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                      190 - Should MELD Scores Be Used to Guide Hip Fracture Treatment?  
*Peter P. Hsiue, 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<br><i>Brendan Y. Shi, MD, University of California, Los Angeles</i>             |
| 1:18 pm – 1:22 pm                    | 318 - Impact of Modern Plasma Technology on Biofilm Eradication in Revision Arthroplasty<br><i>Moritz J. Sharabianlou Korth, MD, Stanford University</i>                        |
| 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<br><i>Joanne Zhou, MD, Stanford University</i>                                  |
| 1:31 pm – 1:35 pm                    | 226 - National Trends In Lumbar Disc Replacement from 2010 to 2019<br><i>Alex Upfill-Brown, MD, MSc, David Geffen School of Medicine, University of California, Los Angeles</i> |
| 1:35 pm – 1:40 pm                    | Discussion  |
| <b>Rapid Fire Session 7D – Spine</b> |   |
| Moderators: TBD                      |   |
| 1:10 pm – 1:14 pm                    | 250 - Refracture Rate in Osteoporotic Compression Fractures<br><i>Emily S. Mills, MD, University of Southern California</i>   |
| 1:14 pm – 1:18 pm                    | 445 - The Learning Curve in Robotic-Assisted Pediatric Spine Surgery<br><i>Graham Albert, MD, University of Colorado Orthopedic Residency Program</i>                           |
| 1:18 pm – 1:22 pm                    | 541 - Osteoporosis and Outcomes in Patients Undergoing Adult Spinal Deformity Surgery<br><i>Max R. Haffner, MD, University of California, Davis Health</i>                      |
| 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<br><i>Jennifer Alter Bell, MD, University of Southern California</i>  |
| 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**

Moderators: Michael F. Githens, MD, *Harborview Medical Center*  
Julius A. Bishop, 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)