
Biomechanics as Basis for New Design in THA

Thursday 11 Oct, 7:30AM - 9:00AM

Podium | Floor: Third | Room: Whittle

Moderators: Justin Cobb, Christina Esposito

- 7:31 **The Soft-Tissue Envelope Around the Hip: Effects of Surgical Approach and Technique**
[Richard van Arkel](#)
- 7:38 *Discussion*
- 7:41 **Effect of Head Size on the Mechanical and Tribological Performance of Metal-on-Polyethylene Bearings, Under Conditions of Adverse Surgical Positioning and Edge Loading**
[Mazen Al-Hajjar](#); Louise M. Jennings; Sophie Williams; Jonathan Thompson; Graham Isaac; John Fisher
- 7:47 **The in Vivo Measured Temperature Increase in Total Hip Joint Replacement During Level Walking**
[Philipp Damm](#); Alwina Bender; Joern Dymke; Georg Duda
- 7:53 **Hip Capsule Biomechanics After Arthroplasty - the Effect of Approach, Implant and Surgical Repair**
[Kartik Logishetty](#); Richard van Arkel; K. C. Geoffrey Ng; Sarah Muirhead-Allwood; Justin Cobb; Jonathan Jeffers
- 7:59 *Discussion*
- 8:05 **Determinants of Total Hip Prostheses Stability-Related Success: The Role of Load-Bearing Surfaces Materials on Hip Capsule Thickness**
Laurent Sedel; Pascal Bizot; [Guillaume Odri](#); Jean Denis Laredo; Jean Michel Sverzut; Julien Sanchez
- 8:11 **Comparing the Deformation in the Cup of a Novel Ceramic Hip Resurfacing to a Metal Standard After Implantation in a Cadaveric Model**
Adam Farrier; William Manning; [Lauren Moore](#); Carolina Avila; Simon Collins; Jim Holland
- 8:17 **What's Behind Acetabular Impingement: An in Vitro Study**
[Fabio Riva](#); Stefano Meneghello; Chiara Celso; Ryan Siskey; Emanuele Buttazzoni; Steven Kurtz; Michele Pressacco
- 8:23 *Discussion*
- 8:29 **Lumbar Spine Degeneration and Flatback Deformity Alter Sitting-Standing Spinopelvic Mechanics - a Detailed Analysis of Segmental Spinal Alignment Change**
[Aaron Buckland](#); Zlatan Cizmic; Peter Zhou; Leah Steinmetz; David Ge; Christopher Varlotta; Nicholas Stekas; Nicholas Frangella; Dennis Vasquez-Montes; Virginie Lafage; Renaud Lafage; Peter G. Passias; Themistocles S. Protopsaltis; Jonathan Vigdorichik
- 8:35 **Statistical Shape Model of the Pelvis to Drive Secondary Initial Acetabular Fixation Design**
[Adam Shallenberg](#)
- 8:41 **Does a Close to Native Anatomy Prosthetic Hip Restoration Improves Functional Scores and Gait?**
Cedric Maillot; [Charles Riviere](#); Edouard Auvinet; Justin Cobb
- 8:47 **The Fate of Sagittal Alignment and Femoral Filling in Tapered Cementless Stems in Total Hip Arthroplasty**
[Eduardo Garcia-Rey](#); Eduardo Garcia-Cimbrello; Rafael Carbonell
- 8:53 *Discussion*

New Insights in Anatomy & Biomechanics of the Knee

Thursday 11 Oct, 7:30AM - 9:00AM

Podium | Floor: Third | Room: Fleming

Moderators: Peter Walker, Jan Victor

- 7:31 **Advanced Biomechanical Testing of Native Joints**
[Scott Banks](#)
- 7:38 *Discussion*
- 7:41 **Poor Relationship Between Femorotibial and Trochlear Anatomic Parameters**
Cedric Maillot; [Charles Riviere](#); Catherine Van Der Straeten; Edouard Auvinet; Justin Cobb
- 7:47 **Robotic Evaluation of the Patellofemoral Envelope of Motion**
[Marc Bandj](#); Alexandra Oswald; Eik Siggelkow
- 7:53 **Gait Analysis of Individuals With Isolated Posterior Cruciate Deficiency**
[Katrijn Smulders](#); Paul Van Rensch; Ate Wymenga; Petra Heesterbeek; Brenda Groen
- 7:59 *Discussion*
- 8:05 **Can the Quality of Proximal Tibial Bone Be Predicted From Cortical Measurements Derived From Plain Radiograph?**

Ryan Blackwell; Scott Mathis; Hayden Smiley; [Sabir Ismaily](#); Philip Noble

- 8:11 **Relationship Between Coronal and Rotational Alignments of the Lower Extremity in Patients With Valgus Osteoarthritic Knees**
Seung-Baik Kang; Moon Jong Chang; Chong Bum Chang; Chan Yoon; Whang Kim; Joung Youp Shin; [Dong Whan Suh](#); Jong Byung Oh; Su Jin Kim; Soo Hee Choi; Su Jin Kim; Hye Su Baek
- 8:17 **Understanding the Pathological Changes of Varus Knee on MRI Can Lead to a Better Algorithm to Balance the Knee**
Feras Haidar; [Samih Tarabichi](#); Amr Osman; Mohamed Elkabbani; Tamer Mohamed
- 8:23 *Discussion*
- 8:29 **A Robotic Based Analysis of Human Cadaveric Knees to Determine Influences of Soft Tissues on Joint Laxity**
[Dario Denzler](#); Dominic Mueller; Bernd Heinlein; Adrian Gomez Diaz; Peter Koch; Samuel Blatter; Christoph Hartog
- 8:35 **the Morphological Appearance of the Posterior Cruciate Ligament After Cruciate Retaining Total Knee Arthroplasty**
[Hidetaka Higashi](#); Ryutaku Kaneyama; Hideaki Shiratsuchi; Kazuhiro Oinuma; Yoko Miura; Tatsuya Tamaki; Taisi Ninomiya
- 8:41 **A Robot Study on Mobile Bearing TKA Laxities and Kinematics***
[Eik Siggelkow](#); Marc Bandi; Iris Blatter
- 8:47 **The Effect of Posterior Condyle Sizing on Extension in Total Knee Arthroplasty**
[Keat Ooi](#); Andrei Diacon; Sam Bewsher
- 8:53 *Discussion*

Computational Modeling Driving Innovation in TJA

Thursday 11 Oct, 7:30AM - 9:00AM

Podium | Floor: Second | Room: Gielgud

Moderators: William Walter, Edouard Auvinet

- 7:31 **Determining the Effect of Device Implantation on Bone Strains Using 2D and 3D Imaging**
[Martin Browne](#)
- 7:38 *Discussion*
- 7:41 **Accuracy of Density-Modulus Relationships Used in Finite Element Modeling of the Shoulder**
Nikolas K Knowles; G. Daniel G. Langohr; Mohammadreza Faieghi; Andrew Nelson; [Louis Ferreira](#)
- 7:47 **Generation of Anatomic Shapes With Prescribed Features From Statistical Shape Models Using Machine Learning**
[Bryan Kirking](#); Alex Drew; Jonathan Wood; Kevin Dodd
- 7:53 **Validation of a Statistical Shape Model for Acetabular Bone Defect Analysis**
[Georg Hettich](#); Ronja Schierjott; Christoph Schilling; Allan Maas; Heiko Ramm; Matthias Bindernagel; Hans Lamecker; Thomas M. Grupp
- 7:59 *Discussion*
- 8:05 **AI Generated 3D Point Cloud Representations of the Humerus**
[Bryan Kirking](#); Alex Drew
- 8:11 **Variations in the Mechanical Properties of Humeral Trabecular Bone: Towards Improving Computational Models of the Humerus**
[Nikolas K Knowles](#); Jonathan Kusins; Melanie Columbus; George Athwal; Louis Ferreira
- 8:17 **Assessing Hip Separation and Instability Using a Validated Forward Solution Model**
[Manh Ta](#); Michael LaCour; Adrija Sharma; Richard Komistek
- 8:23 **Low Cost Hip Replacement Bearing Mechanics Tool for Device Design and Optimisation: Mathematical Prediction of Separation**
[Lee Etchels](#); Lin Wang; Mazen Al-Hajjar; Sophie Williams; Jonathan Thompson; John Fisher; Ruth Wilcox; Alison Jones
- 8:29 *Discussion*
- 8:35 **Forward Solution Modeling to Analyze Normal and Abnormal Knees With Deformities**
Milad Khasian; Ian Zeller; [Adrija Sharma](#); Jarrod Nachtrab; Richard Komistek
- 8:41 **Comparison of Conventional Versus Kinematic Alignment Technique for Mobile Bearing UKA: An in-Silico Study**
Cedric Maillot; Charles Riviere; [Edouard Auvinet](#); Justin Cobb
- 8:47 **Effects of TKR Alignment, Implant Design and Patient Pre-Operative Alignment on Post-Operative Proximal Tibia Strain**
Alessandro Navacchia; Irene Sintini; [Chadd Clary](#); Paul J. Rullkoetter
- 8:53 *Discussion*

Positioning Technology in THA: Are we getting any closer?

Thursday 11 Oct, 9:00AM - 10:00AM

Podium | Floor: Third | Room: Whittle

Moderators: Fares Haddad, Ferdinando Rodriguez Y Baena

- 9:01 **Acetabular Orientation Changes Throughout the Intervention of THA**
Derek T. Schloemann; Adam Edelstein; [Robert Barrack](#)
- 9:08 *Discussion*
- 9:11 **Robot Assisted Positioning of THA Components**
[Bernard Stulberg](#)
- 9:18 *Discussion*
- 9:21 **Outcomes and Complications of Computer-Assisted Surgery in Total Hip Arthroplasty Utilizing a Nationwide Surgical Database**
Ronald Delanois; Nicole E. George; [Randa Elmallah](#); Jennifer I. Etcheson; Chukwuweike U. Gwam; John M. Tarazi; Benjamin M. Stronach
- 9:27 **Utility of Mechanical Cup Alignment Device Based on Functional Pelvic Plane in Supine Total Hip Arthroplasty**
[Satoshi Nakasone](#); Masato Ishihara; Hiroyuki Taira; Mika Takaesu; Yoshihide Miyata; Fuminori Kanaya
- 9:33 *Discussion*
- 9:37 **Modifications of the Global Sagittal Alignment After Total Hip Arthroplasty: An EOS Evaluation**
[Youngwoo Kim](#); Jean Yves Lazennec; Jihane Hani; Dominique Folinai; Aidin Eslam Pour
- 9:43 **Accurate Acetabular Cup Placement in Total Hip Arthroplasty Comparison of an Optical Navigation System and Inertial Measurement Unit**
[Rosaleen McKenna](#); Daniel Marsden-Jones; William Walter
- 9:49 **Accuracy of Patient Specific Instruments (PSI) in 8 Total Hip Arthroplasties (THA) Through Direct Anterior Approach (DAA): Cadaver Study Results**
[Alexander Zembisch](#); Stefan Dittrich; Silke Dorsch
- 9:55 *Discussion*

Advances in Fixation in TKA

Thursday 11 Oct, 9:00AM - 10:00AM

Podium | Floor: Third | Room: Fleming

Moderators: Patrick Meere, Arun Mullaji

- 9:01 **Additive Manufactured Push-Fit Implant Fixation**
[Jonathan Jeffers](#)
- 9:08 *Discussion*
- 9:11 **Can Bone Debris Impede the Seating of Cementless Tibial Trays?**
Hugh Jones; Rikin Patel; Jonathan Gold; [Philip Noble](#)
- 9:17 **Does Implant Fixation Affect Patient Satisfaction in Early Follow-Up of Primary Total Knee Arthroplasty?**
Ajay Rastogi; Kristin Robinson; [Kipling P. Sharpe](#); Russell Cohen; Michael A Masini; Marcus Barnett
- 9:23 **Enhanced Bone Fixation of TKA Tibial Tray Implants With TiO₂ Nanotubes**
[Daniel Justin](#); Young S. Ngyuen; William Walsh; Matt Pelletier; Craig R. Friedrich; Erin Baker; Sungho Jin; Clyde Pratt
- 9:29 *Discussion*
- 9:35 **Loading History Impacts Stability Evaluation of Cementless Knees**
[Jeffrey Bischoff](#); John Kyle Mueller
- 9:41 **Full Activity Micromotion Testing Creates Different Results Than Single Point Loading**
[Fred Wentorf](#); John Kyle Mueller; Charlie Parduhn; Eik Siggelkow; Brian Roach; Marc Bandi
- 9:47 **Effects of Material Model and Implantation on Micromotions Finite Element Analysis of Tibial Component of Primary Total Knee Arthroplasty**
Mauricio Cruz Saldivar; [Thomas Anjls](#); Nico Verdonschot; Dennis Janssen
- 9:53 *Discussion*

Biocompatibility & Mechanobiology

Thursday 11 Oct, 9:00AM - 10:00AM

Podium | Floor: Second | Room: Gielgud

Moderators: Brigitte Von Rechenberg, Peter Dubrue

- 9:01 **CAM Assay Assessment of Reactions to Various Particulate Debris**
[Gwen Sys](#)
- 9:08 *Discussion*
- 9:11 **Endotoxins That Attached to UHMWPE Particle Surface Induced Higher Level of Inflammatory Cytokines Due to Increased Presence of Particles Around Macrophages in Vitro**

[Weiqi Shen](#); Takuma Sugino; Miho Niikura; Naohide Tomita

- 9:17 **What Happened? Extreme Delamination and Oxidation in Modern Day Compression Molded Polyethylene**
[Lydia Weitzler](#); [Brian Nickel](#); [Christina Esposito](#); Madeline Lang; Douglas E Padgett; Timothy Wright
- 9:23 **Mechanobiology Based Microscale Study of Influence of Surface Texture Design on Peri-Acetabular Bone Ingrowth**
[Rajdeep Ghosh](#); Souptick Chanda; Debabrata Chakraborty
- 9:29 *Discussion*
- 9:35 **Compounded PEEK-Sintered Silicon Nitride Composite Exhibits Enhanced Osteoconductivity and Resistance to Biofilm Formation**
[Ryan Bock](#); Giuseppe Pezzotti; Wenliang Zhu; Elia Marin; Alfredo Rondinella; Francesco Boschetto; Bryan McEntire; B. Sonny Bal
- 9:41 **Resistance of a Novel Ceramic Acetabular Cup to Critical Impact Loads**
Carolina Avila; Andy Taylor; [Simon Collins](#)
- 9:47 **Response Profiles of Circulating Leukocytes and Metal Ions in Patients With a Modular Dual Mobility Hip Implant**
[David Markel](#); Therese Bou-Akl; Mario Rossi; Natalie Pizzimenti; Bin Wu; Weiping Ren
- 9:53 *Discussion*

New Insights in Anatomy & Biomechanics of the Hip

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 1

Moderators: Jean-Yves Lazennec, Geoffrey Ng

- 10:20 **Pre-Operative Assessment of the Variation in Supine to Standing Pelvic Tilt Using CT and Standing Lateral Imaging**
[David Markel](#); Thomas McCarthy; Ahmad Faizan; Jim Nevelos; Joseph Peter Nessler
- 10:26 **Quantification of the Dorr Classification System**
[Tyler Goldberg](#); Andrea Torres; Jared W. Bush; Michael J Mahometa
- 10:32 **Native Femoral Version in a Total Hip Replacement Population**
[Stefan Kreuzer](#); Jim Pierrepont; Catherine Stambouzou; Len Walter; Ed Marel; Michael Solomon; Andrew Shimmin; Stephen McMahon; Jonathan Bare
- 10:38 **Sex Differences in Femoral Morphology in Patients With Developmental Dysplasia of the Hip Undergoing Arthroplasty**
Oliver Boughton; [Keisuke Uemura](#); Kazunori Tamura; Masaki Takao; Hidetoshi Hamada; Justin Cobb; Nobuhiko Sugano
- 10:44 **Does Muscle Atrophy Correlate With Muscle Weakness in Unilateral Hip Disease?**
[Kazunori Tamura](#); Masaki Takao; Hidetoshi Hamada; Takashi Sakai; Nobuhiko Sugano
- 10:50 **Iliopsoas Pressures After Standard Total Hip Replacement**
Hugh Jones; Ryan Blackwell; Angela Chun; Sabir Ismaili; Ryan Kim; Christopher Lenherr; Daniel Le; [Philip Noble](#)
- 10:56 **Modern Press-Fit Stem Design Concept Better Allows Surgeons to Recreate Patient Biomechanics**
Geoffrey H Westrich; Kyle Swanson; Alice Cruz; Candice Kelly; [Alana Levine](#)

THR - Clinical Results of Short Stems

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 2

Moderators: Mark Wilkinson, Christina Esposito

- 10:20 **Implantation of Short Stem Hip Prosthesis Type Aida Using a Minimally Invasive Anterolateral Approach: Intermediate Term Clinical and Radiological Results.**
[Mohamed Elkabbani](#); M. A. El-Sayed; Samih Tarabichi; Anas Saleh Malkawi; Michael Schulte
- 10:26 **Novel Hip Stem Designed for Direct Anterior THA Demonstrates Encouraging Outcomes and Low Device Related AE Rate at 90 Days**
Tammy ODell; [J. Bohannon Mason](#); William P Barrett; Sean Croker
- 10:32 **Clinical and Radiographic Outcomes of Minimally Invasive Anterolateral THA Using a Short Femoral Stem in Japanese Patients**
[Toshie Sasaki](#); Takao Kodama; Hiroki Okai
- 10:38 **Comparison of Patient Reported Outcomes in Neck-Preserving Short-Stem Implant vs. Conventional Neck-Sacrificing Implant**
[Stefan Kreuzer](#); Stefany Malanka; Amir Pourmoghaddam; Marius Dettmer
- 10:44 **MiniHip Femoral Stem: A Multi-Centre, Prospective, Observational Study**
Ciara Harman; Irrum Afzal; David Shardlow; Mark Mullins; Jonathan Hull; Fadhil Kashif; [Richard Field](#)
- 10:50 **AMiStem Can Mostly Preserve the Short External Rotators. - Preoperative Planning for the Stem Insertion in DAA-THA-**
[Toshihiro Seki](#); Hiroshi Tanaka; Hiroyoshi Ogasa; Atsunori Tokushige; Kazushige Seki; Takashi Imagama; Toshihiko Taguchi
- 10:56 **Results of Short Stem Hip Prostheses as a Conservative Hip Arthroplasty**
[Mohamed Elkabbani](#); M. A. El-Sayed; Samih Tarabichi; Michael Schulte
- 11:02 **Early-Mid Term Results of a Cementless Short Hip Stem Prosthesis**

THR - Clinical Results 1

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 3

Moderators: David Stulberg, Keith Tucker

- 10:20 **Cementless Total Hip Replacement With a Lateral Flare Stem: An Average of 15 Years Follow Up of a Previously Reported Case Series**
[Yasushi Oshima](#); Joseph Fetto
- 10:26 **Investigation of the Correlation Between Preoperative Bone Density and Clinical Outcomes at 2 Years Follow-Up Following Cementless Total Hip Arthroplasty**
[Sariali Elhadi](#); Quentin Grimal
- 10:32 **Clinical Results of Total Hip Arthroplasty for the Rheumatoid Arthritis Patients.**
[Natsuo Konishi](#); Hitoshi Kubota; Hiroaki Kijima; Tetsuya Kawano; Yoichi Shimada
- 10:38 **Post Marketing Trial Results of Total Hip Replacement Using Mp_1**
James Burn; [Alisa Buchman](#); Simha Sibony; Ray Payne
- 10:44 **Investigation of the Factor That Advanced Opposite Initial Hip Arthrosis to End-Stage Hip Arthrosis After One-Sided Total Hip Arthroplasty (THA) in Patients With Bilateral Sublux Hip Arthropathy**
[Hiroki Nomura](#); Masaaki Maruyama
- 10:50 **Minimum 12-Year Follow-Up and Revision Rate Following Metal on Metal (MoM) Hip Arthroplasty.**
[Mohamed Fagir](#); Muhammed Umar; Qasim Malik; Steven Kershaw; Keith Barnes; Syam Morapudi
- 10:56 **Long Term Results of Metal on Metal Hip Arthroplasty in Younger Patients (<55 Yrs)**
[Mohamed Fagir](#); Muhammed Umar; Qasim Malik; Steven Kershaw; Keith Barnes; Syam Morapudi
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New Insights in Anatomy & Biomechanics of the Knee

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 4

Moderators: Peter Walker, Jacqueline Simon

- 10:20 **Passive Ligament Tension in Natural Knees -20 25 N on Each Side Are Enough to Achieve Stability**
[Thomas Paszicsnyek](#); Bernardo Innocenti
- 10:26 **Effect of an Internal Unloading Implant on Tibiofemoral Joint Stress: Simulation of Cartilage Defects**
[Rajshree Hillstrom](#); Oliver J Morgan; S. Robert Rozbruch; Austin T Fragomen; Anil Ranawat; Howard Hillstrom
- 10:32 **Femoral Stress Fractures at Tracker of Computer Navigated Total Knee Replacement and Minimally Invasive Plate Osteosynthesis**
[Kodali Siva Rama Krishna Prasad](#); Rakesh Kumar; Ajay Sharma; Kyriakos Karras
- 10:38 **What Factor Decides the Posterior Slope Angle of the Tibial Articular Surface?**
Ryuji Nagamine; Makoto Kawasaki; [Weijia Chen](#); Mitsugu Todo; Yuan Ma; Keitaro Yamamoto; Toru Suguro
- 10:44 **Evaluation of Proximal Tibia Bone Quality With Teriparatide Administration by Computed Tomography Number**
[Takafumi Shimazaki](#); Syuya Ide; Yohsuke Matsumura; Masaaki Mawatari
- 10:50 **Pre-Operative Anatomy and Its Correlation to Intra-Operative Knee Laxity and Patient Outcome in Total Knee Arthroplasty**
Edgar Wakelin; [Joshua Twiggs](#); Brett Fritsch; Brad Miles; David Liu; Andrew Shimmin
- 10:56 **Numerical Analysis of the Knee Cartilage With Resultant Joint-Line Obliquity**
[Masaru Higa](#); Hiroshi Nakayama; Shinichi Yoshiya
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TKR - Anatomy & Biomechanics

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 5

Moderators: Scott Banks, Matthew Teeter

- 10:20 **Examination of the Relationship Between the Axial CT Shape of Distal Femoral Condyle Osteotomy and the Implant Shape in Total Knee Arthroplasty**
[Hiroki Nomura](#); Masaaki Maruyama
- 10:26 **Predisposing Factors for Patellofemoral Arthritis and Their Correction After Patellofemoral Arthroplasty**
[Mo Saffarini](#); Marco Valoroso; Giuseppe La Barbera; Cecile Toanen; Gerjon Hannink; Luca Nover; David Dejour
- 10:32 **What Is the Prevalence of Femoral Component Overhang in Total Knee Arthroplasty?**
[Emily Hampf](#); Ronald Connors-Ehler; Ormonde Mahoney
- 10:38 **Accuracy of Tibial Slope Estimation in Total Knee Arthroplasty**

[Mark S. Meyer](#); George Chimento; Bradford Waddell; J. Lockwood Ochsner; Conner Ojard

- 10:44 **External Rotation of the Femoral Component Increases Asymmetry of the Posterior Condyles**
[Mo Saffarini](#); Michel Bonnin; Luca Nover; Gerjon Hannink; Jan Victor
- 10:50 **Tibial Bone Density Changes Following TKA: What Can We Learn From DEXA Studies?**
[Thomas Anjls](#); Dennis Janssen; Nico Verdonshot
- 10:56 **Comprehensive Femoral Component Fit Assessment on Mediolateral Overhang and Sulcus Restoration**
[Yifei Dai](#); Georgios Papantonakis; Sjoerd Kolk; Danielle Beski; Laurent Angibaud
- 11:02 **Changes in Bone Mineral Density of Both Proximal Femurs After Total Knee Arthroplasty**
[Kunyoung Park](#)
- 11:08 **Effect of Soft Tissue Constraints and Component Alignment on the Kinematics and Wear of Total Knee Replacements**
[Helena Johnston](#); Abdellatif Abdelgaied; Hemant Pandit; John Fisher; Louise M. Jennings

TKR - Biomechanics & Kinematics

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 6

Moderators: Jan Victor, William Walter

- 10:20 **Comparison of Contact Pressure on the Anterior Aspect of the Knee During Kneeling Between Volunteers and Postoperative Patients.**
[Kunihiko Watamori](#); Tatsuhiko Kutsuna; Hiromasa Miura; Kazunori Hino; Hiroshi Kiyomatsu
- 10:26 **Analysis of a Custom Tibial Insert to Improve Functional Outcomes Following Total Knee Arthroplasty**
Miriam Chaudhary; [Orhun Muratoglu](#); Kartik Mangudi Varadarajan
- 10:32 **Sagittal Stability of Medial Pivot Total Knee Arthroplasty Compared to Other Implant Designs**
[Rosaleen McKenna](#); Hans Jacobs; Chris Jones; Andrew Redgment; Simon Talbot; William Walter; Roger Brighton
- 10:38 **Implant Geometry and Alignment Driven Variability in Post-TKA Kinematics**
Edgar Wakelin; [William Walter](#); Jonathan Bare; Willy Theodore; Joshua Twiggs; Brad Miles
- 10:44 **The Native Tibiofemoral Kinematics in Bicruciate-Retaining Total Knee Arthroplasty**
[Nobuhiro Abe](#); Kimihiko Makiyama; Kensuke Tanaka; Hirokazu Date
- 10:50 **Quantitative Assessment of Straight Leg Raising Test on Tibial Contact Loads During Total Knee Arthroplasty.**
[Patrick Meere](#); Randy Cuevas; Arthur Atchabahian,
- 10:56 **The Effect of Rotational Kinematics on Postoperative Range of Motion and Functional Activity Score After Posterior Stabilized Total Knee Arthroplasty.**
[Tatsuhiko Kutsuna](#); Kazunori Hino; Kunihiko Watamori; Hiroshi Kiyomatsu; Hiromasa Miura
- 11:02 **Comparative Assessment of Gait in Total Knee Arthroplasty Patients Between Multi-Radius and Gradually Reducing Radius Femoral Component Designs During Sit-to-Stand and Stair Descent Movement**
[Sang Jin Lee](#)
- 11:08 **Fluoroscopic Study of Medial Pivot Knees During Stair Ascent and Descent**
[Danè Dabirrahmani](#); Joseph Cadman; Linden Bromwich; Brian Pattana Hettige; Richard Brackenbury; James Sullivan; Richard Appleyard

Innovative Materials & Surface Technologies

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 7

Moderators: Ebru Oral, Mazen Al Hajjar

- 10:20 **Towards an Artificial Meniscus: Biomechanical Properties as a Driver for Orthopaedic Innovation.**
[Peter Dubrue](#); Alberto Lagazzo; Ozge Begum Akalin; Sandra Van Vlierberghe; Catherine Van Der Straeten; Fabrizio Barberis
- 10:26 **Interface Tissue Engineering for Joint Replacement: Biomimetic Nanostructured Coatings, From Material Characterization to in Vitro Stem Cell Differentiation**
[Alessandro Russo](#); Gabriela Graziani; Michele Bianchi; Gianluca Carnevale; Alessandra Pisciotta; Laura Bertoni; Marco Boi; Alessandro Gambardella; Matteo Berni; Gregorio Marchiori; Anto De Pol; Stefano Zaffagnini
- 10:32 **Metal Ion Release From Conventional and Coated Femoral Components in Total Knee Arthroplasty (TKA)**
[Satya Nambu](#); Ethan Baker; Anish Shivaram
- 10:38 **Prosthetic Joint Infection and Aseptic Loosening - Could Liposomes Be the Solution?**
[Rebecca Beamish](#); Wayne Nishio Ayre; Sam Evans
- 10:44 **A New Polymeric Dicalcium Phosphate (P-DCPD) Cement for Load-Bearing Bone Defects**
[David Markel](#); Weiping Ren
- 10:50 **Characterization of Osteoconductive Si-Y-O-N Film Present at Annealed Silicon Nitride Surface**
[Ryan Bock](#); David Cullen; Bryan McEntire; Karren More; Donovan Leonard; B. Sonny Bal

- 10:56 **An All-Polymer Total Knee Replacement**
[Louise M. Jennings](#); Raelene Cowie; Adam Briscoe; John Fisher
- 11:02 **Metal-on-Polycarbonate-Urethane Total Hip Arthroplasty: A Prospective Study at 5 Years Follow-Up**
[Giovanni Micera](#); Antonio Moroni; Riccardo Orsini; Fabrizio Sinapi; Daniele Fabbri; Francesco Aciri; Maria Teresa Miscione; Salvatore Mosca
- 11:08 **The Design and in-Vivo Testing of a Locally Stiffness Matched Porous Scaffold**
[Shaaz Ghose](#); Natalie Reznikov; Oliver Boughton; Justin Cobb; Gordon Blunn; Molly Stevens; Jonathan Jeffers

THR - Complications & Complicating Factors

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Third | Kiosk: 8

Moderators: Stephen Murphy, Philippe Van Overschelde

- 10:20 **Intra- and Post-Operative Complications in Hip Hemiarthroplasty Using Conjoined Tendon Preserving Posterior Approach**
[Hiroshi Watanabe](#); Tokifumi Majima; Ryu Tsunoda; Yasushi Oshima; Takuya Uematsu; Shinro Takai
- 10:26 **Preventing Neurologic Injury During Direct Anterior Total Hip Arthroplasty (THA) Using the Hana Table: A Novel Technique Incorporating Neuromonitoring During THA**
[Timothy Niedzielak](#)
- 10:32 **Repeated Dislocation in Very Acute Phase After a Total Hip Arthroplasty; a Case With Possible Factitious Disorder**
[Satona Murakami](#); Hiroto Mitsui; Hidetaka Okamoto; Hirotaka Iguchi
- 10:38 **Qualitative and Quantitative Comparisons Between Acromegalic and Non-Acromegalic Patients With Direct Anterior Approach THA.**
[Yukari Watanabe](#); Seizo Yamamoto; Kazuya Isawa; Hiro Shiono; Naoki Yamada; Yu Hirota
- 10:44 **Results of Total Hip Arthroplasty After Core Decompression With Tantalum Rod for Osteonecrosis of the Femoral Head**
[Chang Yong Hu](#); Taek Rim Yoon; Kyung-Soon Park
- 10:50 **A Long-Term Follow-Up for Monobloc Implants in Cementless Total Hip Arthroplasty in Patients With Legg-Calve-Perthes Disease**
[Ze-Yu Luo](#)

THR - Biomechanics

Thursday 11 Oct, 10:20AM - 11:20AM

Young Investigators Session | Floor: Second | Kiosk: Geilgud

Moderators: Jonathan Jeffers, Nobuhiko Sugano

Guest Mentor: Seth Greenwald

- 10:24 **Pelvic Motions Play an Important Role in Contact Location in Total Hip Replacement Bearings**
[Ksenija Vasiljeva](#); Mazen Al-Hajjar; David Lunn; Graham Chapman; Anthony Redmond; Ian Flatters; Jonathan Thompson; Alison Jones
- 10:31 **Total Hip Replacement Patients Stratified by Functionality Present Different Implant Loadings**
[Enrico De Pieri](#); David Lunn; Kasper Rasmussen; Anthony Redmond; S J Ferguson
- 10:38 **Effects of Using a Lipped Liner on the Occurrence of Impingement in THA**
[Gregory Pryce](#); Bismaya Sabu; Mazen Al-Hajjar; Ruth Wilcox; Jonathan Thompson; Tim Board; Sophie Williams
- 10:45 **Does Total Knee Arthroplasty Influence Hip Rotational Range of Motion?**
[Tatsunori Kataoka](#); Yasushi Oshima; Atsushi Okubo; Norishige Iizawa; Tokifumi Majima; Shinro Takai
- 10:52 **Contact Surface Pathways in Total Hip Replacement Patients Stratified by Body Mass Index**
[David Lunn](#); Graham Chapman; Anthony Redmond
- 10:59 **In Vivo Comparison of Normal Hip Kinematics With Degenerative Hips Before and After THA**
[Jarrod Nachtrab](#); Garrett Dessinger; Milad Khasian; Michael LaCour; Adrija Sharma; Richard Komistek
- 11:06 **Minimizing Bone Strain While Maximising Fixation During Impaction of the Acetabular Cup**
[Ruben Doyle](#); Jonathan Jeffers

Tranexamic Acid & Clinical Management of the TJR Patient

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Second | Kiosk: 10

Moderators: Koen De Smet, Bernard Stulberg

- 10:20 **Tranexamic Acid Reduces Transfusions Rates in Obese and Super Obese Patients Undergoing Total Joint Arthroplasty**
[Morteza Meftah](#); Ira Kirschenbaum
- 10:26 **Oral Versus Intravenous Versus Topical Tranexamic Acid in Primary Hip Arthroplasty: A Prospective, Randomized, Double-Blind, Controlled Study**
[Ze-Yu Luo](#)

- 10:32 **Intra-Articular Tranexamic Acid to Reduce Blood Loss in Concurrent Bilateral Total Knee Arthroplasty - a Prospective, Randomised Double Blind Study**
Mohamed Elkabbani; Feras Haidar; [Amr Osman](#); Tamer Mohamed; Samih Tarabichi
- 10:38 **The Efficacy and the Effect of Intra-Articular Injection of Tranexamic Acid in Total Knee Arthroplasty**
[Young-Woo Chung](#); Jae-Woong Seo; Hong-Man Cho
- 10:44 **The post-operative determination of hemoglobin level in not necessary after TKA**
[Jean-Yves Jenny](#); Xavier Nicolau; Nicolae Hazaparu
- 10:50 **Prospective Evaluation of a Non-Invasive Hemoglobin Measurement System in Total Joint Arthroplasty**
Michael Casale; Bradford Waddell; Connor Ojard; [George Chimento](#); Tyler Adams; Alaa Mohammed
- 10:56 **Comparison of the Incidence of Venous Thromboembolism Following Total Hip Arthroplasty With Tendon-Preserving Approaches and a Direct Lateral Approach**
[Tetsuya Kawano](#); Hiroaki Kijima; Shin Yamada; Natsuo Konishi; Hitoshi Kubota; Hiroshi Tazawa; Takayuki Tani; Norio Suzuki; Keiji Kamo; Yoshihiko Okudera; Ken Sasaki; Naohisa Miyakoshi; Yoichi Shimada
- 11:02 **The Effect Preoperative Discontinuation of Antiplatelet Agent on Blood Loss and Bleeding Related Complication in Total Knee Arthroplasty**
[Kwangkyoun Kim](#)
- 11:08 **Comparison of Oral Versus Intra-Articular Tranexamic Acid in Enhanced-Recovery Primary Total Knee Arthroplasty Without Tourniquet Application: A Randomized Controlled Trial**
[Duan Wang](#); Zong-Ke Zhou
- 11:14 **Blood-Sparing Efficacy of Multiple Doses of Oral Tranexamic Acid in Enhanced-Recovery Primary Total Knee Arthroplasty: A Randomized Controlled Trial**
[Duan Wang](#); Zong-Ke Zhou

THR - Clinical Results 2

Thursday 11 Oct, 10:20AM - 11:20AM

ePoster with Short Talk | Floor: Second | Kiosk: 11

Moderators: Susanna Stea, Thomas Gross

- 10:20 **Three-Year Outcomes of a Highly Porous Acetabular Shell in Primary Total Hip Arthroplasty**
[Alana Levine](#); Timothy H Izant; Daniel Del Gaizo; Michael Baratz; Anton Khlopas; Michael Mont
- 10:26 **Comparison of Total Hip Arthroplasty With and Without Computed Tomography-Based Navigation System for Osteonecrosis of the Femoral Head: A Propensity Score Matched Analysis**
[Kazuma Takashima](#); Takashi Sakai; Hidetoshi Hamada; Masaki Takao; Nobuhiko Sugano
- 10:32 **Total Hip Arthroplasty Utilizing an Uncemented, Flat, Tapered Stem With a Reduced Distal Profile**
Rachelle Morgenstern; Thomas Alastair Denova; Imraan Khan; Allina Nocon; [Edwin Su](#)
- 10:38 **Clinical Results of the Cemented THA Stem With Double-Tapered Design and Smooth Surfaced Titanium Alloy for More Than 10 Years**
[Jiro Tamura](#); Yoshiyuki Asada; Masato Oota; Yasutaka Matsuda
- 10:44 **Early Clinical Outcomes of a Tapered Wedge Femoral Hip Stem**
Matthew Peterson; [Hilary Feskanin](#); Jeffery Pierson
- 10:50 **Radiographic Change Around the Standard Tapered Round Stem and the Shorter Tapered Round Stem Two Years After Total Hip Arthroplasty**
[Naoya Taki](#); Naoto Mitsugi; Yuichi Mochida; Yohei Yukizawa; Yohei Sasaki; Shu Takagawa

THA Surgical Technique: What Works, What Doesn't?

Thursday 11 Oct, 11:20AM - 12:25PM

Podium | Floor: Third | Room: Whittle

Moderators: Richard Field, Jonathan Jeffers

- 11:21 **How do we Know a (New) Surgical Technique Works? What Difference Does it Make?**
[David Stulberg](#)
- 11:28 *Discussion*
- 11:31 **Learning Curve for Direct Anterior Approach for Total Hip Arthroplasty**
Andrea Torres; [Tyler Goldberg](#); Jared W. Bush; Michael J Mahometa
- 11:37 **Early Outcomes of Obese Patients Undergoing Total Hip Arthroplasty: Comparison of Anterior to Posterior Approach**
[Mark William Zawadsky](#); William Zelenty; Eric Windsor; Richard Verstraete; Blake Bodendorfer
- 11:43 **Acetabular Reaming Accuracy: Optimal Techniques and Single-Use Reamers**
[Monil Karia](#); Sceyon Vishnu-Mohan; Oliver Boughton; Edouard Auvinet; Robert Wozencroft; Susannah Clarke; Camilla Halewood; Justin Cobb
- 11:49 *Discussion*

- 11:55 **Smart Hand-Held Imageless Navigation for Augmented Surgical Quality and Improved Patient Safety in Total Hip Arthroplasty**
[Karl-Heinz Widmer](#)
- 12:01 **Improved Accuracy in Restoration of Native Hip Biomechanics in Robotic-Arm Assisted Surgery Compared to Conventional Manual Techniques for Total Hip Arthroplasty: A Prospective Cohort Study**
[Babar Kayani](#); Sujith Konan; Sumon Huq; Fares Haddad
- 12:07 **Using an Active Robotic System for THA - a Benefit or Only Cost Intensive Technology ?**
[Martin Boerner](#)
- 12:13 **Accuracy of Image-Less Navigation for Functional Cup Positioning in Total Hip Arthroplasty**
[Morteza Meftah](#); Vinay Siddappa; Jeffrey Muir
- 12:19 *Discussion*

TKA: Innovative Positioning Technology & PSI

Thursday 11 Oct, 11:20AM - 12:25PM

Podium | Floor: Third | Room: Fleming

Moderators: Hani Haider, Justin Cobb

- 11:21 **TKA: Mechanical vs Kinematic Alignment**
[Steven MacDonald](#)
- 11:28 *Discussion*
- 11:31 **Navigation Improves the Survival Rate of Mobile Bearing Total Knee Arthroplasty by Severe Pre-Operative Coronal Deformation**
Jean-Yves Jenny; [Frederic Chatain](#); Dominique Saragaglia
- 11:37 **Sensor-Driven Evaluation of Tibial Coronal Alignment: A Validation Study**
[Matthias Verstraete](#); Michael Conditt; Daniel Liefort; Wael Hazin; Jonathan Trousdale; Martin Roche
- 11:43 **Accuracy of Bone Resection in Total Knee Arthroplasty Using Ct Assisted 3D Printed Patient Specific Cutting Guides in 201 TKAs**
[Ikram Nizam](#); Ashish Batra
- 11:49 *Discussion*
- 11:55 **A Clinical Trial of Next Generation PSI - Robotic Level Accuracy in Less Than Half the Time**
[Gareth Jones](#); Susannah Clarke; Simon Harris; Martin Jaere; Thunayan Aldalmani; Patrick De Klee; Justin Cobb
- 12:01 **Posterior Condylar Offset Changes and Its Effect on Clinical Outcomes After Posterior-Substituting, Fixed-Bearing Total Knee Arthroplasty: Anterior Versus Posterior Referencing**
Seung-Baik Kang; Chong Bum Chang; Moon Jong Chang; Whang Kim; Joung Youp Shin; Dong Whan Suh; [Jong Byung Oh](#); Su Jin Kim; Soo Hee Choi; Su Jin Kim; Hye Su Baek
- 12:07 **Rotation in Total Knee Replacement - Are We Accurate?**
[Rosaleen McKenna](#); Hans Jacobs; William Walter
- 12:13 **Accuracy of Intraoperative Robotic-Arm Assisted Total Knee Replacement Alignment With Standing Long Leg Postoperative Alignment**
[Martin Roche](#); Tsun Yee Law; Rushabh Vakharia; Kevin Wang; Jim Nevelos
- 12:19 *Discussion*

Preventing & Avoiding Arthroplasty

Thursday 11 Oct, 11:20AM - 12:25PM

Podium | Floor: Second | Room: Gielgud

Moderators: Javad Parvizi, Ebru Oral

- 11:21 **The Development of New Polymers for Tissue-Engineered Menisci**
[Peter Dubrue](#)
- 11:28 *Discussion*
- 11:31 **Hip Joint Mechanics Before and After Cam Femoroacetabular Impingement**
[K. C. Geoffrey Ng](#); Hadi El Daou; Marcus Bankes; Ferdinando Rodriguez-Y-Baena; Jonathan Jeffers
- 11:37 **Joint Distraction for Knee Osteoarthritis: A Systematic Review and Quantitative Analysis**
[En Lin Goh](#); Winston Lou; Swathikan Chidambaram; Shaocheng Ma
- 11:43 **Bisphosphonate Prematurely Ages Bone Matrix Mechanics**
[Shaocheng Ma](#); En Lin Goh; Angelo Karunaratne; Crispin Wiles; Yong Wu; Oliver Boughton; Tabitha Tay; John Churchwell; Rajarshi Bhattacharya; Nick Terrill; Justin Cobb; Ulrich Hansen; Richie Abel
- 11:49 *Discussion*
- 11:55 **Hip Capsule Function in the Natural and Implanted Hip**

Chadd Clary; Luke Storer; Yashar Behnam; Casey Myers; Dan Huff; Paul Rullkoetter; Brian Haas

- 12:01 **Spinopelvic Compensatory Mechanisms for Reduced Hip Motion in the Setting of Hip Osteoarthritis**
Jonathan Vigdorich; Leah Steinmetz; Peter Zhou; Dennis Vasquez-Montes; Matthew T. Kingery; Nicholas Stekas; Nicholas Frangella;
Christopher Varlotta; David Ge; Zlatan Cizmic; Virginie Lafage; Renaud Lafage; Peter G. Passias; Themistocles S. Protopsaltis; Aaron Buckland
- 12:07 **Hip Arthroscopy Improves Patient Satisfaction in All Patients Regardless of Age**
Brian Godshaw; Michael Wong; Arturo Villarreal; Kian Setayash; Deryk Jones; Misty Suri
- 12:13 **Altered Walking and Muscle Patterns Reduce Hip Contact Forces in Individuals With Symptomatic Cam FAI**
K. C. Geoffrey Ng; Giulia Mantovani; Luca Modenese; Mario Lamontagne; Paul Edgar Beaulé
- 12:19 *Discussion*

AMTI Lunch Symposium – Six-DOF Experimental Simulation of Soft Tissue Models. Research from SCORE & Western University using the AMTI Vivo.

Thursday 11 Oct, 12:25PM - 1:25PM
Podium | Floor: Third | Room: Fleming

Welcome and Introduction

Bruce White; Robert Sonntag

Computational and Experimental Simulation: Is There a Need for Both?

Philip Noble

The AMTI Vivo as a Tool for Experimental Simulation

Joseph Deck

Hybrid Experimental-Computational Approaches to Elbow and Knee Biomechanics

Ryan Willing

Constructing Virtual Ligaments for the Shoulder, Hip and Knee

Darryl D'Lima

THINK Surgical Lunch Symposium – In's and Out's of Active Robotics: Interactive Q&A

Thursday 11 Oct, 12:25PM - 1:25PM
Podium | Floor: Third | Room: Whittle

Stefan Kreuzer and Bernard Stulberg

Materialise Lunch Symposium – How virtual patients can accelerate implant development, exemplified by the DJO Exprt® revision hip

Thursday 11 Oct, 12:25PM - 1:25PM
Podium | Floor: Second | Room: Gielgud

Welcome and Introduction

Sjoerd Kolk

Virtual Patients Explained

Julien Deckx

Virtual Patients Example: DJO Exprt® Revision Hip Design

Adam Shallenberg; Bryan Kirking

Q&A and Round Table Discussion

Adam Shallenberg; Bryan Kirking; Julien Deckx; Sjoerd Kolk

The Role of the Spine in THR (In)stability

Thursday 11 Oct, 1:25PM - 2:25PM
Podium | Floor: Third | Room: Whittle

Moderators: Gwen Sys, Yixin Zhou

1:26 Spine-Hip Relations and THA Positioning

Christina Esposito

1:33 *Discussion*

1:36 Sitting-Standing Spinopelvic Mechanisms Predict Risk of Dislocation After Total Hip Arthroplasty

Jonathan Vigdorich; Zlatan Cizmic; Matthew T. Kingery; Peter Zhou; Leah Steinmetz; David Ge; Christopher Varlotta; Nicholas Stekas; Nicholas Frangella; Dennis Vasquez-Montes; Virginie Lafage; Renaud Lafage; Peter G. Passias; Themistocles S. Protopsaltis; [Aaron Buckland](#)

- 1:42 **Standing to Sitting Is Not Only Pelvic Rotation: Description and Quantification of the Combined Pelvic Translation. EOS Evaluation Comparing Pre and Post Op Data in THA Patients.**
[Jean Yves Lazennec](#); Youngwoo Kim; Jihane Hani; Dominique Folinais; Aidin Eslam Pour
- 1:48 **Quantitative Analysis of the Stand to Sit Pelvis Kinematics Using 3D Reconstructions From Bi-Planar X-Rays**
[Youngwoo Kim](#); Francois Girinon; Jean Yves Lazennec; Wafa Skalli
- 1:54 *Discussion*
- 2:00 **Pelvic Sagittal Inclination in Supine and Standing After Corrective Long Fusion for Adult Spinal Deformity**
[Nobuhiko Sugano](#); Kazunori Tamura; Takashi Kaito; Hidetoshi Hamada; Masaki Takao; Takashi Sakai
- 2:06 **Reduced Bony Hip Range of Motion Associated With ADL Impairment Related to Anteflexion After Rotational Acetabular Osteotomy**
[Hidetoshi Hamada](#); Masaki Takao; Takashi Sakai; Nobuhiko Sugano
- 2:12 **Posterior Pelvic Tilt Increases Over Time and Affects Cup Position After Primary Total Hip Arthroplasty**
[Eduardo Garcia-Rey](#); Beatriz Garcia-Maya; Javier Gomez-Luque
- 2:18 *Discussion*

Innovative & Disruptive Technologies for Arthroplasty

Thursday 11 Oct, 1:25PM - 2:25PM

Podium | Floor: Third | Room: Fleming

Moderators: Stephen Murphy, Scott Banks

- 1:26 **The Role of Biomechanics and Engineering in Total Hip Replacement. Why Surgeons Need Technical Help.**
[Jonathan Jeffers](#)
- 1:33 *Discussion*
- 1:35 **A New Quantitative Load Balancing Sensor for Reverse Total Shoulder Arthroplasty**
Matthias Verstraete; [Michael Conditt](#); Thomas Wright; Joseph Zuckerman; Ari Youderian; Ira Parsons; Richard Jones; Joseph Decerce; Gordon Goodchild; Alexander Greene; Christopher Roche
- 1:41 **Collection of Innovative Patient-Reported Outcome Measures Using a Digital Platform. Interim Results From a Feasibility Study With TKA Patients.**
[Tim Waters](#); Michael Ries; Gorav Datta; Edward Davis; Dinesh Nathwani; Paul Sutton; Alex Trahey; Anna Turco; Amir Kamali; Iain McNamara
- 1:47 **Smart Treatment for the Surface of Titanium Implants: Development of Multifunctional Surfaces**
[Martina Cazzola](#); Sara Ferraris; Barbara Stella; Gissur Orlygsson; Chuen How Ng; Grzegorz Cempura; Cristina Scolaro; Enrico Prenesti; Seiji Yamaguchi; Giuseppe Pezzotti; Andrea Cochis; Lia Rimondini; Silvia Spriano
- 1:53 *Discussion*
- 1:56 **Avoiding Intraoperative Fractures in Total Hip Arthroplasty Using a Practical Vibrational Analysis Technique During Bone Preparation**
[Zahra Ehteshami](#); Isaiah Adekanmbi; Chris Hunt; Matthew Dressler
- 2:02 **Antibacterial Properties of Bupivacaine-Loaded UHMWPE**
[Ebru Oral](#); Dmitry Gil; Scott Grindy; Ali Atici; Orhun Muratoglu; Hany Bedair; Sandra Bliss Nelson
- 2:08 **Gentamicin Sulfate Eluting UHMWPE Spacer for Two-Stage Revision**
[Ebru Oral](#); [Orhun Muratoglu](#); Ali Atici; Dmitry Gil; Rachel Connolly
- 2:14 **The Reliability of Synovasure (Alfa Defensin-1 Assay) in Intra-Operative Diagnosis of Prosthetic Joint Infection**
[Chris Wilson](#); Vikas Singh
- 2:20 *Discussion*

UKA With & Without Robotic Assistance

Thursday 11 Oct, 1:25PM - 2:25PM

Podium | Floor: Second | Room: Gielgud

Moderators: Steven MacDonald, Nico Verdonschot

- 1:26 **Improved Outcomes of UKA with PSI**
[Justin Cobb](#)
- 1:33 *Discussion*
- 1:36 **Is Robotic-Arm Assisted Unicompartmental Knee Arthroplasty Associated With Reduced Postoperative Pain and Early Restoration of Function?**
[Babar Kayani](#); Sujith Konan; Jenni Tahmassebi; Fares Haddad
- 1:42 **Kinematic Assessment of Anatomical Compartment Specific Partial Knee Arthroplasty**

[Marc Bandi](#); Eik Siggelkow; Alexandra Oswald; Sebastien Parratte; Francesco Benazzo

- 1:48 **Indication for Medial Unicompartmental Knee Arthroplasty in ACL-Deficient Knees: In Vivo Kinematic Evaluation Using a Moving Fluoroscope**
[Thomas Zumbunn](#); Pascal Schuetz; Fabian von Knoch; Stefan Preiss; Renate List; S J Ferguson
- 1:54 *Discussion*
- 2:00 **In Vitro Biomechanics of UKA and UKA Combined With ACL Reconstruction**
[Thijs Renders](#); Thomas Heyse; Fabio Catani; Patrick Sussmann; Ronny De Corte; Luc Labey
- 2:06 **Effect of Extra-Articular Deformities on Limb Alignment After Mobile-Bearing Unicompartmental Knee Arthroplasty**
[Arun Mullaji](#); Gautam Shetty
- 2:12 **Early Survivorship of Robotic-Assisted Unicompartmental Knee Arthroplasty**
Andrew K Battenberg; [Nathan Netravali](#); Jess Lonner
- 2:18 *Discussion*

Extending Longevity of THA: Improving Clinical Results & Addressing Complications

Thursday 11 Oct, 2:25PM - 3:30PM

Podium | Floor: Third | Room: Whittle

Moderators: Josh Jacobs, David Stulberg

- 2:26 **What do we Need to Monitor the Quality of Medical Devices?**
[Keith Tucker](#)
- 2:33 *Discussion*
- 2:36 **Stepwise Evaluation and Surgical Correction of Instability in Total Hip Arthroplasty**
Nima Eftekhary; Ameer Elbuluk; Zlatan Cizmic; Richard Iorio; Ran Schwarzkopf; [Jonathan Vigdorshik](#)
- 2:42 **Lumbo-Pelvic Complex Degeneration Influences the Risk of THA Instability: A Case-Control Study**
[Charles Riviere](#); Stanislas Marouby; Cedric Maillot; Francois Canovas; Louis Dagneaux
- 2:48 **Long-Term Results of Anatomical Custom-Made Femoral Component in Total Hip Arthroplasty**
[Takashi Sakai](#); Kenji Ohzono; Takashi Nishii; Hidenobu Miki; Masaki Takao; Nobuhiko Sugano
- 2:54 *Discussion*
- 3:00 **Longevity and Socket Wear Was Improved by Cross-Linked Polyethylene in Cemented Total Hip Arthroplasty: Minimum 10 Years Followup Study**
[Masaaki Maruyama](#); Shinji Wakabayashi; Keiji Tensho; Hiroki Nomura
- 3:06 **Clinical Results of Total Hip Arthroplasty Using Modulus Stem for High Hip Dislocation**
[Takeshi Ogawa](#); Wataru Ando; Hirohiko Yasui; Yoshichika Hashimoto; Tsuyoshi Koyama; Takayuki Tsuda; Kenji Ohzono
- 3:12 **Survivorship of Porous Titanium Acetabular Components With an Average of 5-Year Follow-Up**
Brian Godshaw; Emily Lawrentz; J. Lockwood Ochsner; Mark S. Meyer; [George Chimento](#)
- 3:18 **Opioid Abuse Is an Independent Risk Factor for Deep Vein Thrombosis, Pulmonary Embolism, Venous Thromboembolism Following Primary Total Joint Arthroplasty: A Matched-Control Analysis**
Rushabh Vakharia; [Timothy Niedzielak](#); Scott Nelson; Scott Polansky; Matthew Quattrocelli; Tsun Yee Law; Martin Roche
- 3:24 *Discussion*

TKA: New Insights in Clinical Results & Patient Reported Outcomes

Thursday 11 Oct, 2:25PM - 3:30PM

Podium | Floor: Third | Room: Fleming

Moderators: Bernd Grimm, Mark Wilkinson

- 2:26 **The Role of Prehabilitation in TKA Outcome and Patient Satisfaction**
[Alison McGregor](#)
- 2:33 *Discussion*
- 2:36 **Outcome Analysis of Hip or Knee Arthroplasty in Patients With Cirrhotic Liver Disease**
[Chang Yong Hu](#); Taek Rim Yoon; Kyung-Soon Park
- 2:42 **Patient Satisfaction and Clinical Outcomes Are Better With a Medial-Stabilized Implant vs. a Posterior-Stabilized Implant**
[David Scott](#); Brenna McMahill
- 2:48 **The Effect of Local Anesthetic Infiltration Between the Popliteal Artery and Capsule of Knee (IPACK) on Pain After Total Knee Arthroplasty: A Double Blinded Prospective Randomized Trial**
[George Chimento](#); Mathew Patterson; Leslie Thomas; Kim Bland; Bobby Nossaman; Jillian Vitter

- 2:54 *Discussion*
- 3:00 **Does the Amount of Opioid Consumed Influence How Patients Rate Their Experience of Care After Total Knee Arthroplasty?**
Ronald Delanois; Jennifer I. Etcheson; [Randa Elmallah](#); Chukwuweike U. Gwam; Nicole E. George; John M. Tarazi; Benjamin M. Stronach
- 3:06 **Does Preoperative Diabetes Affect the Achievement of Forgotten Knee Status in TKR Patients**
[Sanjay Londhe](#); Ravi Shah; Atul Ranade
- 3:12 **Influence of Femoral Component Sizing on Patient Satisfaction After TKA.**
[Stefaan Van Onsem](#); Matthias Verstraete; Dries Verrewaere; Catherine Van Der Straeten; Jan Victor
- 3:18 **Early Patient Outcomes and Satisfaction of Robotic-Assisted Total Knee Arthroplasty**
[Jan Albert Koenig](#); Karen Neuhauser-Daley; Sami Shalhoub; Christopher Plaskos
- 3:24 *Discussion*

Disruptive Innovations in Education & Communication

Thursday 11 Oct, 2:25PM - 3:30PM

Podium | Floor: Second | Room: Gielgud

Moderators: Seth Greenwald, Koen De Smet

- 2:26 **Getting Research Published and Achieving the Highest Impact**
[Fares Haddad](#)
- 2:33 *Discussion*
- 2:37 **The Use of Social Media for Patient Recruitment and Follow-Up in Clinical Trials**
[Richard Field](#)
- 2:44 *Discussion*
- 2:48 **An Announcement from ISTA: Building up the Journal of Technology in Arthroplasty**
[Hani Haider](#)
- 2:55 *Discussion*
- 2:59 **Patient Perceptions of Robotically Assisted Hip and Knee Arthroplasty**
[John Kelly](#); Kieran Bochat; Dermot Collopy; Gavin Clark
- 3:05 **YouTube as a Source of Patient Information for Knee Arthroplasty and Knee Arthritis**
Michael Wong; [Bhumit Desai](#); Michele Bautista; Ohmin Kwon; George Chimento
- 3:11 **Progressive Scholarly Acceptance (PSA) Analysis of Global Trends in Robotic Orthopaedic Research: A New Innovation Assessment Metric for Use in Orthopaedic Bibliometric Research**
Dylan Misso; [John Kelly](#); Dermot Collopy; Gavin Clark
- 3:17 **Reducing Post-Operative Costs in Elective Total Joint Arthroplasty: A Role for Virtual Care and Telehealth**
Zlatan Cizmic; Christian Pean; Daniel Buchalter; [Jonathan Vigdorshik](#)
- 3:23 *Discussion*

TJA Monitoring with Wearable Devices: Interactive Session in Collaboration with EORS

Thursday 11 Oct, 3:50PM - 5:10PM

Podium | Floor: Third | Room: Whittle

Moderators: Alison McGregor, Mark Wilkinson

- 3:51 **Monitoring Patient Activity: Relevance, Technologies and Applications**
[Bernd Grimm](#)
- 4:01 **Wearable Plus App for Mobile Monitoring and Patient Feedback After TJR**
[Ward Servaes](#)
- 4:07 **Accelerometry to assess activity & sedentary behaviour: parameters & applications**
[Freek Boesten](#)
- 4:13 **Physical activity monitoring & orthopaedic patients: clinical data & opportunities**
[Ben Stansfield](#)
- 4:19 **Sensor Insoles for Performance Tests and Monitoring in Fracture and Fall Risk Patients**
[Benedikt Braun](#)
- 4:25 **Maximising the Usefulness of PROMs Through ePROMs and PCOMs**
Emily Moore; [Brogan Keane](#); Justin Cobb
- 4:31 **PROMIS Computer Adaptive Tests Compared With Traditional Patient-Reported Outcome Measures: A Systematic Review**
Stewart Richmond; [Amir Kamali](#); Anna Turco; Diarmuid De Faoite; Beate Hanson

4:37 **The future of intelligent machines in arthroplasty. Will we still need human doctors and engineers?**
[William Walter](#)

4:43 **Debate & Interactive Demos**

Shark Tank: Presenting New Inventions

Thursday 11 Oct, 3:50PM - 5:10PM

Podium | Floor: Third | Room: Fleming

Moderators: Philip Noble, Derek McMinn

3:54 **3D Ultrasound: A Novel New Imaging Opportunity for Orthopaedic Surgeons**
[Richard Komistek](#); Mohamed Mahfouz; Emam ElHak Abdel Fatah; Joseph Johnson

4:01 *Discussion*

4:06 **Alternative Implant Surface Coating to Extend the Implant Longevity**
[Weiping Ren](#)

4:13 *Discussion*

4:18 **Intraoperative Computer Aided Manufacture - a Novel Arthroplasty Guidance Approach**
[Alastair Darwood](#); Guillaume Villatte; Fabio Tatti; Riccardo Secoli; Roger JH Emery; Ferdinando Rodriguez-Y-Baena

4:25 *Discussion*

4:30 **Novel Sol-Gel Coatings for Local Prophylactic Delivery of Antibiotics on Orthopaedic Prosthesis Materials**
[Thomas Smith](#); Patrick Harrison; Tim Nichol; Robert Akid; Tim Harrison; Ian Stockley

4:37 *Discussion*

4:42 **JO-VE – Reducing the Guess Work in Hip Replacement Alignment**
[Jan Vermaat](#)

4:49 *Discussion*

4:54 **Advanced Concept of Bone Implant**
[Marco Soares Dos Santos](#); Rodrigo Bernardo; Antonio Ramos; Jorge A. F. Ferreira; Jose Antonio Simoes

5:01 *Discussion*

5:06 **Selection and Announcement of Winners**

Tissue Reactions & Metal Ions in TJA

Thursday 11 Oct, 3:50PM - 5:10PM

Podium | Floor: Second | Room: Gielgud

Moderators: Susanna Stea, Markus Wimmer

3:51 **Metal Ions From Joint and Disc Replacement: The Challenge of Interpretation**
[Josh Jacobs](#)

3:58 *Discussion*

4:01 **Metal Allergy as a Cause of Implant Failure. Manifestations, Diagnosis and Prediction of Failure**
[Pat Campbell](#)

4:08 *Discussion*

4:11 **Use of a Tribocorrosion Bioreactor for the Analysis of Immune Cell Response to In-Situ Generated Wear Products**
[Markus Wimmer](#)

4:18 *Discussion*

4:21 **Blood Metal Levels, Leukocyte, and Cytokine Profiles in Patients With a Modular Dual Mobility (MDM) Hip Prosthesis: A Prospective Cohort Study**
David Markel; Therese Bou-Akl; Mario Rossi; [Natalie Pizzimenti](#); Weiping Ren

4:27 **The Potential Ototoxicity of Cobalt From Metal-on-Metal Hip Prostheses: Preliminary Results**
[Laura Leyssens](#); Catherine Van Der Straeten; Koen De Smet; Bart Vinck; Ingeborg Dhooge; Leen Maes

4:33 **Novel Methodologies for Understanding the Individual Biological Effects of Orthopaedic Wear Particles and Ions**
[Saurabh Lal](#); Richard Hall; Joanne Tipper

4:39 *Discussion*

4:45 **Metallosis and Tissue Metal Concentrations From Autopsy Retrieved TKA**

[Christina Arnholt](#); Joshua White; Daniel MacDonald; Julie Lowell; Meredith Perkins; William Mihalko; Steven M. Kurtz

- 4:51 **Inflammatory Impact of Metal Ions and Metal Particles in the Synovial Layer of Mice**
[Alexander Paulus](#); Sabine Dirmeier; Sandra Hasselt; Philippe Kretzer; Rainer Bader; Volkmar Jansson; Sandra Utzschneider
- 4:57 **Survivorship of Female Patients Treated With < 48 Mm Metal on Metal Hip Resurfacing: Metal Ions Evaluation at a Minimum Follow-Up of 5 Years**
Giovanni Micera; [Antonio Moroni](#); Riccardo Orsini; Salvatore Mosca; Daniele Fabbri; Fabrizio Sinapi; Maria Teresa Miscione; Francesco Acri
- 5:03 *Discussion*

Cost-Effectiveness & Economic Challenges

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 1

Moderators: Richard Field, Jonathan Vigdorichik

- 5:15 **Shorter Length of Stay Following THA Associated With Improved Outcomes and Payments Across Medicare Population**
William Murphy; [Patrick Lane](#); Tony Cheng; David Terry; Stephen Murphy
- 5:21 **Readmission Rates, Causes, and Costs Following Total Joint Arthroplasty in U.S. Medicare Population**
William Murphy; [Patrick Lane](#); Ben Lin; Tony Cheng; David Terry; Stephen Murphy
- 5:27 **Association of Technique and Technology With Lower Cost Following THA**
William Murphy; Patrick Lane; Tony Cheng; David Terry; [Stephen Murphy](#)
- 5:33 **Leveraging Your EHR: Data Collection, Clinical Pathways Optimization and Operational Efficiency**
[Charles Fisher](#)
- 5:39 **The Effects of Robot-Assisted Total Knee Arthroplasty on Readmission and Post-Operative Pain: Are the Added Costs Worth It?**
[Connor King](#); Jonathan Edgington; Michael Perrone; Caroline Wlodarski; Richard Wixson; Lalit Puri
- 5:45 **90-Day Costs and Clinical Results of Robotic-Assisted and Conventional TKA**
[Jan Albert Koenig](#); Christopher Plaskos
- 5:51 **Single-Use Instrumentation in Total Knee Arthroplasty: Safe and Economical**
Andrea Torres; [Tyler Goldberg](#); Jared W. Bush
- 5:57 **The Cost-Effectiveness of Dual-Mobility in a Spine Fusion Population With High-Risk of Dislocation**
James Slover; Zlatan Cizmic; Ameer Elbuluk; Afshin Anoushiravani; Ran Schwarzkopf; Aaron Buckland; [Jonathan Vigdorichik](#)

Insights Through Imaging & Measurements in TJA

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 2

Moderators: Koen De Smet, Charles Riviere

- 5:15 **The Measurement of Limb Length Discrepancy With Full-Length X-Ray Before Total Hip Arthroplasty**
[Michitaka Kato](#); Hideki Warashina
- 5:21 **Standing and Sitting Sagittal Pelvic Position : Optimization of Sacral Slope Analysis Using the Relative Pelvic Version Concept.**
[Jean Yves Lazennec](#); Youngwoo Kim; Jihane Hani; Aidin Eslam Pour
- 5:27 **Patellofemoral Evaluation After Total Knee Arthroplasty by Using a Weight-Bearing Axial Radiographic View: Comparison Between Medialized and Domed Patellar Components**
[Kunio Yamada](#); Keisuke Hoshino; Kaneaki Tawada; Junpei Inoue
- 5:33 **Weight-Bearing 3D Foot Model Reconstruction From Simple Standing Radiographs**
[Sang Gyo Seo](#); Jaeil Kim
- 5:39 **Long-Term Migration Characteristics of the Corail Hydroxyapatite-Coated Femoral Stem: A 10-Year RSA Study**
[Chris Wilson](#); Critchely, Owen; Stuart Callary; David Campbell
- 5:45 **Pelvic Tilt Cannot Be Accurately Predicted Using Anteroposterior Radiographs**
Jonathan Vigdorichik; Zlatan Cizmic; David Novikov; Patrick A. Meere; Ran Schwarzkopf; [Aaron Buckland](#)
- 5:51 **NaF-PET Assessment of Postoperative Bone Metabolic Changes Around Total Knee Arthroplasty**
[Masakazu Kanetaka](#); Soichiro Kaneko; Seiichi Azuma; Kei Wagatsuma; Kenji Ishii; Fumiaki Tokimura; Tsuyoshi Miyazaki
- 5:57 **Assessment of Limb Length and Offset in Total Hip Arthroplasty Using Intra-Operative Digital Radiography**
[Eytan Debbi](#); Sean Rajae; Brad L Penenberg

Innovative Clinical Pathways & Technologies

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 3

Moderators: Jean-Yves Jenny, Keith Tucker

- 5:15 **Efficacy of Regional Adductor Canal Block Using Extended Release Liposomal Bupivacaine in Total Knee Arthroplasty: A Randomized Prospective Study**
[Morteza Mefteh](#); Suhas Boenerjous-Abel; Vinay Siddappa; Peter White; Ira Kirschenbaum
- 5:21 **Accelerated Rehabilitation After TKA. a French Nationwide Study.**
[Jean-Yves Jenny](#); Aymard Deladoucette
- 5:27 **Post-Operative Day Zero Physical Therapy Contributes to Faster Physical Recovery and Cost Effectiveness for Total Hip Arthroplasty Patients**
[Kohei Yabuno](#); Noriyoshi Sawada; Motonori Kanazawa
- 5:33 **Feasibility of Using a Surface Sensor to Measure Activity Specific Outcomes After Total Knee Replacement**
[Ryan Harold](#); Daniel Hu; Lanie Woeltjen; Victoria Brander; S. David Stulberg
- 5:39 **A Pilot Study on Fracture Detection Using Vibration Frequency Analysis During Powered Impaction of THA**
[Isaiah Adekanmbi](#); Zahra Ehteshami; Chris Hunt; Matthew Dressler
- 5:45 **Mitigation of Surgical Outliers During Total Knee Arthroplasty With Navigation-Enhanced Instrumentation**
[Jake Mooney](#); James Huddleston; Derek Amanatullah
- 5:51 **Accelerometer Measured Physical Activity Levels Before and After Total Hip Arthroplasty: A Cohort Study**
Ronald Delanois; Chukwuweike U. Gwam; Jennifer I. Etcheson; Nicole E. George; [Randa Elmallah](#); John M. Tarazi; Benjamin M. Stronach
- 5:57 **Effects of Variability With Impaction Strike Conditions on Vibroacoustic Signals for Bone Fracture**
[Isaiah Adekanmbi](#); Zahra Ehteshami; Chris Hunt; Matthew Dressler

TKR - Soft Tissue Balancing 1

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 4

Moderators: Steven MacDonald, Hani Haider

- 5:15 **Soft Tissue Balance in ACL Deficient Osteoarthritis Knee at Total Knee Arthroplasty**
[Satomi Abe](#); Hitoshi Nochi; Hiroshi Ito
- 5:21 **Evaluation of Soft Tissue Balance Using a Pneumatic Tensor Device in Total Knee Arthroplasty**
[Masashi Hirakawa](#); Shinichi Ikeda; Yu Nagashima; Hiroshi Tsumura
- 5:27 **Comparison of 3-Years Postoperative Knee Stability After PS-TKA Between Medial Preserving Gap Technique and Measured Resection Technique**
[Kemmei Ikuta](#); Hirotsugu Muratsu; Masato Kamimura; Shotaro Tachibana; Takashi Oshima; Takaaki Koga; Tomoyuki Matsumoto; Akihiro Maruo; Hidetoshi Miya; Ryosuke Kuroda
- 5:33 **Coronal Laxity in Total Knee Arthroplasty: an Intraoperative Measurement**
[Yifei Dai](#); Amaury Jung; Guillaume Bras; David Liu
- 5:39 **Patients Height and Preoperative Alignment Affect Soft Tissue Balancing in Total Knee Arthroplasty: A Cross-Sectional Retrospective Study on Continuous Determination of Distraction Force**
[Hitoshi Wakama](#); Yoshinori Okamoto; Shuhei Otsuki; Tomohiko Murakami; Kosuke Nakagawa; Nobuhiro Okuno; Masashi Neo
- 5:45 **Less Compressive Force on the Posterolateral Compartment Can Correlate With More Flexion Angle Following Cruciate-Retaining TKA: A Retrospective Observational Study.**
[Yoshinori Okamoto](#); Shuhei Otsuki; Tomohiro Okayoshi; Hitoshi Wakama; Tomohiko Murakami; Kosuke Nakagawa; Masashi Neo
- 5:51 **Sensor Assisted Balancing: Does a Surgeon Need the Extra Sense?**
[Alexander Gordon](#); Gregory Golladay; Thomas L. Bradbury; Juan Suarez; Preetesh Patel; Carlos Higuera; Viktor Erik Krebs; Ivan Fernandez-Madrid; Wael Barsoum
- 5:57 **Using a Novel Posterior Referenced Gap Sizer Improves Soft Tissue Balance Even After PCL Resection, Kinematic Analyses During Computer Assisted Total Knee Arthroplasty**
[Katsumasa Tei](#); Masaya Minoda; Shigeru Matsuda; Koji Takayama; Tomoyuki Matsumoto; Ryosuke Kuroda
- 6:03 **Dynamic Sensor-Balanced Knee Arthroplasty: Can the Sensor Train the Surgeon?**
Colin YL Woon; [Kaitiin Carroll](#); Stephen Lyman; Richard L Murphy; Brian Michaels; David J. Mayman

TKR - Soft Tissue Balancing 2

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 5

Moderators: Philip Noble, Patrick Meere

- 5:15 **Can the Subvastus Approach for TKA Help in Achieving High Flexion in Highflex Knees ? Results of 242 Knees at 4 Years**
[Nileen Shah](#); Dr. Manish Vaishnav; Mohit Patel; Dr.Ujjwal Wankhade
- 5:21 **Mid-Term Results of TKA by the Hybrid Navigation Technique (Combination of Navigation and Gap Technique)**

[Noriyoshi Sawada](#); Kohei Yabuno; Shogo Ikeda; Motonori Kanazawa

- 5:27 **Effect of Osteophyte Removal on Deformity Correction and Gap Balance in Varus Knees During TKA**
[Arun Mullaji](#); Gautam Shetty
- 5:33 **On the Relationship Between Compartmental Loads and Gap Distance in the Coronal Plane During Instrumentation of Total Knee Arthroplasties**
[Patrick Meere](#); Jackson Wirekoh; Nicholas Parody
- 5:39 **Effect of Posterior Cruciate Ligament Resection on Tibiofemoral Joint Gap in Varus Osteoarthritic Knees**
[Yasushi Oshima](#); Tokifumi Majima; Norishige Iizawa; Naoya Hoshikawa; Kenji Takahashi; Shinro Takai
- 5:45 **Pre-Operative Knee Laxity Measurements Are More Indicative of TKA Outcomes Than Intraoperative Assessments**
Edgar Wakelin; Joshua Twiggs; Ella Moore; [Brad Miles](#); Andrew Shimmin; David Liu
- 5:51 **A Load Measuring Device Can Achieve Fine Tuning of Mediolateral Load at Knee Replacement but May Lead to a More Lax Knee State**
William Manning; Alasdair Blain; [Antony K Sorial](#); Lee Longstaff; David Deehan

Unicompartmental Knee Arthroplasty

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 6

Moderators: Justin Cobb, Stefaan Van Onsem

- 5:15 **Correction of Alignment (HKA Angle) Predicts Reduction of Dynamic Loads in Gait Following Medial Unicompartmental Knee Replacement.**
[Chukwudi Uzoho](#); [Joby John](#)
- 5:21 **UKA With Portable Navigation**
[Yoshifumi Namba](#); Norifumi Umehara
- 5:27 **Does Unicompartmental Knee Arthroplasty Have Worse Outcomes in Spontaneous Osteonecrosis of the Knee Than in Medial Compartment Osteoarthritis? a Systematic Review and Meta-Analysis**
[Moon Jong Chang](#); Seung-Baik Kang; Chong Bum Chang; Chan Yoon; Whang Kim; Joung Youp Shin; Dong Whan Suh; Jong Byung Oh; Su Jin Kim; Soo Hee Choi; Su Jin Kim; Hye Su Baek
- 5:33 **The Relationship Between the Alignment of UKA Component and Radiolucent Line**
[Yoshiaki Miyake](#); Yoshifumi Namba; Norifumi Umehara; Shigeru Mitani
- 5:39 **A Case of Pseudomeniscus Impingement After Unicompartmental Knee Arthroplasty**
[Yu Nagashima](#); Masashi Hirakawa; Shinichi Ikeda; Hiroshi Tsumura
- 5:45 **Second Surgery Following Partial Knee Replacement Is Functionally Superior With Higher Patient Satisfaction Than Primary Total Knee Replacement**
[Amy Garner](#); Justin Cobb
- 5:51 **Long-Term Results of Mobile-Bearing Unicompartmental Knee Arthroplasty for Spontaneous Osteonecrosis of the Knee**
[Shinichi Fukuoka](#); Kenji Fukunaga; Kei Taniura; Takeharu Sasaki
- 5:57 **Accuracy of Intraoperative Robotic-Arm Assisted Unicompartmental Knee Replacement Coronal Alignment With Standing Long Leg Postoperative Alignment**
[Martin Roche](#); Rushabh Vakharia; Tsun Yee Law; Kevin Wang; Jim Nevelos

Wear & Retrieval Analysis

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 7

Moderators: Pat Campbell, Matthew Teeter

- 5:15 **New Evidence of Adverse 3rd-Body Wear Mechanisms in Large-Diameter MOM Retrievals**
[Ian Clarke](#); Jean Yves Lazennec; Alun John; E.J. Smith; Thomas Donaldson
- 5:21 **A Retrieval Analysis of Oxinium Heads: Do Oxinium Heads Decrease Tribocorrosion in Total Hip Arthroplasty?**
Lydia Weitzler; Chadwick Hampton; [Christina Esposito](#); Elexis Baral; Timothy Wright; Mathais Bostrum
- 5:27 **Unequivocal Retrieval Evidence That Metal-Rimmed Hip Liners and Acetabular Shells Promote Release of Large Metal Particles During Repetitively Consistent Impingement Episodes**
[Ian Clarke](#); Thomas Donaldson; Jean Yves Lazennec
- 5:33 **A Taper Impaction Technique to Eliminate Trunionniosis**
[Kambiz Behzadi](#)
- 5:39 **Fretting Initiated Crevice Corrosion of Stainless Steel on Stainless Steel**
David Pierre; [Jeremy Gilbert](#)
- 5:45 **Gravimetric and CMM Validation of Wear in Edge-Loaded MOM Cups - a 10-Million Cycle Simulator Study Using Inverted-Cup Test Mode**
[Ian Clarke](#); Zhen Lu; Eddie Ebramzadeh; Thomas Donaldson

- 5:51 **The Wear of Poly-Ether-Ether-Ketone (PEEK) Based Bearing Couples Subject to Different Lubricant Protein Concentrations Under Kinematics Relevant to Total Knee Replacements**
[Kathryn Chamberlain](#); Kenneth Rankin; David Deehan; Philip Hyde
- 5:57 **In Vivo Polyethylene Wear Measurement of a Contemporary Total Knee Arthroplasty Implant: A Minimum 10 Year Follow-Up**
[Matthew Teeter](#); Jacob Wihlidal; Richard W McCalden; Xunhua Yuan; Steven MacDonald; Brent Lanting; Douglas Naudie

Wear & Tribology

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Third | Kiosk: 8

Moderators: Anne Neville, Markus Wimmer

- 5:15 **Start-Up Friction Testing for Evaluating Tribological Performance of Cartilage**
[Yohei Otsu](#); Shinji Mikami; Masaya Higaki; Tatsuya Otsu; Naoya Hatano; Mitsuhiro Matsumoto; Daisuke Kono; Atsushi Matsubara; Naohide Tomita
- 5:21 **Proposal of Destruction Energy Index for Evaluating Tribological Performance of Joint**
[Masaya Higaki](#); Yohei Otsu; Naoya Hatano; Shinji Mikami; Tatsuya Otsu; Mitsuhiro Matsumoto; Atsushi Matsubara; Daisuke Kono; Naohide Tomita
- 5:27 **Destruction Energy Index (DEI) of Vitamin E-Blended UHMWPE**
[Naoya Hatano](#); Masaya Higaki; Yohei Otsu; Tatsuya Otsu; Shinji Mikami; Mitsuhiro Matsumoto; Daisuke Kono; Atsushi Matsubara; Naohide Tomita
- 5:33 **Wear and Deformation of Metal-on-Polyethylene Bearings Under Edge Loading Conditions: A Cross-Laboratory Study**
Mazen Al-Hajjar; [Oscar O'Dwyer Lancaster-Jones](#); Casey Wise; Elizabeth Hippensteel; Louise M. Jennings; John Fisher
- 5:39 **Effectiveness of Theoretical/Empirical Relationship in Predicting Polyethylene Wear**
[Satya Nambu](#); Danny Chang
- 5:45 **Friction Factor and Wear Determinations of Metal-on-Polyethylene Hip Implants Using an Anatomical Motion Hip Simulator.**
[Jason Langhorn](#); Chase Maag; Brandon Wolters; Corey Laukhuf
- 5:51 **First in Vitro Motion-Load-Motion Wear Test of Reverse Shoulder Replacements**
[Israel Ramirez-Martinez](#); Thomas Joyce; Simon Smith
- 5:57 **In Vitro Wear Testing of a New Prosthetic Shoulder System in Anatomic Configuration**
[Carlo De Biase](#); Gennaro Fiorentino; Francesco Catellani; Giovanni Ziveri; Lorenzo Banci; Alessio Meoli; Hans-Rudolf Bloch

Implant Positioning in TKA

Thursday 11 Oct, 5:15PM - 6:15PM

Young Investigators Session | Floor: Second | Kiosk: Geilgud

Moderators: Jan Victor, Darryl D'Lima

Guest Mentor: Mark Heldreth

- 5:19 **Analysis of Malpositioning of Total Knee Implants Under Dynamic Activities Using Musculoskeletal Multibody Simulation**
[Maeruan Kebbach](#); Andreas Geier; Martin Darowski; Sven Krueger; Christoph Schilling; Thomas M. Grupp; Rainer Bader
- 5:26 **Influence of Posterior Tibial Slope on One-Year Postoperative Patient Satisfaction After Posterior-Stabilized Total Knee Arthroplasty**
[Shotaro Tachibana](#); Hirotsugu Muratsu; Masato Kamimura; Kemmei Ikuta; Takashi Oshima; Takaaki Koga; Tomoyuki Matsumoto; Akihiro Maruo; Hidetoshi Miya; Ryosuke Kuroda
- 5:33 **Utility of the Skyline Radiograph in the Assessment of Malrotation in the Painful Total Knee Arthroplasty: a Radiographic Review**
[Colleen Weeks](#); Catherine Hui; Hector Aguilar; Jacob Jaremko
- 5:40 **Accuracy of a Patient Specific Patella Guide, Relationships Between Patella Button Placement and Patient Reported Outcome**
[Edgar Wakelin](#); Joshua Twiggs; Justin Roe; Jonathan Bare; Andrew Shimmin; Leina Suzuki; Brad Miles
- 5:47 **Mechanical Versus Kinematic Alignment in Total Knee Arthroplasty: Does the Bone Density Profile at the Implant-Tibia Interface Differ?**
[Monil Karia](#); Adam Ali; Simon Harris; Richie Abel; Justin Cobb
- 5:54 **Conservative Approaches to Kinematic Alignment and Their Impact on Patient Reported Outcomes**
[Joshua Twiggs](#); Andrew Shimmin; Michael Solomon; Edgar Wakelin; Brad Miles
- 6:01 **Clinical Outcome of Medial Pivot Compared With Posterior Stabilized Total Knee Arthroplasty in the Same Patients.**
[Shogo Ikeda](#); Kohei Yabuno; Noriyoshi Sawada

Outcomes Measurement

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Second | Kiosk: 10

Moderators: Bernd Grimm, Alison McGregor

- 5:15 **Anterior Versus Posterior Approach Total Hip Arthroplasty: Patient Reported and Functional Outcomes in the Early Post-Operative Period**
Alexander Martusiewicz; [Ryan Harold](#); Dimitri Delagrammaticas; Matthew Beal; David Manning
- 5:21 **Effect of Smoking Status on Pain Intensity and Opioid Consumption in Total Hip Arthroplasty Patients**
[Randa Elmallah](#); Jennifer I. Etcheson; Nicole E. George; Chukwuweike U. Gwam; John M. Tarazi; Benjamin M. Stronach; Ronald Delanois
- 5:27 **Relationship Between Muscle Strength and Functional Level in Patients With Revision Total Knee Arthroplasty**
Musa Eymir; Bayram Unver; [Vasfi Karatosun](#)
- 5:33 **The Effect of Pain and Kinesiophobia Level on Postoperative Functional Outcomes in Patients With Total Knee Arthroplasty**
Musa Eymir; Bayram Unver; [Vasfi Karatosun](#)
- 5:39 **: Post TKR Home Physiotherapy for a Period of 6 Weeks Reduces the Rate of Post TKR Manipulation Under Anesthesia (MUA) Rate**
[Sanjay Londhe](#); Ravi Shah

Biology & Biomaterials

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Second | Kiosk: 11

Moderators: Brigitte Von Rechenberg, Philippe Kretzer

- 5:15 **Preparation of rGO/HA Composite Scaffold and Study on Osteogenesis Effect of It in Vitro and in Vivo**
Kai Zhou; [Tingxian Ling](#); Duan Wang; Haoda Yu; Zeyu Luo; Zongke Zhou
- 5:21 **Fracture Toughness at the Interface Between Cortical Bone and Cancellous Bone**
Rajesh Ghosh; [Pankaj Shitole](#); Arpan Gupta
- 5:27 **The Effect of Material Heterogeneity, Element Type, and Down-Sampling on Trabecular Stiffness in Micro Finite Element Models**
[Nikolas K Knowles](#); Kenneth Ip; Louis Ferreira
- 5:33 **Trabecular Titanium: Overview of the Biomedical Applications of an Advanced Cellular Solid Biomaterial.**
[Leo Massari](#); Alessandro Bistolfi; Pier Paolo Grillo; Araldo Causero
- 5:39 **Ceramic on Ceramic Total Hip and Significant Trauma: What Risks?**
Laurent Sedel; [Pascal Bizot](#)
- 5:45 **Chondrocytes on CH3-SAMs Form Cell Aggregation as on the Fibroin Substrate**
[Shoji Tatehata](#); Naohide Tomita; Yasushi Tamada; Akira Tatsumi; Rin Hiraiwa; Yusuke Arima
- 5:51 **Inhibition of Syndecan-4 Reduces Cartilage Degeneration in Murine Models of Osteoarthritis Through Downregulation HIF-2 α via miR-96-5p**
[Kai Zhou](#); Tingxian Ling; Zongke Zhou
- 5:57 **Assesment of Micro Architecture of Bone and Biomechanical Properties of Proximal Femur for Hip Fractures Risk : A Pilot Study**
[Rajendra Kumar Kanojia](#)

Advances in Positioning & Alignment in THR

Thursday 11 Oct, 5:15PM - 6:15PM

ePoster with Short Talk | Floor: Second | Kiosk: 12

Moderators: Eduardo Garcia-Rey, Mohamed Elkabbani

- 5:15 **Evaluation of the Implanted Position of microMAX Stem Using Pre-Operative Planning Software**
[Yoshihiro Shibata](#); Hirotaka Iguchi; Satona Murakami; Hiroto Mitsui
- 5:21 **Effectiveness of CT-Based Navigation for Femoral Neck Cut in Total Hip Arthroplasty**
[Takashi Tsujimoto](#); Nobuo Nakamura; Junghyo Kim; Nobuhiko Sugano
- 5:27 **The Need for Patient-Specific "Safe Zones" in Total Hip Arthroplasty**
Jonathan Vigdorich; Zlatan Cizmic; Ameer Elbuluk; Michael Bradley; Michael Miranda; David Watson; Douglas Dennis; [Stefan Kreuzer](#)
- 5:33 **The Patient Specific Template for Femoral Neck Cut and Adjustment of the Stem Alignment With the Modified Watson-Jones Anterolateral Approach**
[Makoto Kitada](#); Katsuya Nakata; Satoru Tamura
- 5:39 **Clinical Accuracy of a Smart Mechanical Navigation System for Cup Alignment as Measured by Post-Operative CT**
William Murphy; Jens H. Kowal; [Stephen Murphy](#)
- 5:45 **Measuring Pelvic Tilt Using Inertial Measurement Units for Optimising Total Hip Arthroplasty**
Mark Elliott; [Richard King](#); Xueyang Wang; Arham Qureshi; Abhinav Vepa
- 5:51 **Does an Intraoperative Measurement of Acetabular Cup Orientation Predict the Postoperative Acetabular Cup Orientation?**
Brett Hayden; [Stephen Murphy](#); Ho Hyun Yun; Daniel Ward; Guoyan Zheng

PJI: Risk Factors & Diagnosis

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 1

Moderators: Javad Parvizi, Brian Godshaw

- 7:30 **Comparison of Synovial Fluid and Serum Procalcitonin for Diagnosis of Periprosthetic Joint Infection: A Prospective Cohort Study in 32 Patients**
[Paphon Sa-Ngasoongsong](#); Siwadol Wongsak; Chavarat Jarungvittayakon; Kawee Limsamutpetch; Thanaphot Channoom; Viroj Kawinwonggowit
- 7:36 **CRP (C Reactive Protein) Level After Total Knee Replacement in Indian Population- Does It Follow Anglo-Saxon Trend ?**
[Sanjay Londhe](#); Ravi Shah
- 7:42 **Seasonal Relationship of Prosthetic Joint Infection Following Primary Total Joint Arthroplasty in a Sub-Tropical Climate**
[Brian Godshaw](#); Tara Saxena; Michael Wong; George Chimento
- 7:48 **Obesity Increases Risk of Infection in Revision Total Hip Arthroplasty**
[Katrijn Smulders](#); Joris Bongers; Marc Nijhof
- 7:54 **Changes in Invasiveness and Latent Infection Rate Associated With Switching in Approach of Total Hip Replacement**
[Hiroaki Kijima](#); Kenji Tateda; Shin Yamada; Satoshi Nagoya; Masashi Fujii; Ima Kosukegawa; Naohisa Miyakoshi; Yoichi Shimada
- 8:00 **An Enhanced Understanding of Culture-Negative Periprosthetic Joint Infection With Next Generation Sequencing**
Karan Goswami; Timothy Tan; Majd Tarabichi; Noam Shohat; [Javad Parvizi](#)

Solutions For Treatment of PJI

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 2

Moderators: Gwen Sys, Morteza Meftah

- 7:30 **Long-Term Clinical Outcome of Two-Stage Revision Surgery for Infected Hip Arthroplasty Using Cement Spacer: Culture Negative Versus Culture Positive**
[Joon-Soon Kang](#); Young Sook Park; Yeop Na; Bong Seong Ko
- 7:36 **A Comprehensive Review of the Use of Silver Coated Megaprotheses for Infection Control Following Tumor Resection**
Robert Eberle; [Richard Buch](#)
- 7:42 **Outcome of the Treatment of Knee Prosthetic Joint Infection**
[Yohsuke Matsumura](#); Syuya Ide; Takafumi Shimazaki; Masaaki Mawatari
- 7:48 **Debridement, Antibiotics and Implant Retention (DAIR) Following Total Hip and Knee Replacements**
[Kodali Siva Rama Krishna Prasad](#); Salim Punjabi; A Manta; Chanakya Silva; Stephen Sarasin; Peter Lewis
- 7:54 **Hand-Made Articulating Cement Spacers in Two Stage Revision for Infected Total Hip Arthroplasty: A Prospective Cohort Study**
[Devarshi Rastogi](#); Mukesh Kumar Dwivedi
- 8:00 **Two to Eight Year Results of the Use of Megaprosthesis for Infected End-Stage Revision Cases**
Robert Eberle; [Richard Buch](#)
- 8:06 **The Chronic Salvage Patient: When Is Enough, Enough?**
Robert Eberle; [Richard Buch](#)

Revision Arthroplasty: Implants & Surgical Techniques

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 3

Moderators: Yixin Zhou, Eduardo Garcia-Rey

- 7:30 **3d Printed Acetabular Components for Complex Revision Arthroplasty. a Case Series.**
[Chris Wilson](#); Mark Inglis; Daniel George
- 7:36 **PSI for One-Stage and Two-Stages of Revision TKA Using CCK and Hinged Implants**
[Mahmoud Hafez](#); Vikas Seth
- 7:42 **Cup Migration After Acetabular Revision Surgery With Impaction Bone Grafting and a Cemented Cup in Large Bone Defects**
[Eduardo Garcia-Rey](#); Eduardo Garcia-Cimbrela
- 7:48 **Reconstruction of Severe Superior Acetabular Bone Defects in Revision Total Hip Arthroplasty With Superior Extended Fixation Using Porous Metal Augments**
Hao Tang; [Yixin Zhou](#); Huang Yong; Shengjie Guo; Baochun Zhou; Hongyi Shao

7:54 **A New Custom-Made Porous Titanium Device in Knee Revision Surgery: Early Results and Technical Notes**

Luca Cavagnaro; [Giorgio Burastero](#); Francesco Chiarlone; Lamberto Felli

8:00 **In Vitro Wear Analysis of the Constrained Knee Systems**

[Satya Nambu](#); Anish Shivaram; Gary Hines

TKR - Clinical Results

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 4

Moderators: Bernd Grimm, William Walter

7:30 **Total Knee Arthroplasty Using Only Cementless Component – a Minimum 10 Years Follow-Up**

[Amr Osman](#); Samih Tarabichi; Feras Haidar

7:36 **Early Results of the Attune Knee System: A Minimum 2 Year Follow Up Observational Study**

[Chris Wilson](#); James Sires; Stephanie Lennon; Mark Inglis

7:42 **Cruciate Retaining Implant Has Superior Outcomes Over Posterior Stabilized Implant in Obese Patient and It Is a Better Choice to Reduce Early Post-Operative Complications**

[Feras Haidar](#); Samih Tarabichi; Amr Osman; Mohamed Elkabbani; Tamer Mohamed

7:48 **Short Term Clinical Results of Total Knee Arthroplasty With JourneyII BCS**

[Taisei Kawamoto](#); Satoshi Iida

7:54 **Two Cases Reports of Total Knee Arthroplasty (TKA) With Schizophrenia**

[Akiko Sato](#)

8:00 **Correlation Between the Tibiofemoral Anteroposterior Position in Knee Mid-Flexion Range and Clinical Results in Journey BCS-TKA**

[Hiroshi Kiyomatsu](#); Kazunori Hino; Tatsuhiko Kutsuna; Kunihiro Watamori; Tomofumi Kinoshita; Hiromasa Miura

8:06 **Mid-Term Outcomes and Complications of Total Knee Arthroplasty: A Review of 404 Knees in a Single Institute, FINE Knee (CR).**

[Kazuichiro Hori](#); Kunio Nakane; Akira Yoshida; Masashi Otani; Satoshi Terada

TKR - Clinical Results & Complications

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 5

Moderators: Jean-Yves Jenny, Babar Kayani

7:30 **Body Mass Index Does Not Impact the 13 Year Survival After Mobile Bearing Total Knee Arthroplasty**

[Jean-Yves Jenny](#); Dominique Saragaglia

7:36 **Long-Term Results of Total Knee Arthroplasty With Single-Radius Versus Multi-Radius Posterior-Stabilized Prosthesis in Rheumatoid Arthritis**

[Zhenyu Luo](#); Zongke Zhou; Fuxing Pei

7:42 **Medial Tibial Periprosthetic Bone Resorption and Its Effect on Clinical Outcomes After Total Knee Arthroplasty: Cobalt-Chromium Versus Titanium Implants**

Dong Whan Suh; [Moon Jong Chang](#); Seung-Baik Kang; Chong Bum Chang; Chan Yoon; Whang Kim; Joung Youp Shin; Jong Byung Oh; Su Jin Kim; Soo Hee Choi; Su Jin Kim; Hye Su Baek

7:48 **Test Method to Investigate Secondary Lockdown Bolt Loosening in Total Knee Arthroplasty**

Saandeep Mani; [James Wernle](#)

7:54 **Internal Mal-Rotation of the Tibial Component Is a Cause of Flexion Contracture After TKR : In-Vivo Study**

[Amr Osman](#); Samih Tarabichi; Feras Haidar

8:00 **Anterior Knee Pain After Total Knee Arthroplasty**

[Seunghyun Jung](#)

8:06 **A Holistic Approach to Optimize the Pain Management Strategy After Tka: A Prospective Observational Report**

[Philippe Van Overschelde](#); Alain Kalmar

8:12 **Concomitant Ankle Osteoarthritis Is Related to Increased Ankle Pain and a Worse Clinical Outcome Following Total Knee Arthroplasty**

[Seung-Baik Kang](#); Chong Bum Chang; Moon Jong Chang; Whang Kim; Joung Youp Shin; Dong Whan Suh; Jong Byung Oh; Su Jin Kim; Soo Hee Choi; Su Jin Kim; Hye Su Baek

8:18 **Over 15 Years of Long Term Clinical Results of Cementless CR Type TKA; Hi-Tech Knee II in Patients With Rheumatoid Arthritis**

[Hajime Yamanaka](#); Hiroshi Tamai; Munetaka Suzuki; Tatsuya Kobayashi; Yawara Eguchi

TKR - Outcomes

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 6

Moderators: Arun Mullaji, Gareth Jones

- 7:30 **Association Between Tibial Coronal Alignment in Posterior-Stabilized Primary Total Knee Arthroplasty and Patient Satisfaction: Using a 3D-Matching Evaluation Method**
[Kazushige Seki](#); Atsunori Tokushige; Takashi Imagama; Toshihiro Seki; Hiroyoshi Ogasa
- 7:36 **Functional Prognosis of Total Knee Arthroplasty in Osteoporotic Elderly Patients.**
[Yukari Watanabe](#); Seizo Yamamoto; Kazuya Isawa; Naoki Yamada; Yu Hirota
- 7:42 **The Effects of Knee Swelling and Pain on Early Patients Outcomes After Primary Total Knee Arthroplasty**
Musa Eymir; Bayram Unver; [Vasfi Karatosun](#)
- 7:48 **A Mid-Term Follow-Up Study of Quality of Life After Bilateral Total Knee Arthroplasty**
[Takehiko Sugita](#); Toshimi Aizawa; Naohisa Miyatake; Seiya Miyamoto; Akira Sasaki; Ikuo Maeda; Tetsuo Honma; Masayuki Kamimura; Atsushi Takahashi
- 7:54 **Ability of Walking After Total Knee Arthroplasty Is Correlated With Preoperative Berg Balance Scale**
[Ken Okazaki](#); Hideki Mizu-uchi; Satoshi Hamai; Yukio Akasaki; Yasuharu Nakashima
- 8:00 **Missed Pathology- Is This the Cause of Unhappy TKR Patient?**
[Sanjay Londhe](#); Ravi Shah
- 8:06 **Patellofemoral Arthroplasty Improves Gait in Isolated Patellofemoral Arthritis, a Prospective Cohort Gait Analysis Study.**
[Aliya Choudhury](#); Edouard Auvinet; Rhiannon Lambkin; Farhad Iranpour; Duncan Tennent; Caroline Hing; Justin Cobb
- 8:12 **Lower Knee Score but Better Survival of Mobile Bearing TKAs When Patella Is Resurfaced: A Matched-Paired Retrospective Study.**
[Jean-Yves Jenny](#); Dominique Saragaglia
- 8:18 **Returning to Work After Journey II Total Knee Replacement**
[Saif Ul Islam](#); Joanne Banks; Alasdair Santini; Jill Pope; Joanne Yorke

Total Shoulder - Biomechanics & Fixation

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 7

Moderators: Andrew Amis, Antonio Ramos

- 7:30 **Impact of Screw Preload on Primary Stability in Reverse Shoulder Arthroplasty**
[Mehul Dharia](#); Saandeep Mani
- 7:36 **Evaluation of Implant Fixation in Reverse Total Shoulder Arthroplasty: A Prospective, Randomized Clinical Trial**
[Madeleine Van De Kleut](#); George Athwal; Xunhua Yuan; Matthew Teeter
- 7:42 **Effect of Screw Length and Screw Number on Reverse Shoulder Glenoid Fixation**
Christopher Roche; [Jose Yegres](#); Nick Stroud; Jennifer VanDeven; Thomas Wright; Pierre Henri Flurin; Joseph Zuckerman
- 7:48 **Articular Impingement in Reverse Shoulder During Activities of Daily Living: A Biomechanical Analysis With the SMR Prosthesis**
[Andrea Fattori](#); Andreas Kontaxis; Xiang Chen; Gabriele Vidoni; Alessandro Castagna; Michele Pressacco
- 7:54 **Cuff Tear Arthropathy: Determination of Predisposing Scapular Anatomy With a Statistical Shape Model.**
[Alexander Meynen](#); Filip Verhaegen; Philippe Debeer; Lennart Scheys
- 8:00 **Developing Robust Non-Invasive Shoulder Biomechanics Analyses of Pre-Operative Reverse Total Shoulder Replacement Patients**
Antonia Zaferiou; SukHwan Jang; Matt Perek; Avi Agarwalla; [Christopher Knowlton](#); Anthony Romeo

Arthroplasty Beyond the Knee & Hip

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Third | Kiosk: 8

Moderators: Angus Wallace, Cyrus Broden

- 7:30 **In Vivo Measurement of Distance Between Scapular Neck and Polyethylene Insert During Active External Rotation in Shoulders With Grammont Type Reverse Prosthesis**
[Keisuke Matsuki](#); Kei Matsuki; Hiroyuki Sugaya; Norimasa Takahashi; Shota Hoshika; Morihito Tokai; Yusuke Ueda; Hiroshige Hamada; Scott Banks
- 7:36 **Inter-Surgeon Variability in Using 3D Planning Software for Anatomic Total Shoulder Arthroplasty: an Analysis of 360 Cases**
[Alexander Greene](#); Emilie Cheung; Sandrine Polakovic; Matthew Hamilton; Richard Jones; Ari Youderian; Thomas Wright; Paul Saadi; Joseph Zuckerman; Pierre Henri Flurin; Ira Parsons
- 7:42 **Does Preoperative Planning Simulation Software Aid Implant Positioning in TSA?**
[Vani Sabesan](#); Diego L Lima; Jonathan P. Yawman; James Whaley; Danielle L. Malone
- 7:48 **Accuracy of Preoperative Templating in Shoulder Arthroplasty**
[Vani Sabesan](#); Diego L Lima; Danielle L. Malone; Gregory J. Gilot
- 7:54 **Clinical Results of Kudo Total Elbow Arthroplasty for Patients With Rheumatoid Arthritis**
[Hiroki Nishikawa](#); Katsunori Inagaki; Jun Ikeda; Keikichi Kawasaki; Kazunari Tomita

- 8:00 **Retrieval Analysis of Thirty Explanted NeuFlex Metacarpophalangeal Joint Prostheses**
[Thomas Joyce](#); Grey Giddins
- 8:06 **The Preventive Role Against Adjacent Segment Disease of Interspinous Process Device After a Rigid Instrumented Level in Lumbar Degenerative Disease.**
[Haoju Lo](#)
- 8:12 **Clinical and Radiologic Results According to the Prosthesis Design and Placement in Reverse Total Shoulder Arthroplasty**
Kyu-Hak Jung; [Young-Kyu Kim](#); Jin-Hun Hong
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Imaging

Friday 12 Oct, 7:30AM - 8:30AM

Young Investigators Session | Floor: Second | Kiosk: Geilgud

Moderators: Matthew Teeter, Patrick Meere

Guest Mentor: Jean-Yves Lazennec

- 7:34 **The Precision of Low Field MRI to Measure Prosthetic Migration; a Cadaver Study.**
[F.F. Schroder](#); R. Huis In't Veld; F.J.J. Simonis; C.E. Post; A.J.H. Vochteloo; Nico Verdonschot
- 7:41 **Joint Surface Contact Estimation Using 3D Scan and Navigation System: Preliminary Results**
[Edouard Auvinet](#); Arash Aframian; Catherine Van Der Straeten; Caroline Hing; Justin Cobb; Farhad Iranpour
- 7:48 **Evaluation of Tibial Component Rotation in Painful Total Knee Arthroplasties by MRI Enhanced With Metal Artifact Reduction Technique.**
[Mohamed Elkabbani](#); Feras Haidar; Tamer Mohamed; Amr Osman; Samih Tarabichi
- 7:55 **A Guide to Diagnose Failed TKA; a Case Study Comparing Low-Field and High-Field MRI.**
[C.E. Post](#); F.F. Schroder; F.J.J. Simonis; A. Peters; R. Huis In't Veld; Nico Verdonschot
- 8:02 **Magic Angle Directional Imaging (MADI) in a Partially Torn Canine ACL Provides Quantification of Ligament Health.**
[Karvn Chappell](#); Catherine Van Der Straeten; Donald McRobbie; Wladyslaw Gedroyc; Djordje Brujic; Richard Meeson
- 8:09 **Reproducibility of Pelvic Sagittal Inclination While Acquiring Radiographs in Supine and Standing Postures**
[Keisuke Uemura](#); Masaki Takao; Yoshito Otake; Futoshi Yokota; Hidetoshi Hamada; Takashi Sakai; Yoshinobu Sato; Nobuhiko Sugano
- 8:16 **Accuracy of Different CT-Based Methods for Measuring Implant Placement Errors**
[Valentina Campanelli](#); Nathan Netravali; Hosna Akhlaghpour; Rocio Lozano; Joel Zuhars
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TKR - Kinematics

Friday 12 Oct, 7:30AM - 8:30AM

Young Investigators Session | Floor: Second | Kiosk: 10

Moderators: Scott Banks, Peter Walker

Guest Mentor: Nico Verdonschot

- 7:34 **Total Knee Kinematics Determine Patient Satisfaction After TKA**
[Stefaan Van Onsem](#); Matthias Verstraete; Catherine Van Der Straeten; Jan Victor
- 7:41 **Differential Kinematics During Stair Ascent and Descent in Medial Pivot Design Total Knee Arthroplasty**
[Hayato Mine](#); Ryuichi Gejo; Makiko Nogami; Tomoatsu Kimura
- 7:48 **Rotational Soft-Tissue Balance Highly Correlates With Rotational Kinematics in Total Knee Arthroplasty**
[Tomofumi Kinoshita](#); Kazunori Hino; Tatsuhiko Kutsuna; Kunihiko Watamori; Hiroshi Kiyomatsu; Hiromasa Miura
- 7:55 **In-Vivo, Multicenter Assessment of Knee Kinematics for Subjects Having Patient-Specific and Traditional Total Knee Arthroplasty**
Garrett Dessinger; Manh Ta; Ian Zeller; [Jarrod Nachtrab](#); Adrija Sharma; Richard Komistek
- 8:02 **A Comparison of Gait at a Five-Year Follow Up in Robotic Assisted vs Conventional Unicompartmental Knee Arthroplasty**
[Lindsay Millar](#); Matthew Banger; Philip Rowe; Mark Blyth; Bryn Jones; Angus Mclean
- 8:09 **Motion Analysis of Kneeling After Total Knee Arthroplasty With Ball and Socket Joint**
[Norifumi Umehara](#); Yoshifumi Namba
- 8:16 **Effect of Patellar Shape to the Kinematics of Tibiofemoral and Patellofemoral Joint: Model Analysis**
[Michihiko Fukunaga](#); Yuki Kawagoe; Tomoko Kajiwara; Ryuji Nagamine
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TKR - Implant Fixation

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Second | Kiosk: 11

Moderators: Jonathan Jeffers, Yasushi Oshima

- 7:30 **Extraction Force Is Not an Indicator for Primary Stability of Cementless Tibial Trays**

Fred Wentorf; [Jeffrey Bischoff](#); Charlie Parduhn; Nick Drury; Brian Roach; John Kyle Mueller; Marc Bandi

- 7:36 **Influence of Physiological Loading Following Intra-Operative Lipid/Marrow Infiltration and Intra-Operative Motions Upon Micromotion**
[Eric Peckenpaugh](#); Chase Maag; Amber Metcalfe; Jason Langhorn; Mark Heldreth
- 7:42 **Distribution of Bone on-Growth in Tibial Metaphyseal Sleeves: A Retrieval Analysis**
Lydia Weitzler; Ugonna Ihekweazu; [Christina Esposito](#); Timothy Wright; Douglas E Padgett
- 7:48 **Ps Devices Are Not Worst Case for Tray Fixation in Cementless Tka**
[Jeffrey Bischoff](#); Marc Bandi; Eik Siggelkow; Fred Wentorf; Brian Roach; Nick Drury
- 7:54 **Does Drill Design Affect the Implantation of a Cementless Tibia Tray?**
[John Kyle Mueller](#); Brian Roach; Charlie Parduhn
- 8:00 **Does Implant Fixation Affect Early Return to Function Following Primary Total Knee Arthroplasty?**
Ajay Rastogi; Kristin Robinson; [Kipling P Sharpe](#); Russell Cohen; Michael A Masini; Marcus Barnett
- 8:06 **The Effect of Coating Thickness and Morphology on the Primary Fixation of a Femoral TKA Component**
[Esther Sanchez](#); Christoph Schilling; Thomas M. Grupp; Nico Verdonschot; Dennis Janssen
- 8:12 **Bone Ingrowth Into EBM Implants**
William Walsh; Matt Pelletier; Michael Dan; [Jonathan Greenwald](#); Lewis Harrison; Jessee Hunt

Let Me Show You My Invention!

Friday 12 Oct, 7:30AM - 8:30AM

ePoster with Short Talk | Floor: Second | Kiosk: 12

Moderators: Josh Jacobs, Seth Greenwald

- 7:30 **The ENGAGE Locking Knee Implant: A TKR System for Use as an Alternative to Knee Arthrodesis**
[John DesJardins](#); Eric Lucas; Kim Chillag; Frank Voss
- 7:36 **Concept of a New Approach to Support Total Hip Replacement Procedures by Surgical Navigation**
[Juergen Wahrburg](#); Oliver Gieseler; Hubert Roth
- 7:42 **Image Guided Surgery (Or Navigation) Software Optimization**
[Davor Saravanja](#); Greg Roger
- 7:48 **iHip Surgical innovative Total Hip Arthroplasty Proposal**
[Anatol Podolsky](#)
- 7:54 **A Trial Femoral Head for Intraoperative Evaluation of Combined Anteversion**
[Kazutaka So](#)
- 8:00 **Fiducial Surgical Navigation Screw**
[Davor Saravanja](#); Greg Roger
- 8:06 **Antimicrobial Dispensing Knee Spacer for Improved PJI Treatment**
[Chadd Clary](#); Jeff Castleberry
- 8:12 **How Can an Electronic Tool Improve the Results After TKA? Comparing the Results Including 1 Year FU**
[Thomas Paszicsnyek](#); Christoph Stiegler
- 8:18 **A Novel Guide for Locating Femoral Head Center in Knee Surgeries**
[Ming Chou Ku](#)

Cost-Effectiveness & Economic Challenges

Friday 12 Oct, 8:30AM - 9:30AM

Podium | Floor: Third | Room: Whittle

Moderators: Richard Field, Josh Jacobs

- 8:31 **Arthroplasty Innovations Versus Regulatory Authorities and Registries: Born Enemies?**
[Keith Tucker](#)
- 8:41 *Discussion*
- 8:46 **Higher Volume Surgeons Have Lower Cost, Readmissions, and Mortality After THA and TKA**
[William Murphy](#); Geoffrey Stoker; Tony Cheng; Benjamin Lin; David Terry; Stephen Murphy
- 8:52 **Evidence-Based Thresholds for the Volume and Cost Relationship in Total Hip Arthroplasty: Outcomes and Economies of Scale**
William Frankel; [Sergio Navarro](#); Heather Haeberle; Michael A Mont; Prem Ramkumar
- 8:58 **Analysis of US Hip Replacement Bundled Payments: Physician-Initiated Episodes Outperform Hospital-Initiated Episodes**
[William Murphy](#); Ahmed Siddiqi; Tony Cheng; Ben Lin; David Terry; Carl Talmo; Stephen Murphy
- 9:04 *Discussion*

- 9:10 **Can a Balanced TKA Save Money Post-Operatively?**
Matthias Verstraete; [Michael Conditt](#); James Chow; Alexander Gordon; Jeffrey Geller; Brandon Wade; Cecilia Ronning
- 9:16 **Cost Saving in Total Joints: Lessons Learned**
[Morteza Meftah](#); Ira Kirschenbaum
- 9:22 *Discussion*

Extending the Longevity of TKA: Long-term Outcomes

Friday 12 Oct, 8:30AM - 9:30AM

Podium | Floor: Third | Room: Fleming

Moderators: Jan Victor, Stefan Kreuzer

- 8:31 **Patient Satisfaction After TKA: Does TKA Design or Alignment Play a Role?**
[Jan Victor](#)
- 8:38 *Discussion*
- 8:41 **Risk Factors Associated With Manipulation Under Anesthesia After Total Knee Arthroplasty**
[Timothy H Izant](#); Sarani Tong-Ngork; Jessica Wagner
- 8:47 **International, Multi-Centre, Prospective, Observational Study of a New Medial Ball-in-Socket Knee Replacement**
Marwan Al-Zibari; [Philippe Van Overschelde](#); Samuel Everett; Irrum Afzal; John Skinner; Gareth Scott; Deairy Kader; Richard E Field
- 8:53 **Simultaneous Bilateral Total Knee Replacement Is Safe as Single Total Knee Replacement and It Is the Best Alternative for Gross Deformity**
[Feras Haidar](#); Samih Tarabichi; Amr Osman; Mohamed Elkabbani
- 8:59 *Discussion*
- 9:05 **Robotic-Arm Assisted Total Knee Arthroplasty Improves Early Functional Recovery and Time to Hospital Discharge Compared to Conventional Jig-Based Total Knee Arthroplasty: A Prospective Cohort Study**
Babar Kayani; Sujith Konan; [Jenni Tahmassebi](#); Fares Haddad
- 9:11 **Central or Medial Pivot for Mobile-Bearing TKA: A Long Term Survivorship Analysis**
[Jean-Yves Jenny](#); Dominique Saragaglia
- 9:17 **Ten to Fifteen Year Survival of Navigation-Assisted Total Knee Arthroplasty.**
[Jean-Yves Jenny](#); Dominique Saragaglia
- 9:23 *Discussion*

3D Printed Implants & PSI

Friday 12 Oct, 8:30AM - 9:30AM

Podium | Floor: Second | Room: Gielgud

Moderators: Jonathan Jeffers, Yixin Zhou

- 8:31 **3D Printed Patient-Specific Additive Manufactured Implants and Instruments for Complex Joint Reconstruction**
[Gwen Sys](#)
- 8:38 *Discussion*
- 8:41 **Implant Fixation and Early Clinical Outcomes of a 3D-Printed Acetabular Cup**
Matthew Peterson; [Hilary Feskanin](#); Yassaman Najmabadi; Raymond Robinson
- 8:47 **Managing the Large Acetabular Defect in Revision Hip Surgery: The Custom 3D Printed Titanium Solution.**
[Anna Di Laura](#); Johann Henckel; Robert Wescott; Harry Hothi; Alister Hart
- 8:53 **Satisfactory Clinical Results at 2-Years Follow-Up of a New 3d-Printed Custom-Made Acetabular Implant for Paprosky 3 Defects**
[Marieke Baauw](#); Miranda Van Hooff; Gijs Van Hellemond; Sjoerd Bulstra; Maarten Spruit
- 8:59 *Discussion*
- 9:05 **Retrieval Analysis of 3D Printed Titanium Orthopaedic Implants**
[Lorenzo Dall'Ava](#); Harry Hothi; Arianna Cerquiglini; Anna Di Laura; Johann Henckel; Paul Shearing; Alister Hart
- 9:11 **Optimisation of 3D Printed Porous Structures for Bone Ingrowth**
[Vee San Cheong](#); Paul Fromme; Aadil Mumith; Melanie Coathup; Gordon Blunn
- 9:17 **Material Properties of Laser 3D Printing Products and Conventional Role Titanium in Many Conditions**
[Hiroto Iquchi](#); Hiroto Mitsui; Gen Kuroyanagi; Takaya Terada
- 9:23 *Discussion*

Awards

Friday 12 Oct, 9:50AM - 10:50AM
Podium | Floor: Third | Room: Fleming

Moderators: David Stulberg, Catherine Van Der Straeten, Nico Verdonshot

- 9:51 **Biomimetics and Bio-Inspiration: Capturing Nature's Creativity for Innovative Solutions in Orthopedics**
[Dominique Adriaens](#)
- 10:06 **Implant and Tissue Retrieval Analysis: Learn from the Past to Improve the Future**
[Pat Campbell](#)
- 10:16 **Biomechanics Award - Challenging the Doctrine That Larger Contact Area Reduces Wear of Total Knee Replacements?**
[Hani Haider](#); Joel Weisenburger; Beau Konigsberg; Curtis Hartman; Kevin Garvin
- 10:26 **Biomaterials in Arthroplasty Award - Early Results of a Modern, Uncemented Total Knee Arthroplasty System**
Arthur Manoli, III; Jacob Markel; Natalie Pizzimenti; [David Markel](#)
- 10:36 **Lifetime Achievement Award - Evolution of Hip Arthroplasty**
[Harlan Amstutz](#)

Advanced Instrumentation for Implant Positioning - System Showcase

Friday 12 Oct, 10:50AM - 11:50AM
Podium | Floor: Third | Room: Whittle

Moderators: Patrick Meere, Ferdinando Rodriguez Y Baena

- 10:51 **Functional Implant Alignment**
Stefan Kreuzer
- 10:59 **An Image and Web-Based Smart-Tool Solution for Total Hip Arthroplasty**
Stephen Murphy
- 11:07 *Discussion*
- 11:10 **Development and Application of the Robot for the Operating Theatre of the Future**
Ferdinando Rodriguez y Baena
- 11:20 **Active Robotics for TKA: First Plan – Then Execute**
Bernard Stulberg
- 11:28 **Handheld Robotics with the Navio System**
Brian McKinnon
- 11:36 **ROSA - Powered by Science, Driven by You**
Pierre Couture
- 11:44 *Discussion*

Revision of TKA: Implants & Surgical Techniques

Friday 12 Oct, 10:50AM - 11:50AM
Podium | Floor: Third | Room: Fleming

Moderators: Charles Rivière, Steven MacDonald

- 10:51 **The Effect of Obesity on Outcomes of Primary and Revision TKA**
[Steven MacDonald](#)
- 10:58 *Discussion*
- 11:01 **What Makes Revision TKR Difficult: A Study of Fellowship Trainees and Young Joint Surgeons?**
[Philip Noble](#); Sara Stephens; Scott Mathis; Sabir Ismaily; Christopher L Peters; Richard Berger; Luis Pulido; David Lewallen; Wayne Paprosky; Daniel Le
- 11:08 *Discussion*
- 11:11 **Statistical Shape Modelling of the Femoral and Tibial Metaphysis for Applications to Revision TKA Design**
[Adam Henderson](#); Vanessa Croll; Amanda Szalkowski; Gregory Szymyd; Jeffrey Bischoff
- 11:17 **Assessing Effects of Implant Geometry on the Loaded Stability Envelope of the Contemporary Revision Knee System**
[Kaitlyn Howard](#); Fallon Fitzwater; Joe Wyss; Amitkumar Mane; Mark Heldreth; Lorin Maletsky
- 11:23 **Posterior Loading During Deep Knee Bend: A Critical Biomechanical State for Evaluating Bone Fillers in Revision Total Knee Arthroplasty**
[Mehul Dharia](#); John Armacost; Yang Son

11:29 *Discussion*

11:35 **Influence of Tibiofemoral Contact and Metal Reinforcement on Articular Surface Spine Stresses**
[Mehul Dharia](#); Douglas Wentz; Kimberly Mimnaugh

11:41 **Parametric Computational Study of the Effect of Different AORI Defect Types on Primary Stability of Sleeved Revision Tibial Tray With and Without Stem.**
[Maged Awadalla](#); Lucian Bogdan Solomon; Mark Heldreth; Paul Rullkoetter; Mark Taylor

11:47 *Discussion*

Total Shoulder Arthroplasty: The Engineer's Perspective

Friday 12 Oct, 10:50AM - 11:50AM

Podium | Floor: Second | Room: Gielgud

Moderators: Vani Sabesan, Andrew Amis

10:51 **Advanced Mechanical Testing of Shoulder Prostheses**
[Andrew Amis](#)

10:58 *Discussion*

11:01 **Biomechanical Models for Shoulder Arthroplasty**
[Scott Banks](#)

11:08 *Discussion*

11:11 **The Walch B2 Humerus: Glenoid Retroversion Is Associated With Torsional Differences in the Humerus**
Nikolas K Knowles; Sumit Raniga; Emily West; [Louis Ferreira](#); George Athwal

11:17 **Navigated vs. Non-Navigated Results of a CT Based Computer Assisted Shoulder Arthroplasty System in 30 Cadavers**
[Alexander Greene](#); Matthew Hamilton; Sandrine Polakovic; Nicole Mohajer; Ari Youderian; Thomas Wright; Ira Parsons; Paul Saadi; Emilie Cheung; Richard Jones

11:23 **Edge Loading Properties of Glenoids Articulating Against a Ceramic Humeral Head: Comparative Wear Study of Conventional and Highly Cross-Linked Vitamin E Polyethylene**
[Reto Lurf](#); Frank Dallmann; Simon Bell

11:29 *Discussion*

11:35 **Minimally Invasive Total Shoulder Arthroplasty Using a Novel Patient Specific Guide and Instrumentation System: A Cadaveric Validation**
[Joshua Giles](#); Cyrus Broden; Christine Tempelaere; Ferdinando Rodriguez-Y-Baena

11:41 **Using Finite Element Simulation for ASTM F2028 Reverse Glenoid Loosening**
[Philippe Favre](#)

11:47 *Discussion*

Robotic Surgical Systems - Surgeon Experience & Clinical Results

Friday 12 Oct, 11:50AM - 12:50PM

Podium | Floor: Third | Room: Whittle

Moderators: Stephen Murphy, Bernard Stulberg

11:51 **The Development and Use of Smart Instruments for TKA**
[Jan Victor](#)

11:58 *Discussion*

12:01 **Robotic Arm Assisted Knee Surgery, Early Experience and Clinical Outcomes**
[Fares Haddad](#)

12:08 *Discussion*

12:11 **Computer-Assisted Total Knee Arthroplasty Improves Patient Reported Outcomes**
Zlatan Cizmic; David Novikov; Nipun Sodhi; [Patrick Meere](#); Jonathan Vigdorichik

12:17 **Aim Small, Miss Small: Radiographic and Functional Outcomes of Robotic-Assisted Total Knee Arthroplasty at One Year**
[Brian Nickel](#); Kaitlin Carroll; Andrew Pearle; Laura J Kleeblad; David J. Mayman; Seth A. Jerabek

12:23 *Discussion*

12:27 **Less Iatrogenic Soft Tissue Damage in Robotic Assisted Haptically Guided Total Knee Arthroplasty When Compared With Manual Approach**
[Emily Hampf](#); Laura Yanoso-Scholl; Geoffrey H Westrich; Michael Mont

12:33 **The Learning Curve of Robotic Arm Assisted (RAA) Total Knee Arthroplasty a Prospective Evaluation and CUSUM Analysis**

[John Kelly](#); Niall Compton; Dermot Collopy; Gavin Clark

12:39 *Discussion*

TKA Wear & Retrieval Analysis: Lessons Learned

Friday 12 Oct, 11:50AM - 12:50PM

Podium | Floor: Third | Room: Fleming

Moderators: Philippe Kretzer, Anne Neville

11:51 **New RSA Technology for Assessment of Wear, Fixation and Kinematics of THA, TKA and Reversed Shoulder Arthroplasty**

[Matthew Teeter](#)

11:58 *Discussion*

12:01 **Wear Analysis of 1385 Tibial Inserts: What Factors Are Driving Performance?**

[Douglas Van Citters](#); Barbara Currier; Alexander Titus; John Currier

12:07 **Wear, Not Corrosion, Is a Feature of the Axles in Retrieved Distal Femoral Replacements**

[Pat Campbell](#); Michael S. Kung; Sang-Hyun Park

12:13 **Gait-Dependent Model of Wear From Retrieved Total Knee Replacement Components**

[Christopher Knowlton](#); Hannah Lundberg; Markus Wimmer

12:19 *Discussion*

12:25 **In-Vivo Performance of Surface-Hardened Ti-Alloy Knee Prostheses**

Hugh Jones; Joshua Choi; Ji Ma; Wilson Serem; [Sabir Ismaily](#); Philip Noble

12:31 **In Vitro Wear at the Taper-Trunnion Junction of BIOLOXdelta Hips Shown in a Multi-Station Hip Simulator**

[Rohan Bhalekar](#); Simon Smith; Thomas Joyce

12:37 *Discussion*

12:40 **Novel Assessment Methods of Wear Particles from Various Materials**

[Catherine Van Der Straeten](#)

12:47 *Discussion*

Total Shoulder Arthroplasty: The Surgeon's Perspective

Friday 12 Oct, 11:50AM - 12:50PM

Podium | Floor: Second | Room: Gielgud

Moderators: Scott Banks, Angus Wallace

11:51 **Innovations in Shoulder Arthroplasty**

[Angus Wallace](#)

11:58 *Discussion*

12:01 **Biomechanical Testing of Innovative Designs for Reversed Shoulder Arthroplasty**

[Vani Sabesan](#)

12:08 *Discussion*

12:11 **Development of a Pre-Clinical Test to Evaluate Total Shoulder Arthroplasty**

[Antonio Ramos](#); Margarida Bola; Jose Antonio Simoes

12:17 **Novel 3D-Printed Patient-Specific Guide Improves Glenoid Pin Placement Compared to Standard TSA Guide: A Cadaveric Study**

Brandon Cabarcas; Gregory Cvetanovich; [Alejandro Espinoza Orias](#); Nozomu Inoue; Anirudh Gowd; Joseph Liu; Nikhil Verma

12:23 **Laboratory and Clinical Study for Using PSI in Positioning Glenoid Components**

[Mahmoud Hafez](#)

12:29 *Discussion*

12:35 **Influence of Humeral Stemless Implant Geometries on Primary Stability Under Physiological Loading**

[Philippe Favre](#)

12:41 **Inter-Surgeon Variability in Using 3D Planning Software for Reverse Total Shoulder Arthroplasty: an Analysis of 360 Cases**

[Alexander Greene](#); Emilie Cheung; Sandrine Polakovic; Matthew Hamilton; Richard Jones; Ari Youderian; Thomas Wright; Paul Saadi; Joseph Zuckerman; Pierre Henri Flurin; Ira Parsons

12:47 *Discussion*

Smith & Nephew Lunch Symposium - Is robotic technology the solution for a personalized pathway approach to knee arthroplasty?

Friday 12 Oct, 12:50PM - 1:50PM
Podium | Floor: Third | Room: Whittle

Chairman: Jan Victor

- 12:50 **Welcome and Introduction**
[Jan Victor](#)
- 12:53 **UKA : turning to Robot for improved accuracy and quicker recovery time**
[Dinesh Nathwani](#)
- 1:05 **TKA Robotic surgical workflow in alignment and balancing**
[Peter Bollars](#)
- 1:18 **Bicruciate TKA : a new approach with Robotic technology?**
[Max Ettinger](#)
- 1:30 **Q&A session – Panel discussion**

Consensus and IBM Watson Health Lunch Symposium – The Future in Joint Arthroplasty: Joint Specific Surface Sensors TracPatch Leading the Way

Friday 12 Oct, 12:50PM - 1:50PM
Podium | Floor: Third | Room: Fleming

Moderator: David Stulberg

What is TracPatch Technology: Wearable Device Revolutionizing orthopedic care
[Chris Leslie](#), Consensus Medical Director

The Watson Health Experience and the future of TracPatch
[Deiva Ramachandran](#), Partner, IBM Watson Health Consulting Services, IBM Services

Clinical applications of TracPatch
[David Stulberg](#), TracPatch Advisory Board Head

THA Wear & Retrieval Analysis: Lessons Learned

Friday 12 Oct, 1:50PM - 2:50PM
Podium | Floor: Third | Room: Whittle

Moderators: Pat Campbell, Markus Wimmer

- 1:51 **Causes and Consequences of Tribocorrosion at Modular Junctions in TJR**
[Anne Neville](#)
- 1:58 *Discussion*
- 2:01 **Damage of the Head-Neck Junction in Hard-on-Hard Total Hip Replacements: Reactions at Implant and Tissue Levels**
[Susanna Stea](#)
- 2:08 *Discussion*
- 2:11 **Fretting-Induced Metallurgical Transformations in Ti6Al4V Alloy: From Crystalline to Amorphous**
[Abimbola Oladokun](#); Richard Hall; Michael Bryant; Anne Neville
- 2:17 **A Postmortem Study of Head-Neck Corrosion and Inflammatory Cell Infiltrates in Periprosthetic Tissues and Distant Organs**
[Deborah Hall](#); Robin Pourzal; Jennifer Wright; Stephanie McCarthy; Joshua Jacobs; Robert Urban
- 2:23 *Discussion*
- 2:27 **Mechanisms of Mechano-Tribological Imprinting in in-Vitro Fretting Corrosion of TiAlV/CoCrMo Couples**
[Alfons Fischer](#); Shanoob Balachandran Nair; Michael Herbig; Dierk Raabe; Markus Wimmer
- 2:33 **The Impact of Micro-Motion and Micro-Structure on Modular Junction Corrosion in Hip Replacements**
[Robin Pourzal](#); Deborah Hall; Hannah Lundberg; Mathew T. Mathew; Robert Urban; Joshua Jacobs
- 2:39 **The Possible Role of the Angular Gap Between Hip Stem Taper and Ball Head and the Stem Taper Profile Depth in Taper Wear and Corrosion**
Kim Haeussler; Lisa Haefner; Leonie Butenschoen; [Thomas Pandorf](#)
- 2:45 *Discussion*
-

Symposium: Solutions For Periprosthetic Joint Infections: Causes & Diagnosis

Friday 12 Oct, 1:50PM - 2:50PM

Podium | Floor: Third | Room: Fleming

Moderators: Javad Parvizi, Fares Haddad

- 1:51 **Peri-Prosthetic Infections: New Insights in Causes, Diagnosis, Biomarkers and Timing of Reimplantation**
[Javad Parvizi](#)
- 1:58 *Discussion*
- 2:01 **The Enigmas of Surgical Decision Making in Periprosthetic Infection**
[Fares Haddad](#)
- 2:08 *Discussion*
- 2:11 **Genetic Variation and Risk of PJI and Osteolytic Responses to Prosthetic Materials.**
[Mark Wilkinson](#)
- 2:18 *Discussion*
- 2:21 **Utility of Next-Generation Sequencing in the Diagnosis of Periprosthetic Joint Infection**
Karan Goswami; Majd Tarabichi; Timothy Tan; Noam Shohat; Abtin Alvand; [Javad Parvizi](#)
- 2:27 **Risk Factors for Infection After Total Knee Replacement: Analysis of Patients Who Received Surgery on Same Day by Same Surgeons at a Single Institution**
[Hiroaki Kijima](#); Hiroshi Tazawa; Yoichi Mizutani; Naohisa Miyakoshi; Yoichi Shimada
- 2:33 **Clostridium Difficile Infection: Incidence and Risk Factors in Revision Total Knee Arthroplasty Patients**
Chukwuweike U. Gwam; [Randa Elmallah](#); Jennifer I. Etcheson; Nicole E. George; John M. Tarazi; Benjamin M. Stronach; Ronald Delanois
- 2:39 **Insulin-Dependent Diabetic Patients Are at Increased Risk of Post-Operative Hyperglycemia in Patients Undergoing Total Joint Arthroplasty**
[Brian Godshaw](#); Michael Warren; George Chimento; Alaa Mohammed; Bradford Waddell
- 2:45 *Discussion*

New Life for Hip Resurfacing?

Friday 12 Oct, 1:50PM - 2:50PM

Podium | Floor: Second | Room: Gielgud

Moderators: Edwin Su, William Walter

- 1:51 **New Materials for Hip Resurfacing: Why Choose X-linked PE on Metal?**
[Derek McMinn](#)
- 1:58 *Discussion*
- 2:01 **New Materials for Hip Resurfacing: Why Choose for Ceramic?**
[Koen De Smet](#)
- 2:08 *Discussion*
- 2:11 **Cemented and Uncemented Femoral Fixation Methods in Hip Resurfacing Arthroplasty: A Retrospective Comparison**
[Thomas Gross](#); Dani Gaillard-Campbell
- 2:17 **Gait Analysis Evaluation of the Ability to Resume High Impact Sports in Patients Treated With Hip Resurfacing Arthroplasty**
[Giovanni Micera](#); Antonio Moroni; Riccardo Orsini; Fabrizio Sinapi; Salvatore Mosca; Francesco Aciri; Daniele Fabbri; Maria Teresa Miscione
- 2:23 **H1 Anatomic Ceramic Hip Resurfacing: Results of a 20 Patient Safety Study**
[Justin Cobb](#); Camilla Halewood; Robert Wozencroft; Kartik Logishetty; Jonathan Jeffers; Susannah Clarke
- 2:29 *Discussion*
- 2:35 **Good Clinical Outcomes of Hip Resurfacing Patients: Implant Survival, Function, Metal Ion Concentrations, and MARS-MRI Results With a Minimum 10 Years Follow Up**
[Walter Van Der Weegen](#); Henk Hoekstra; Thea Sijbesma
- 2:41 **Asymptomatic Early Cup Shifts in Hip Resurfacing Arthroplasty**
[Thomas Gross](#); Dani Gaillard-Campbell
- 2:47 *Discussion*

Revisions of THA: Implants & Surgical Techniques

Friday 12 Oct, 2:50PM - 3:50PM

Podium | Floor: Third | Room: Whittle

Moderators: Josh Jacobs, Koen De Smet

- 2:51 **Bone Remodeling Around Two Cementless Revision Stems**
[Yixin Zhou](#)
- 2:58 *Discussion*
- 3:01 **Computer Assisted Revision Hip Arthroplasty: Short-Term Advantages Versus Long-Term Evidence**
[Nobuhiko Sugano](#); Nobuo Nakamura; Hidetoshi Hamada; Masaki Takao; Takashi Sakai
- 3:07 **The Outcome of Revision Surgery for Failed Metal-on-Metal Total Hip Arthroplasty**
[Zakk Borton](#); Alex Nicholls; Aakil Mumith; Andrea Pearce; Toby Briant-Evans; Geoff Stranks; John Britton; Jamie Griffiths
- 3:13 **Evaluation of Pull-Off Strength and Seating Displacement of Revision Ceramic Heads and Taper Adapter Sleeves in Modular Hip Arthroplasty**
Miriam Chaudhary; [Orhun Muratoglu](#); Kartik Mangudi Varadarajan
- 3:19 *Discussion*
- 3:25 **Computer Navigation for Revision Total Hip Arthroplasty Reduces Dislocation Rates**
[Jonathan Vigdorichik](#); Zlatan Cizmic; Ameer Elbuluk; Seth A. Jerabek; Wayne Paprosky; Peter K. Sculco; Patrick Meere; Ran Schwarzkopf; David J. Mayman
- 3:31 **Trabecular Titanium Tailored Implants in Complex Acetabular Revision Surgeries**
[Loris Peticarini](#); Marta Medetti; Francesco Maria Benazzo
- 3:37 **Pseudotumor Recurrence in a Post-Revision Total Hip Arthroplasty With Stem Neck Modularity**
[Bhumit Desai](#); George Chimento; Gonzalo Sumarriva
- 3:43 *Discussion*

Symposium: Solutions For PJI: Treatment & Prevention

Friday 12 Oct, 2:50PM - 3:50PM

Podium | Floor: Third | Room: Fleming

Moderators: Fares Haddad, Javad Parvizi

- 2:51 **Single-stage or two-stage revision for periprosthetic infections: when, why, how?**
[Fares Haddad](#)
- 3:01 *Discussion*
- 3:04 **Elution of Antibiotics from PE for Long-Term Infection Treatment**
[Ebru Oral](#)
- 3:14 *Discussion*
- 3:17 **Polymyxin and Bacitracin in the Irrigation Solution: There Is No Role for This Practice + Prevention of periprosthetic joint infections: current insights**
Karan Goswami; Jeong Eun Cho; Jorge Manrique; Timothy Tan; Carlos Higuera; Craig Della Valle; [Javad Parvizi](#)
- 3:23 **Cathodic Voltage Controlled Electrical Simulation for Treatment of Periprosthetic Joint Infections**
[Mark Ehrensberger](#); Menachem Tobias; Lisa Hansen; Mary Canty; Nicole Luke-Marshall; Anthony Campagnari
- 3:29 *Discussion*
- 3:33 **In Vivo Anti-Bacterial Effectiveness of Nanotextured Titanium Implant Surfaces**
[Craig R. Friedrich](#); Erin Baker; Sachin Bhosle; Daniel Justin
- 3:39 **Mechanical Analysis of Tigecycline Loaded Bone Cement and Comparison With Vancomycin and Daptomycin Loaded Bone Cements**
[S. Kivanc Muratli](#); Vasfi Karatosun; Bora Uzun; Izge Gunal
- 3:45 *Discussion*

Shark Tank II: More New Inventions

Friday 12 Oct, 2:50PM - 3:50PM

Podium | Floor: Second | Room: Gielgud

Moderators: Philip Noble, Derek McMinn

- 2:54 **Novel Cervical Interbody Spacer to Detect Fusion Radiographically**
[John DesJardins](#); Paul Millhouse; Md. Arifuzzaman; Apeksha Rajamanthirilage; Nathan Carrington; Caleb Behrend; Jeffery Anker
- 3:00 *Discussion*
- 3:04 **Measurement of Intraoperative Range of Motion of Total Hip Arthroplasty Using an Inertial Measurement Unit Based Smart Trial System- an in Vitro Validation Experiment**
[Hao Tang](#); Yixin Zhou; Hongyi Shao; Binjie Zhu

- 3:10 *Discussion*
- 3:14 **Presentation of the neckID concept – A Personalized Neck Brace**
[Mailys Angibaud](#); Pierre Angibaud
- 3:20 *Discussion*
- 3:24 **A New Design of Tibial Baseplate in Bi-Cruciate Preservation TKR**
[Ming Chou Ku](#)
- 3:30 *Discussion*
- 3:34 **Novel Automatic Objective Radiographic Measurements for Knee Arthroplasty Decision Support**
[Mads Jamer Brevadt](#)
- 3:40 *Discussion*

Balancing the Knee: The Role of Technology

Friday 12 Oct, 4:10PM - 5:30PM

Podium | Floor: Third | Room: Whittle

Moderators: Stefan Kreuzer, Charles Riviere

- 4:11 **Soft Tissue Balancing in TKA: State-of-the Art**
[Peter Walker](#)
- 4:18 *Discussion*
- 4:21 **Are Patients More Satisfied With a Balanced TKA?**
[Alexander Gordon](#); Gregory Golladay; Thomas L. Bradbury; Ivan Fernandez-Madrid; Viktor Erik Krebs; Preetesh Patel; Carlos Higuera; Wael Barsoum; Juan Suarez
- 4:27 **Can We Predict Laxity in Robotic TKA Using Pre-Operative Force-Controlled Laxity Measurements?**
Sami Shalhoub; Amber Randall; John Keggi; Jeffrey Lawrence; Jeffrey DeClaire; [Christopher Plaskos](#)
- 4:33 **Can We Safely Release the Posterior Capsule During Total Knee Arthroplasty?**
[Kiron Athwal](#); Piers Milner; Guy Bellier; Andrew Amis
- 4:39 *Discussion*
- 4:46 **A Novel Algorithm to Balance Varus Knee Without Releasing Superficial MCL Based on the Pathological Changes in Varus Knee**
Feras Haidar; [Samih Tarabichi](#); Amr Osman; Mohamed Elkabbani; Tamer Mohamed
- 4:52 **The Extension Planning Angle in Gap Balancing Total Knee Arthroplasty Influences Mid-Flexion Laxity**
Sami Shalhoub; Jeffrey DeClaire; John Keggi; Jeffrey Lawrence; Amber Randall; [Christopher Plaskos](#)
- 4:58 **Does a Difference in the Rotational Position of the Ligament Balancer Affect Medial and Lateral Soft Tissue Balance in TKA?**
[Toru Yoshioka](#); Nobukazu Okimoto; Tomohiro Kobayashi; Yoshiaki Ikejiri; Kei Asano; Hideaki Murata; Makoto Kawasaki; Tokifumi Majima
- 5:04 *Discussion*
- 5:11 **Combining Multiple Technologies to Achieve Optimized Surgical Outcomes**
[Alexander Gordon](#); Chad Anderson; Nancy Cipparone
- 5:17 **Implant Realignment: An Alternative to Ligamentous Release in TKR Balancing**
[Kenneth Gustke](#); Chesley Durgin
- 5:23 *Discussion*

Debate: The Future Of TJA: What Are Right Outcome Targets & How To Achieve Them

Friday 12 Oct, 4:10PM - 5:30PM

Podium | Floor: Third | Room: Fleming

Moderators: Seth Greenwald, David Stulberg, Catherine Van Der Straeten

- 4:14 **Is the role of registries overrated? - Yes**
[Justin Cobb](#)
- 4:21 **Is the role of registries overrated? - Mediator**
[Mark Wilkinson](#)
- 4:28 **Is the role of registries overrated? - No**
[Susanna Stea](#)
- 4:35 *Discussion*
- 4:44 **Do PROMS reflect patients' dreams rather than real outcomes? - Yes**

[Steven MacDonald](#)

- 4:51 **Do PROMS reflect patients' dreams rather than real outcomes? - No**
[Koen De Smet](#)
- 4:58 *Discussion*
- 5:07 **Will innovations in arthroplasty ever benefit the whole world and not only the happy few? - Yes**
[Mark Heldreth](#)
- 5:14 **Will innovations in arthroplasty ever benefit the whole world and not only the happy few? - No**
[Arun Mullaji](#)
- 5:21 *Discussion*

Innovations in Arthroplasty of Other Joints

Friday 12 Oct, 4:10PM - 5:30PM

Podium | Floor: Second | Room: Gielgud

Moderators: Gwen Sys, Christina Esposito

- 4:11 **What Is an Acceptable Failure Rate for a New Spinal Growing Rod?**
[Thomas Joyce](#); Simon Smith; Liam Forbes; Paul Rushton; Andrew Bowey; Mike Gibson
- 4:17 **LP ESP Elastomeric Lumbar Total Disc Replacement : Five Year Follow-Up for Clinical and Radiological Outcomes**
[Jean Yves Lazennec](#); Jean Patrick Rakover; Marc Antoine Rousseau
- 4:23 **CP ESP Viscoelastic Cervical Disk Replacement : 2 Years Follow-Up With Clinical and Radiological Results . Evolution of Segmental Mobility and Location of Mean Centers of Rotation.**
Jean Yves Lazennec; Burkhard Rischke; Jean Patrick Rakover; Olivier Ricart; [Marc Antoine Rousseau](#)
- 4:29 *Discussion*
- 4:36 **Polyethylene Inserts in Ankle Arthroplasty: A Factor in Revision Rate?**
[Douglas Van Citters](#); Barbara Currier
- 4:42 **Medial and Lateral Malleoli Impose Anatomical Constraints on Total Ankle Arthroplasty Design**
[Jeffrey Bischoff](#); Sandra Snyder; Sarah Brownhill
- 4:48 **Trends in Primary and Revision Cervical Disc Arthroplasty Utilization Within the Medicare Database**
[Timothy Niedzielak](#); Bijan Joseph Ameri; Rushabh Vakharia; John Malloy, IV
- 4:54 **Does Acromion Anatomy Affect Acromion Stress Fracture After Reverse Shoulder Arthroplasty?**
[Vani Sabesan](#) William W Liou; Yang Yang; Diego L Lima
- 5:00 *Discussion*

3D Printed Implants & PSI

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 1

Moderators: Nico Verdonschot, Gwen Sys

- 5:35 **Trabecular Titanium - Cement Interface Characterization**
[Fabio Riva](#); Chiara Celso; Emanuele Buttazoni; Michele Pressacco
- 5:41 **Investigation of Architectural and Mechanical Anisotropy in Additively Manufactured Structures With Comparison to Bone**
[Umar Hossain](#); Shaaz Ghouse; Kenneth Nai; Jonathan Jeffers
- 5:47 **Clinical Application of Three Dimensional Printer for Total Hip Arthroplasty With Corrected Femoral Osteotomy**
[Satoru Tamura](#); Katsuya Nakata; Makoto Kitada; Atsushi Goshima; Masataka Nishikawa; Hajime Owaki
- 5:53 **A Comparison of Unit Cells to Optimise Mechanical and Osseointegration Properties in Hip Implants**
[Sophie Louth](#); Sophie C. Cox; Neil Eisenstein; Kenneth Nai
- 5:59 **3D Printed Antimicrobial Silver Titanium Alloys for Arthroplasty**
[Morgan Lowther](#); Sophie C. Cox; Liam Grover
- 6:05 **Multi-Scale Fabrication of Porous Materials for Engineered Tissue Scaffolds**
[Andrew R Hamilton](#); Monika Ziminska; Nicholas Dunne; Alex Lennon
- 6:11 **The Future of Biomaterials Science in Orthopaedic Surgery: Innovative Biomaterials for 3D Printing and Tissue Engineering**
[Pravin Vence](#); Daniel Li; Rachel Bergman; Yaoyi Huang; Fei Yang; Decheng Wu

THR - Advances in Surgical Techniques

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 2

Moderators: Richard Field, Richard Van Arkel

- 5:35 **Surgical Tips of Total Hip Arthroplasty After Transtrochanteric Rotational Osteotomy for Osteonecrosis**
[Masato Ishihara](#); Satoshi Nakasone; Hiroyuki Taira; Fuminori Kanaya
- 5:41 **Encouraging Short Term Outcomes With a Novel Acetabular Reconstruction Construct**
David Novikov; James Feng; Zlatan Cizmic; Afshin Anoushiravani; [Jonathan Vigdorichik](#); Ran Schwarzkopf
- 5:47 **Is Rigid Fixation of the Greater Trochanter Necessary for Arthroplasty of Intertrochanteric Fractures?**
[Yoon Vin Kim](#); Kee-Haeng Lee; Jong Ho Noh; Dong Hun Lee
- 5:53 **Short Term Results of Total Hip Arthroplasty With SuperPATH Approach**
[Keisuke Hagio](#); Masanobu Saito; Keisuke Akiyama; Hirohito Abe; Kazuhisa Aikawa
- 5:59 **Treatment of Vancouver Type B2 and B3 Periprosthetic Fractures With Revision Total Hip Arthroplasty and Internal Fixation Using Locking Plate.**
[Toshiyuki Shiomi](#)
- 6:05 **The Lage Maneuver - an Easy, Simple, Reproducible Method to Prevent Scratching of Femoral Head Prosthesis**
[Lafayette Lage](#)
- 6:11 **Efficacy of Bone Wax in Total Hip Arthroplasty**
[Bongjoo Lee](#)

TKR - Patient Specific Implants & Instruments

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 3

Moderators: Justin Cobb, Lennart Schroeder

- 5:35 **A Prospective International Multicentre Clinical Trial of Personalised 3D Printed Guides for High Tibial Osteotomy Surgery**
[Gareth Jones](#); Susannah Clarke; Martin Jaere; Adrian Wilson; Ronald Van Heerwaarden; Justin Cobb
- 5:41 **Patient Satisfaction, Functional Outcomes and Survivorship in Patients With a Customized Posterior Stabilized Total Knee Replacement**
[Lennart Schroeder](#); Vivekanand Neginhal; William B Kurtz
- 5:47 **A PSI Guide for UKR to TKR Revision**
[Edgar Wakelin](#); Joshua Twiggs; Ella Moore; Brad Miles; Andrew Shimmin
- 5:53 **A Prospective Study of Patient-Specific Total Knee Arthroplasty Compared to an Off-the-Shelf Design**
[Carlos Meheux](#); Kwan J Park; Terry A Clyburn
- 5:59 **Can 3D Guides Improve Rotational Alignment in Megaprosthesis Surgery?**
[Arne De Smet](#); Dries Verrewaere; Gwen Sys
- 6:05 **Effect of Different Depth Designs of 3D Printed Patient Specific Instrument (PSI) on Planar Cutting Operation Accuracy in Simulated Orthopaedic Surgery: A Preliminary Study**
[Moucheng Xu](#); Martin Jaere; Edouard Auvinet; Justin Cobb
- 6:11 **Accuracy of Alignment Determined by Patient-Specific Instrument in Total Knee Arthroplasty**
[Kwangkyoun Kim](#)
- 6:17 **Total Knee Arthroplasty With PSI Technique, Our Experience With 82 Cases**
[Alessandra Albisetti](#); Massimo Franceschini; Leopoldo Pedretti; Giuseppe Mineo

Advances in Positioning & Alignment in TKR

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 4

Moderators: Stefan Kreuzer, Rick Komistek

- 5:35 **Tibial Alignment Using an Extramedullary Guide That the Amount of Distal Rod Shift Was Decided at Pre-Surgical 3-D Planning in Total Knee Arthroplasty**
[Yoshikazu Tsuneizumi](#); Tadashi Tsukeoka
- 5:41 **Accuracy of Accelerometer-Based Portable Navigation System and CT-Based Patient Matched Instruments in Total Knee Arthroplasty**
[Jin Miyagi](#); Yoshitada Harada; Takeshi Miyasaka; Sota Kitahara
- 5:47 **Improved Accuracy in Total Knee Arthroplasty by CAOS Enhanced Mechanical Instrumentation**
Yifei Dai; James Huddleston; [Matthew Rueff](#); Laurent Angibaud; Derek Amanatullah
- 5:53 **Comparison of Postoperative Radiologic Outcome Between Conventional and Computer Assisted Navigation Total Knee Arthroplasty**

in Extra-Articular Tibia Vara

[Yongun Cho](#); Taedong Jang; Eugene Kim; Hwa Jae Jeong

- 5:59 **Learning of a CAOS Enhanced Mechanical Instrument System for Total Knee Arthroplasty: A CUSUM Analysis**
[Yifei Dai](#); James Huddleston; [Matthew Rueff](#); Laurent Angibaud; Derek Amanatullah
- 6:05 **Condylar Differential in Planned Tibial Cuts in Total Knee Replacement: An Alternative to Computer Navigation**
[Kodali Siva Rama Krishna Prasad](#); Emil Schemitsch; Peter Lewis
- 6:11 **Evaluation of Tibial Coronal Alignment With Whole-Leg Standing Radiographs After Total Knee Arthroplasty.**
[Toshihiro Seki](#); Kazushige Seki; Atsunori Tokushige; Takashi Imagama; Hiroyoshi Ogasa
- 6:17 **The Effect of Greater External Rotation of the Femoral Component as a Result of Gap Ligament Balancing on Patellar Tracking and Flexion Instability in Total Knee Arthroplasty**
[Gary Rasmussen](#)
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TKR - Robotic Surgery 1

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 5

Moderators: Ferdinando Rodriguez Y Baena, Keisuke Uemura

- 5:35 **Iatrogenic Bone and Soft Tissue Injury in Robotic-Arm Assisted Total Knee Arthroplasty: A Prospective Cohort Study and Validation of a New Classification System**
[Babar Kayani](#); Sujith Konan; Jurek Pietrzak; Fares Haddad
- 5:41 **Robotic Arm Assisted Versus Computer Navigated Total Knee Arthroplasty; a Prospective Parallel Study of 150 Patients**
[John Kelly](#); Gavin Clark; Dermot Collopy; Brian Fahey
- 5:47 **Can Surgical Technology Reduce Surgical Staff Postural Demands During Total Knee Arthroplasty**
[Laura Yanoso-Scholl](#); Emily Hampf; Vincent Alipit; Anil Bhav; Antonia Chen; Michael Mont
- 5:53 **Robotic Total Knee Arthroplasty With a Semi-Active Haptic Guided Technique Is Safe and Reliable**
[Kenneth Gustke](#)
- 5:59 **Does the Use of Robotic Technology Improve a Surgeons Cervical Ergonomics and Their Overall Satisfaction?**
[Laura Yanoso-Scholl](#); Emily Hampf; Vincent Alipit; Manoshi Bhowmik-Stoker; Anil Bhav; Michael Mont; Antonia Chen
- 6:05 **Robotic Knee Surgery Produces a Reproducible and Balanced Knee Construct When Compared to Conventional TKA.**
William Manning; Arman Moteshareh; [Antony K Sorial](#); Milton Ghosh; Lee Longstaff; David Deehan
- 6:11 **Robotic Assisted Total Knee Arthroplasty in Patients With Severe Varus Deformity**
[Sang Jin Park](#)
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TKR - Robotic Surgery 2

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 6

Moderators: Bernard Stulberg, Edouard Auvinet

- 5:35 **Quality of Systematic Reviews Comparing Conventional and Computer-Assisted Joint Replacement**
[Hassan Ghomrawi](#); Mohamed Hassan; Manrui Zhang
- 5:41 **Assessing the Learning Curve for Robotic-Arm Assisted Total Knee Arthroplasty: a Look at Operative Times and Reoperations**
[Gregory Klingenstein](#); Scott Schoifet; Jeremy Reid; Manny Porat; Rajesh Jain; Mojisola Otegbeye
- 5:47 **A Bibliometric Analysis of Robotic Assisted Hip and Knee Arthroplasty**
Dylan Misso; [John Kelly](#); Dermot Collopy; Gavin Clark
- 5:53 **Can the Use of Robotic Technology Reduce Surgical Variability and Mental Exertion When Performing Total Knee Arthroplasty?**
[Emily Hampf](#); Laura Yanoso-Scholl; Geoffrey H Westrich; Michael Mont
- 5:59 **The Learning Curve Associated With Robotic-Arm Assisted Unicompartmental Knee Arthroplasty**
Babar Kayani; Sujith Konan; [Jenni Tahmassebi](#); Sumon Huq; Fares Haddad
- 6:05 **Energy Expenditure During Conventional and Robotic Arm-Assisted Total Knee Arthroplasty**
Kier Blevins; Jon Danoff; Rahul Goel; [Karan Goswami](#); Carol Foltz; Antonia F Chen; William Hozack
- 6:11 **Comparison of Blood Loss Between Robotics Assisted and Conventional 1 Week Interval Staged Bilateral TKA**
[Sang Jin Park](#)
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THR - Resurfacing

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 7

Moderators: Derek McMinn, Thomas Gross

- 5:35 **Metal-on-Metal Hip Resurfacing Arthroplasty: What is the Risk?**
[Harlan Amstutz](#)
- 5:43 **Are Component Alignment and Biomechanics of Hip Resurfacing Improved by CT-Based Navigation?**
[Ryuichi Sato](#); Hidetoshi Hamada; Masaki Takao; Takashi Sakai; Nobuhiko Sugano
- 5:49 **Closed Reduction on a Rare Case of Resurfacing Dislocation Three Years Post Op.**
[Lafayette Lage](#)
- 5:55 **Compromise in Bone Density Results in Amplified Cement Layer Stress in Hip Resurfacing Arthroplasty**
Sourabh Boruah; Laura Husken; [Orhun Muratoglu](#); Kartik Mangudi Varadarajan
- 6:01 **Mortality After Hip Resurfacing vs. Total Hip Arthroplasty in Young Patients: A Single Surgeon Experience**
[Peter Brooks](#); David Brigati; Anton Khlopas; A. Seth Greenwald; Michael Mont
- 6:07 **Performance of Ceramic Resurfacing Heads for Hip Arthroplasty - Component Strength.**
[Mateusz Juszczyk](#); Hendrik Bertmaring; Markus Flohr
- 6:13 **Determination of the Minimum Clearance of Ceramic Resurfacing Systems**
[Thomas Pandorf](#); Roman Preuss
- 6:19 **Deformation and Temperature Changes During Femoral Implantation in a Novel Ceramic and a Standard Metal Hip Resurfacing**
Adam Farrier; William Manning; [Lauren Moore](#); Carolina Avila; Simon Collins; Jim Holland

Advances in Fixation in THA

Friday 12 Oct, 5:35PM - 6:35PM

ePoster with Short Talk | Floor: Third | Kiosk: 8

Moderators: Martin Browne, Edwin Su

- 5:35 **The Influence of Stem Occupation Ratio on Stem Subsidence and Cement Creep. -a Biomechanical Study Using a Collarless Polished Tapered Stem-**
[Eiji Takahashi](#); Ayumi Kaneuji; Kenichi Hirosaki; Masahiro Takano; Yuhei Numata; Kazuhiro Shintani; Norio Kawahara
- 5:41 **The Importance of Considering Dynamic Strain in Bone During Seating of Cementless Components**
[Ruben Doyle](#); Jonathan Jeffers
- 5:47 **Affects of Proximal Hydroxyapatite Coating in a Tapered, Rectangular Titanium Stem / Zweymüller Type**
[Yoshitada Harada](#); Takeshi Miyasaka; Jin Miyagi; Sota Kitahara
- 5:53 **The Bone Ingrowth of a Silver Oxide-Containing Hydroxyapatite Coating Antibacterial Cementless Acetabular Socket.**
[Shunsuke Kawano](#); Motoki Sonohata; Shuichi Eto; Masaru Kitajima; Masaaki Mawatari
- 5:59 **Sensitivity of FEA Predicted Micromotion to Implant-Bone Contact Angle in a Wedge Stem**
[Bryan Kirking](#); Jonathan Wood; Adam Shallenberg
- 6:05 **Inferior Extended Fixation Using Porous Metal Augments in Acetabular Reconstruction During Revision Total Hip Arthroplasty**
[Yixin Zhou](#); Huang Yong; Hao Tang; Shengjie Guo; Dejin Yang; Baochun Zhou
- 6:11 **Acetabular Components With or Without Screws in Cementless Short Stem Total Hip Arthroplasty**
Mehmet Asilturk; [Mahmut Ugurlu](#)

Tribology & Wear Testing

Friday 12 Oct, 5:35PM - 6:35PM

Young Investigators Session | Floor: Second | Kiosk: Geilgud

Moderators: Susanna Stea, Philippe Kretzer

Guest Mentor: Anne Neville

- 5:39 **Third Body Wear of UHMPWE-on-PEEK-OPTIMA**
[Raelene Cowie](#); Naveen Pallem; Adam Briscoe; John Fisher; Louise M. Jennings
- 5:46 **Effect of Cup Positioning on Wear of Metal-on-Polyethylene Total Hip Replacement: A Finite Element Analysis**
[Lin Wang](#); Duncan Beedall; Jonathan Thompson
- 5:53 **Musculoskeletal Modeling Combined With a Finite Element Model to Predict Wear at the Taper Junction in Total Hip Arthroplasty**
[Thom Bitter](#); Marco Marra; Imran Khan; Tim Marriott; Elaine Lovelady; Nico Verdonschot; Dennis Janssen
- 6:00 **Hip Wear Simulator Results of Vitamin E Blended Highly Crosslinked Polyethylene**
[Hilary Feskanin](#); Brady Barnes; Edmund Loftus; Nick Stroud
- 6:07 **Review: Does Total Hip Arthroplasty Wear Simulation Represent Heavy and Active Patients?**
[Christopher Gardner](#); Alison Traynor; Nazir-Ahmed Karbane; Dominic Clarke; Catherine Hardaker
- 6:14 **Mixed Lubrication Wear Model of the Human Knee Implant**
[Hamza Butt](#); Lee Nissim; Rob Hewson; Leiming Gao; Connor Myant

6:21 **Development of a Multi-Station Shoulder Simulator for Wear Performance Analysis of Shoulder Implants**
[Dong Wang](#); Andrew Amis

Retrieval Analysis

Friday 12 Oct, 5:35PM - 6:35PM

Young Investigators Session | Floor: Second | Kiosk: 10

Moderators: Christina Esposito, Pat Campbell

Guest Mentor: Markus Wimmer

- 5:39 **Electrochemical Impedance Spectroscopy as a Method to Distinguish Corrosion Severity and Damage Modes in Retrieved Femoral Heads**
[Genymphas Higgs](#); Ryan Siskey; Clare Rimnac; William Mihalko; Jeremy Gilbert; Steven Kurtz
- 5:46 **Gross Taper Failure of TMFZ Stems in Total Hip Arthroplasty**
[Emilie Dickinson](#); Valerie-Sophie Polster; Michael Morlock
- 5:53 **Is There a Difference in the Wear Performance of MOM Pinnacle Implants Manufactured Before and After 2006?**
[Sean Bergiers](#); Harry Hothi; Johann Henckel; Antti Eskelinen; Alister Hart
- 6:00 **Taper-Trunnion Junction and Bearing Surface Wear Measurement of Metal-on-Cross-Linked Polyethylene Total Hip Replacements in a Hip Joint Simulator**
[Rohan Bhalekar](#); Simon Smith; Thomas Joyce
- 6:07 **Biological, Chemical and Mechanical Damage Modes in Corrosion of CoCrMo Acetabular Liners**
[Aarti Shenoy](#); Steven Kurtz; Jeremy Gilbert
- 6:14 **Fretting Corrosion Characteristics of Ti6Al4V vs. TMZF Titanium Alloys in Simulated Body Fluid**
[Abimbola Oladokun](#); Yenal Vangolu; Zabeada Aslam; John Harrington; Andy Brown; Richard Hall; Anne Neville; Michael Bryant
- 6:21 **Damage and Wear in Retrieved Humeral Inserts of Reverse Shoulder Joint Replacements: Where, How Much and Why?**
[Ulrike Mueller](#); Stefan Schroeder; Matthias Buelhoff; Johannes A. Eckert; Philippe Kretzer
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Innovative Clinical Pathways

Saturday 13 Oct, 7:30AM - 9:00AM

Podium | Floor: Third | Room: Whittle

Moderators: Keith Tucker, Arun Mullaji

- 7:31 **Innovative Clinical Pathways for Joint Replacement**
[Richard Field](#)
- 7:38 *Discussion*
- 7:41 **The Use of Risk Stratification Algorithms in Arthroplasty**
[Josh Jacobs](#)
- 7:48 *Discussion*
- 7:51 **Use of a Mandatory Clinical Decision Unit Reduces Readmission Rates Following Total Joint Arthroplasty**
Arthur Manoli, III; Jacob Markel; Natalie Pizzimenti; [David Markel](#)
- 7:57 **Perioperative Surgical Home Model With or Without Electronic Medical Record Integration Results in Positive Clinical and Financial Outcomes**
Michael Wong; George Chimento; [Gonzalo Sumarriva](#)
- 8:03 **Safety Criteria for Short Stay After Total Joint Replacement**
[Morteza Meftah](#); Ira Kirschenbaum
- 8:09 *Discussion*
- 8:15 **Provision of Prehabilitation and ROM Prior to Total Knee Arthroplasty**
Joshua Twiggs; [Brad Miles](#); David Liu; Simon Carlton; Edgar Wakelin
- 8:21 **A Unique Cardiac Screening Program to Reduce Readmissions in Risk Bundled Total Hip and Knee Replacement Patients**
[Kenneth Gustke](#); Eric Harrison; Susan Heinrichs
- 8:27 *Discussion*
- 8:31 **Debate**
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Big Data, Artificial Intelligence & Virtual Reality

Saturday 13 Oct, 7:30AM - 9:00AM

Podium | Floor: Third | Room: Fleming

Moderators: Mark Wilkinson, Edouard Auvinet

- 7:31 **Implant Registries: Tackling all the Challenges of Big Data Management and Analysis and Conclusions**
[Susanna Stea](#)
- 7:41 *Discussion*
- 7:45 **Big Data Analysis as a Means to Improve Arthroplasty Outcomes**
[Mark Wilkinson](#)
- 7:55 *Discussion*
- 7:59 **Using Augmented Reality to Train Surgeons to Operate More Skillfully**
[W Angus Wallace](#); Mal J Gandhi
- 8:09 *Discussion*
- 8:13 **Wearable Sensor Technology and Machine Learning as a Tool for Assessing Patient Recovery**
[Matthias Verstraete](#); Michael Condit; Gordon Goodchild
- 8:19 **Small Data Forecasting of Length of Stay After Primary Total Hip Arthroplasty in the Value-Based Payment Era: Validation of a Predictive Big Data Machine Learning Model**
[Prem Ramkumar](#); Sergio Navarro; Eric Y Wang; Viktor E Krebs; Brendan M Patterson
- 8:25 *Discussion*
- 8:29 **Development of an Augmented Reality Rehabilitation Platform in Shoulder Arthroplasty**
[Sergio Navarro](#); Prem Ramkumar; Julien Bouvier; Albert Kwon
- 8:35 **Low-Cost Augmented Reality Intra-Operative Assistive Tool for Orthopedic Surgery: Preliminary Results**
[Edouard Auvinet](#); Cedric Maillot; Arash Aframian; Charles Riviere; Farhad Iranpour; Justin Cobb
- 8:41 *Discussion*
- 8:45 **Cognitive Task Analysis in Virtual Reality Hip Arthroplasty Training**
[Kartik Logishetty](#); Wade Gofton; Paul Edgar Beaulé; Chinmay Gupte; Richard E Field; Justin Cobb
- 8:51 **Learning Computer-Assisted Total Knee Arthroplasty: A Cusum Analysis on Ten Surgeons**
[Yifei Dai](#); Guillaume Bras; Cyril Hamad
- 8:57 *Discussion*

Advances in Preclinical Testing

Saturday 13 Oct, 8:00AM - 9:00AM

Podium | Floor: Second | Room: Gielgud

Moderators: Philippe Kretzer, Pat Campbell

- 8:01 **Preclinical Implant Testing: Are Regulatory Requirements Obsolete?**
[Seth Greenwald](#)
- 8:08 *Discussion*
- 8:11 **PEEK Knee Replacements: Preclinical Testing - Theoretical Advantages**
[Nico Verdonschot](#)
- 8:18 *Discussion*
- 8:21 **A Novel Rabbit Hip Arthroplasty Model as an Attractive and Reliable in Vivo Model for Preclinical Testing of Materials and Bearing Surfaces for Arthroplasty.**
[Brigitte von Rechenberg](#)
- 8:28 *Discussion*
- 8:31 **Surface and Volume Imaging to Accurately Determine Properties of Bone Like Materials**
[Martin Browne](#)
- 8:38 *Discussion*
- 8:41 **Development and Application of a Computational TKA Evaluation Framework for Preclinical Parametric Studies**
[Hannah Lundberg](#); Steven Mell; Spencer Fullam; Markus Wimmer
- 8:47 **Development of a Pre-Operative Planning Computation Tool to Simulate Virtual Surgery, Predicting Post-Operative Results**
[Manh Ta](#); Michael LaCour; Adrija Sharma; Richard Komistek
- 8:53 *Discussion*
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Assessing & Improving Functional Outcomes of THA

Saturday 13 Oct, 9:00AM - 10:10AM
Podium | Floor: Third | Room: Whittle

Moderators: Justin Cobb, Bernd Grimm

- 9:01 **Sensors and Wearable Devices for Evaluation of Joint Function**
[Alison McGregor](#)
- 9:08 *Discussion*
- 9:11 **When Are Patients Actually Driving After Minimally Invasive Anterior Hip Replacements and Total Knee Arthroplasty Surgery? a Single Surgeon Experience of 353 Joint Replacements.**
[Ikram Nizam](#); Ashish Batra
- 9:17 **Minimal Post Operative Restrictions Are Safe After Posterior Approach Total Hip Arthroplasty. Results From a Large Cohort Study.**
[Walter Van Der Weegen](#); Anke Kornuijt; Dirk Das; Rein Vos; Thea Sijbesma
- 9:23 *Discussion*
- 9:27 **Can Patients Practice Strenuous Sports After Uncemented Ceramic-on-Ceramic Total Hip Arthroplasty?**
[Mo Saffarini](#); Michel Bonnin; Jean-Charles Rollier; Jean-Christophe Chatelet; Tarik Ait-Siselmi; Julien Chouteau; Laurent Jacquot; Gerjon Hannink; Michel-Henri Fessy
- 9:33 **Improved Postoperative Clinical Outcome of Total Hip Arthroplasty Is Related to Patients' Preoperative Expectation**
[Stefan Kreuzer](#)
- 9:39 **Does Robotic-Arm Assisted Total Hip Arthroplasty Benefit Short-Term Clinical Outcomes? a Pair Match-Controlled Study.**
[Itay Perets](#); John Walsh; Brian Mu; Yosif Mansor; Leslie C. Yuen; Benjamin G Domb
- 9:45 *Discussion*

Biomechanics as Basis for New Design in TKA

Saturday 13 Oct, 9:00AM - 10:10AM
Podium | Floor: Third | Room: Fleming

Moderators: Peter Walker, Charles Riviere

- 9:01 **Biomechanical Models for the Evaluation of Implant Performance**
[Nico Verdonshot](#)
- 9:08 *Discussion*
- 9:11 **In Vivo Kinematics of the Medial Pivot Knee**
[William Walter](#)
- 9:18 *Discussion*
- 9:21 **Dependence of Tibial Post Contact Forces in Posterior Stabilized Total Knee Arthroplasty on Implant Design, Alignment and Activity.**
Sourabh Boruah; [Orhun Muratoglu](#); Kartik Mangudi Varadarajan
- 9:27 **Mechanical Properties of the Knee Envelope Are Different in Flexion and Extension: Measurements During TKA**
[Tokifumi Majima](#); Yasushi Oshima; Norishige Iizawa; Tatsunori Kataoka; Kenji Takahashi; Shinro Takai
- 9:33 **Utilization of Mathematical Model to Assess Various TKA Designs and Component Positioning**
Milad Khasian; Ian Zeller; [Adrija Sharma](#); Jarrod Nachtrab; Richard Komistek
- 9:39 *Discussion*
- 9:45 **Knee Ligament Recruitment Probability Under Distraction Loading**
William Zaylor; Bernard Stulberg; [Jason Halloran](#)
- 9:51 **The Effects of Posterior Tibial Slope, Loading Distribution and Flexion Angle on Anterior-Posterior Constraint of Total Knee Replacements**
[Kiron Athwal](#); Vincent Chan; Camilla Halewood; Andrew Amis
- 9:57 **Compromise in Component Placement: A Comparison Between Symmetric and Anatomic Patellar Designs**
[Yifei Dai](#); Pierre Angibaud; H Morton Bertram
- 10:03 *Discussion*

Orthopaedic Technology in Developing Countries

Saturday 13 Oct, 9:00AM - 10:10AM
Podium | Floor: Second | Room: Gielgud

Moderators: David Stulberg, Catherine Van Der Straeten

- 9:01 **Orthopaedic Technology in Developing Countries - An Introduction**
[David Stulberg](#)
- 9:11 **Women in Arthroplasty: Our impact on Technology and the Developing World.**
[Linda Suleiman](#)
- 9:21 **The Barriers and Drivers of Orthopaedic Surgery and Arthroplasty in Uganda. Could Technology Support the Effort? The Case of Kilembe Mines Hospital**
[Ojangor Sande Isaac](#)
- 9:31 **Prevention and Treatment of Osteomyelitis Following Open Fractures by Use of a Medicated Bone Graft Substitute in a Developing Country Setting.**
[Stefaan Van Onsem](#); Emily Van Damme; David Dedecker; Catherine Van Der Straeten; Isaac Sande; Edward Wefula
- 9:37 **Patient Reported Outcomes After Total Hip Arthroplasty in a Developing Country by a Visiting Surgical Team: A 1-Year Update**
[Ryan Harold](#); Emanuelle De Candida Soares Pereira; Erika Cavalcante; Maria Paula Mariz Da Silveira Barros; Synara Nunes Medeiros De Souza; Victoria Brander; S. David Stulberg

Insights Through Imaging & Measurements in TJA

Saturday 13 Oct, 10:30AM - 11:30AM

Podium | Floor: Third | Room: Whittle

Moderators: Richard Van Arkel, Martin Browne

- 10:31 **Assessing and Quantifying Pelvic Motion During THA**
[William Walter](#)
- 10:38 *Discussion*
- 10:41 **Video Fluoroscopy-Based Evaluation of the Error of Skin-Marker-Based Motion Capture in the Retrieval of Hip Joint Center Location and of Hip Rotations During Four Activities of Daily Living.**
[Fabio D'Isidoro](#); Clara Brockmann; S J Ferguson
- 10:47 **Femoral Neck Cut Anteversion Predicts Stem Anteversion in Cementless Total Hip Arthroplasty**
[Christina Esposito](#); Sean Sutphen; Kaitlin Carroll; Douglas E Padgett; David J. Mayman; Seth A. Jerabek
- 10:53 **Three-Dimensional Analysis of Contact Area and Ratio Between Acetabular Component and Bone According to Cup Inclination and Anteversion in Revision Arthroplasty**
Jun-Young Kim; Seung-Hoon Baek; [Shin-Yoon Kim](#)
- 10:59 *Discussion*
- 11:05 **The Influence of Sagittal Pelvic Rotation on the Functional Cup Orientation When Transverse Acetabular Ligament as an Intraoperative Guide for Cup Position**
[Tingxian Ling](#); Zongke Zhou
- 11:11 **Can We Refer to the Contralateral Side for Restoring Coronal Plane Alignment in Reconstructive Knee Surgery?**
[Lucas Beckers](#); William Colyn; Johan Bellemans; Jan Victor; Pieter-Jan Vandekerckhove
- 11:17 **Are Supine Intraoperative and Standing Biplanar Postoperative Radiographic Measurements of Acetabular Cup Position the Same?**
[Ryan Harold](#); Dimitri Delagrammaticas; Michael Stover; David W Manning
- 11:23 *Discussion*

Innovations in TKA Kinematics

Saturday 13 Oct, 10:30AM - 11:30AM

Podium | Floor: Third | Room: Fleming

Moderators: Nico Verdonshot, Peter Walker

- 10:31 **Novel Evaluation Methods of Total Knee Mechanics**
[Peter Walker](#)
- 10:38 *Discussion*
- 10:41 **Six-Degree-of-Freedom Kinematics of Posterior-Stabilised, Cruciate-Retaining and Medial-Stabilised Knee Implants in Overground Walking**
Hans Gray; Shanyuanye Guan; Tony Young; Michelle Dowsey; Peter Choong; [Marcus Pandey](#)
- 10:47 **Kinematically Aligned Total Knee Arthroplasty Reduces Frontal Plane Knee Adduction Moment During Gait**
[Yasuo Niki](#); Takeo Nagura; Kengo Harato; Katsuya Nagai; Morio Matsumoto; Masaya Nakamura
- 10:53 **Is There a TKA Bearing Design Which Can Be Used for a Cruciate Sacrificing and Cruciate***
[Eik Siggelkow](#); Marc Bandi; Iris Blatter
- 10:59 *Discussion*
- 11:05 **Influence of Gradually Reducing Femoral Radii in Total Knee Arthroplasty on in Vivo Tibiofemoral Kinematics During Daily Activities:**

A Videofluoroscopy Study

Renate List; Pascal Schuetz; Michael Angst; Lynn Ellenberger; Katrin Daetwyler; Claudio Cerletti; Ruediger Von Eisenhart-Rothe; Reto Gruenig; Carsten Perka; Christoph Schwaller; S J Ferguson

11:11 **Muscle Activity in TKA Patients While Ascending and Descending a Ramp**

Erik Kowalski; Mario Lamontagne; Romain Galmiche; Geoffrey F Dervin

11:17 **Does ACL Retention in TKR Affect Knee Biomechanics During Level Walking and Stair Ascent?**

Jacqueline Simon; Craig Della Valle; Markus Wimmer

11:23 *Discussion*

Tribology & Wear Testing

Saturday 13 Oct, 10:30AM - 11:30AM

Podium | Floor: Third | Room: Geilgud

Moderators: Anne Neville, Matthew Teeter

10:31 **Ion Release in Ceramic Bearings for Total Hip Replacement: Results From an in Vitro and an in Vivo Study**

Philippe Kretzer

10:38 *Discussion*

10:41 **Full System Testing of Total Hip Replacements to Capture Complexities in Tribocorrosion**

Anne Neville

10:48 *Discussion*

10:51 **Effect of Head Size on the Mechanical and Tribological Performance of Ceramic-on-Ceramic Bearings, Under Conditions of Adverse Surgical Positioning and Edge Loading**

Mazen Al-Hajjar; Louise M. Jennings; Sophie Williams; Jonathan Thompson; Graham Isaac; John Fisher

10:57 **The Influence of Contact Pressure and Cross-Shear on the Wear of UHMPWE-on-PEEK-OPTIMA**

Raelene Cowie; Adam Briscoe; John Fisher; Louise M. Jennings

11:03 **Pin-on-Disc Tests to Search for a Material Well Suited to Articulate Against Cartilage and Subchondral Bone**

Reto Lurf; Daniel Delfosse

11:09 *Discussion*

11:15 **Metallic Wear Debris Isolation and Characterization: A Cadaver TKA Study**

Christina Arnholt; Jayna Patel; Saurabh Lal; Meredith Perkins; William Mihalko; Joanne Tipper; Steven M. Kurtz

11:21 **The Influence of Different International Standards Organization (ISO) Control Regimes and Simulation Inputs on the Kinematics, Mechanics and Wear of a Total Knee Replacement**

Abdellatif Abdelgaied; John Fisher; Louise M. Jennings

11:27 *Discussion*

Silent ePosters (no scheduled in-person presentation)

Strain Counter Strain Technique Versus Kinesio Tape in Treating Patients With Myofascial Neck Pain Syndrome

Ahmed Abdelfattah

Effect of Kinesio Tape in Myofascial Pain Syndrome "Randomized Control Trial"

Ahmed Abdelfattah

Proximal Femoral Peri-Prosthetic Fracture in a Cerebral Palsy Patient: Case Report and Literature Review

AlAnoud AlGouaiz; Hesham Al-Khateeb; Yousif Alkalfan

Two Type Partial Revision Reverse Shoulder Arthroplasty for Glenoid Notching

Ki Yong An

Results of Hip and Knee Antibiotic Spacer Use for Two-Stage Revision of Infected THA and TKA

Robert Eberle; Richard Buch

Tibial Insert Micromotion of Revision Fixed-Bearing TKA Protheses

Shouchen Dun; Eric Peckenpaugh; Joe Wyss

Cement-Less vs. Cemented Fixation in Total Knee Arthroplasty: Usage, Costs, and Complications During the Inpatient Period

Ronald Delanois; Randa Elmallah; Chukwuweike U. Gwam; Jennifer I. Etcheson; Nicole E. George; John M. Tarazi; Benjamin M. Stronach

Short-Term Outcomes of the Muscle-Sparing Anterolateral Versus Direct Lateral Approach to Primary Total Hip Arthroplasty

Ronald Delanois; Randa Elmallah; Nicole E. George; Jennifer I. Etcheson; Chukwuweike U. Gwam; John M. Tarazi; Benjamin M. Stronach

Use of New Interactive Patient-Provider Software Improves Patient Satisfaction and Outcomes - a Retrospective Single-Center Study

Ronald Delanois; Chukwuweike U. Gwam; Randa Elmallah; Jennifer I. Etcheson; Nicole E. George; John M. Tarazi; Benjamin M. Stronach

Short-Term Outcomes for Total Knee Arthroplasty Patients With Active Extension Lag

Ronald Delanois; Chukwuweike U. Gwam; Nicole E. George; Jennifer I. Etcheson; Randa Elmallah; John M. Tarazi; Benjamin M. Stronach

Reverse Shoulder Arthroplasty for Cuff Tear Arthropathy in Korean Elderly Patients

Ki Yong An; Seo Jae Eung

The Analysis of the Contact Area of the Stem in Total Hip Arthroplasty

Kazuo Fujiwara

New Level for Higher Constraint in Primary Total Knee Replacement

Feras Haidar; Amr Osman; Mohamed Elkabbani; Tamer Mohamed; Samih Tarabichi

The Length Pattern Assessment of ACL Small Bundles by Using the Biometric Image Matching Technique

Kazunori Hino; Hiromasa Miura; Tatsuhiko Kutsuna; Kunihiro Watamori; Tomofumi Kinoshita

Characterizing Edge-Wear in UHMWPE Acetabular Cups

Ameer Hussain; Radu Racasan; Mazen Al-Hajjar; Paul Bills

Investigate Risk Factors Related to Clinical Results After Total Hip Arthroplasty in Rheumatoid Arthritis Patients

Takashi Imagama; Atsunori Tokushige; Kazushige Seki; Toshihiro Seki; Hiroyoshi Ogasa

The Clinical Results After Arthroscopic Rotator Cuff Repair for the Patients of 75 Years and Over

Masahiro Izumi

Post Traumatic Ankle and Foot Deformity, Correction by Multiple Osteotomy and Ilizazrov Rings

Rajendra Kumar Kanojia; Rajendra Kumar Kanojia

Posterior Dislocation Following Revision Total Knee Replacement Arthroplasty: A Case Report

JongPil Kim; Ho Min Lee; Phil Hyun Chung; Suk Kang; Young Sung Kim; Bo Sung Go

Trends in Lower Utilization of Inpatient and Post Acute Care in THA

William Murphy; Patrick Lane; Tony Cheng; David Terry; Stephen Murphy

Volume and Cost of Total Joint Replacement at High-Volume Centers in the US

William Murphy; Patrick Lane; Tony Cheng; Stephen Murphy

The Correlation Between Geometry and Pullout Strength of Suture Anchor

Jinah Lee

Stability Analysis of Acetabular Hip Reconstruction Under Different Fixation Modes

Xiaoyu Liu; Xihui Chen; Zhongmin Jin

What Patients Want Out of Their Total Knee Replacement?- an Indian Perspective

Sanjay Londhe; Ravi Shah

Virtual Reality Simulation of Orthopedic Surgery for Academic Use

Rita Marino; Hamid Reza Seyyed Hosseinzadeh

A Comparative Shopping Guide Compendium for Robot-Assisted Surgical Systems for Lower Extremity Joint Arthroplasties

Patrick Meere; Nicholas Parody

Alternative Payment Models in Total Joint Arthroplasty Under the Affordable Care Act

Morteza Meftah; Richard Iorio

Clinical and Radiographic Results of the PFC Sigma TC3- RP Mobile Bearing Prosthesis: A Consecutive Series at 5 Year Follow Up

Morteza Meftah; Peter White; Amar S. Ranawat; Chitranjan S. Ranawat

Total Joint Arthroplasty in Immunocompromised Patients: A Matched Pair Analysis for Co-Morbidities

Morteza Meftah; Ira Kirschenbaum

Fracture Mechanism of Higher PTSA Angle Knee Using FE Simulation

Kohei Murase; Hiroshi Watanabe; DongWook Kim; Yasushi Oshima; Takeo Matsumoto; Tokifumi Majima; Shinro Takai

Evaluation of Lower Score in Patient-Reported Outcomes After Direct Anterior Total Hip Arthroplasty

Kazuhiro Murayama; Kazuhiro Oinuma; Yoko Miura; Hidetaka Higashi; Tatsuya Tamaki; Taisi Ninomiya; Kazuhisa Kurogi; Ayako Kurogi; Hideaki Shiratsuchi

Wear Behavior of the Constrained Hip Systems

Satya Nambu; Anish Shivaram; Gary Hines

90-Day Perioperative Complications in Patients Undergoing Anterior Cervical Discectomy and Fusion (ACDF) With and Without Hypothyroidism: A Retrospective Analysis

Rushabh Vakharia; Timothy Niedzielak; Bijan Joseph Ameri; Ajit Vakharia; John Malloy, IV

Hypothyroidism Increases 90-Day Complications in Patients Following Primary Total Hip Arthroplasty: A Retrospective Analysis

Dhanur Damodar; Timothy Niedzielak; Ajit Vakharia; Erik Zachwieja; Rushabh Vakharia; Martin Roche

Sleep Apnea Is a Risk Factor for Postoperative Complications Following Primary Total Joint Arthroplasty

Rushabh Vakharia; Wayne Cohen-Levy; Timothy Niedzielak; Ajit Vakharia; Chester J Donnally; Tsun Yee Law; Martin Roche

A Case of Distal Humeral Non-Union Which Acquired Elbow Flexion Defficiency and Ulnar and Median Nerve Symptoms After Total Elbow Arthroplasty

Hiroki Nishikawa; Katsunori Inagaki; Jun Ikeda; Keikichi Kawasaki; Kazunari Tomita

Bilateral Cement Venogram Following Total Hip Replacements: Excellent Cementation or Excessive Pressurisation?

Kodali Siva Rama Krishna Prasad; Stephen Sarasin

Postoperative Digital Templating in Total Hip Arthroplasty: An Objective Analysis of Practice

Kodali Siva Rama Krishna Prasad; Faiz Khan; Rakesh Kumar; Peter Lewis

Effect of Repeat Testing on the Mechanical Behaviour of the Porcine Lumbar Spine

Sonia Ramos Pascual; Patrick S Keogh; Anthony Miles; Sabina Gheduzzi

Significant Demographic and Geographic Differences Exist in the Reporting of Superior Labrum From Anterior to Posterior (SLAP) Tear Literature: A Systematic Review

Giulia Rinaldi

Reliability of 3D Preoperative Templating Software Systems for Humeral Head Selection in Total Shoulder Arthroplasty

Diego L Lima; Jacob Markel; Jonathan P. Yawman; James Whaley; Danielle L. Malone; Gregory J. Gilot; Vani Sabesan

Evaluation of Suprainguinal Fascia Iliaca (SIFI) Block on Hip Fracture Outcomes

Leslie Thomas; Kim Bland; Jillian Vitter; Patrick Torres; Clint Elliott; Mathew Patterson; Dane Hendrick; James Mauntner

A Holistic Approach to Optimize the Thromboprophylactic Strategy After Tka: A Prospective Observational Report.

Philippe Van Overschelde; Alain Kalmar

A Custom-Made Cement Spacer: For a 2-Stage Revision of an Infected Megaprosthesis of the Hip

Dries Verrewaere; Arne De Smet; Gwen Sys

Open Labral Reconstruction Improves Outcomes in Femoroacetabular Impingement After Failed Hip Preserving Surgery

Zlatan Cizmic; David Novikov; Kristofer Chenard; Tyler Luthringer; Lazaros Poultides; Jonathan Vigdorichik

Surgeon Volume Does Not Influence Short-Term Outcomes Following Robotic-Assisted Medial Unicompartmental Knee Arthroplasty

Zlatan Cizmic; Kelvin Kim; Afshin Anoushiravani; William J. Long; William Macaulay; Jonathan Vigdorichik

A Large Proportion of Revision Total Hip Arthroplasty Is Potentially Preventable

David Novikov; John Mercuri; Zlatan Cizmic; James Feng; Afshin Anoushiravani; Joseph Bosco; Ran Schwarzkopf; William Long; Jonathan Vigdorichik

Sagittal Spine Disease Alters Sitting-Standing Lumbopelvic Mechanics: Implications for Total Hip Arthroplasty

Aaron Buckland; Matthew T. Kingery; Zlatan Cizmic; Peter Zhou; John Y. Moon; Jared Tishelman; Bryan M. Beaubrun; Samantha R Horn; Dennis Vasquez-Montes; Gregory W. Poorman; Thomas Errico; Peter G. Passias; Themistocles S. Protopsaltis; Richard Iorio; Jonathan Vigdorichik

Dynamic Sitting to Standing Radiographs Provide More Accurate Evaluation of Functional Mechanics in Total Hip Arthroplasty

Jonathan Vigdorichik; Zlatan Cizmic; David Novikov; Omar Behery; Aaron Buckland

Robotic-Assisted Total Hip Arthroplasty Improves Patient Reported Outcomes

Zlatan Cizmic; David Novikov; Nipun Sodhi; Patrick Meere; Jonathan Vigdorichik

Improved Component Positioning in Computer-Assisted Birmingham Hip Resurfacing

Zlatan Cizmic; David Novikov; Scott Marwin; Roy Davidovitch; William Macaulay; Jonathan Vigdorichik

Robotic-Assisted Total Hip Arthroplasty May Reduce the Risk of Complications in Patients Younger Than 35 Years

David Novikov; Zlatan Cizmic; Roy Davidovitch; Jonathan Vigdorichik

The Effect of Combined Application of Calcium Polyphosphate Granules and bFGF Fibrin Glue for Tendon-Bone Healing in the Tibial Tunnel in a Rabbit ACL Reconstruction Model

Duan Wang; Zong-Ke Zhou

Results of Revision Total Knee Arthroplasty Due to Instability

Chris Wilson; Joshua Kelly; Jegan Krishnan

Clinical Diagnosis of Instability in TKA:

Chris Wilson; Joshua Ford; Stephen Quinn; Jegan Krishnan

Prospective Evaluation of the MAKO Robotic System in Total Knee Arthroplasty

Chris Wilson

ACL Reconstruction Without the Use of a Tourniquet

Khaled Yagmour; Hesham Al-Khateeb
