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 Vigdorchik

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-Cimbrelo; 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 Bandi; Alexandra Oswald; Eik Siggelkow

7:53 Gait Analysis of Individuals With Isolated Posterior Cruciate Deficiency
Katrin 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?
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 Haiard; Samih Tarabichi; Amr Osman; Mohamed Elkabban; 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 Ohnuma; 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**

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**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 Brown

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 Kirkings; Alex Drew; Jonathan Wood; Kevin Dodd

7:53 **Validation of a Statistical Shape Model for Acetabular Bone Defect Analysis**
Georg Hetlich; 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 Kirkings; 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**
Marsh 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 Nachtrag; Richard Komistek

8:41 **Comparison of Conventional Versus Kinematic Alignment Technique for Mobile Bearing UKA: An in-Silico Study**
Cedric Mailloit; 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**

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**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
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. Nguyen; 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; Elk 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 Anjis; 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 Dubruele

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**
What Happened? Extreme Delamination and Oxidation in Modern Day Compression Molded Polyethylene
Weiqi Shen; Takuma Sugino; Miho Niikura; Naohide Tomita

Mechanobiology Based Microscale Study of Influence of Surface Texture Design on Peri-Acetabular Bone Ingrowth
Raideep Ghosh; Souptick Chanda; Debabrata Chakraborty

Discussion

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 McIntire; B. Sonny Bal

Resistance of a Novel Ceramic Acetabular Cup to Critical Impact Loads
Carolina Avila; Andy Taylor; Simon Collins

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

Discussion

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

Quantification of the Dorr Classification System
Tyler Goldberg; Andrea Torres; Jared W. Bush; Michael J Mahometa

Native Femoral Version in a Total Hip Replacement Population
Stefan Kreuzer; Jim Prieur; Catherine Stambouzou; Len Walter; Ed Marel; Michael Solomon; Andrew Shimm; Stephen McMahon; Jonathan Bare

Sex Differences in Femoral Morphology in Patients With Developmental Dysplasia of the Hip Undergoing Arthroplasty
Oliver Boughton; Keiuke Uemura; Kazunori Tamura; Masaki Takao; Hidetoshi Hamada; Justin Cobb; Nobuhiko Sugano

Does Muscle Atrophy Correlate With Muscle Weakness in Unilateral Hip Disease?
Kazunori Tamura; Masaki Takao; Hidetoshi Hamada; Takashi Sakai; Nobuhiko Sugano

Iliopsoas Pressures After Standard Total Hip Replacement
Hugh Jones; Ryan Blackwell; Angela Chun; Sabir Ismaily; Ryan Kim; Christopher Lenherr; Daniel Le; Philip Noble

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

Implantation of Short Stem Hip Prothesis 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

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

Clinical and Radiographic Outcomes of Minimally Invasive Anterolateral THA Using a Short Femoral Stem in Japanese Patients
Toshio Sasaki; Takao Kodama; Hiroki Okai

Comparison of Patient Reported Outcomes in Neck-Preserving Short-Stem Implant vs. Conventional Neck-Sacrificing Implant
Stefan Kreuzer; Stefanf Malanka; Amir Pourmoghaddam; Marius Dettmer

MiniHip Femoral Stem: A Multi-Centre, Prospective, Observational Study
Ciara Harman; Irum Afzal; David Shardlow; Mark Mullins; Jonathan Hull; Fadhil Kashif; Richard Field

AMIStem Can Mostly Preserve the Short External Rotators. - Preoperative Planning for the Stem Insertion in DAA-THA-
Toshihiro Seki; Hiroshi Tanaka; Hirochitoshi Ogasa; Atsunori Tokushige; Kazushige Seki; Takashi Imagama; Toshihiko Taguchi

Results of Short Stem Hip Prostheses as a Conservative Hip Arthroplasty
Mohamed Elkabbani; M. A. El-Sayed; Samih Tarabichi; Michael Schulte

Early-Mid Term Results of a Cementless Short Hip Stem Prosthesis

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
**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**  
Hinko 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; Kyrilkos Karras

10:38 **What Factor Decides the Posterior Slope Angle of the Tibial Articular Surface?**  
Ryuji Nagamine; Makoto Kawasaki; Weiwa Chen; Mitsugu Todo; Yao Ma; Keitaro Yamamoto; Toru Suguro

10:44 **Evaluation of Proximal Tibia Bone Quality With Teriparatide Administration by Computed Tomography Number**  
Takaharu Shimazaki; Syuya Ide; Yoysuke Matsumura; Masaaki Matsubara

10:50 **Pre-Operative Anatomy and Its Correlation to Intra-Operative Knee Laxity and Patient Outcome in Total Knee Arthroplasty**  
Edgar Wakelein; Joshua Twigg; Brett Fritsch; Brad Miles; David Liu; Andrew Shimmin

10:56 **Numerical Analysis of the Knee Cartilage With Resultant Joint-Line Obliquity**  
Masaru Hisa; 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**  
Hinko Nomura; Masaaki Maruyama

10:26 **Predisposing Factors for Patellofemoral Arthritis and Their Correction After Patellofemoral Arthroplasty**  
Mo Saffarini; Marco Valeroso; 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 Hampp; Ronald Connors-Ehlert; Ormonde Mahoney

10:38 **Accuracy of Tibial Slope Estimation in Total Knee Arthroplasty**
10:44 External Rotation of the Femoral Component Increases Asymmetry of the Posterior Condyles  
Mark S. Meyer; George Chimento; Bradford Waddell; J. Lockwood Ochsner; Conner Ojard

10:50 Tibial Bone Density Changes Following TKA: What Can We Learn From DEXA Studies?  
Thomas Anjis; Dennis Janssen; Nico Verdonschot

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

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**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 Kyomatsu

10:26 Analysis of a Custom Tibial Insert to Improve Functional Outcomes Following Total Knee Arthroplasty  
Miriam Chaudhary; Orhum Muratoglu; Kartik Mangudi Varadarajan

10:32 Sagittal Stability of Medial Pivot Total Knee Arthroplasty Compared to Other Implant Designs  
Roseleen McKemery; 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 Wakenel; 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 Meers; Randy Cuevas; Arthur Alshabahian,

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 Kyomatsu; 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

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**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 Ducruix; 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 Pusso; Gabriela Graziani; Michele Bianchi; Gianluca Carnevale; Alessandra Pisciotto; 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 Nambo; Ethan Baker; Anish Shivaram

10:38 Prosthetic Joint Infection and Aseptic Loosening - Could Liposomes Be the Solution?  
Rebecca Beanish; Wayne Nishio Ayre; Sam Evans

10:44 A New Polymeric Dicalcium Phosphate (P-DCPD) Cement for Load-Bearing Bone Defects  
David Market; Weiping Ren

10:50 Characterization of Osteoconductive Si-Y-O-N Film Present at Annealed Silicon Nitride Surface  
Ryan Bock; David Cullen; Bryan McEntire; Karen More; Donovan Leonard; B. Sonny Bal
An All-Polymer Total Knee Replacement
Louise M. Jennings; Raelene Cowie; Adam Briscoe; John Fisher

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 Acri; Maria Teresa Miscione; Salvatore Mosca

The Design and in-Vivo Testing of a Locally Stiffness Matched Porous Scaffold
Shaaz Ghousse; Natalie Reznikov; Oliver Boughton; Justin Cobb; Gordon Blunn; Molly Stevens; Jonathan Jeffers

THR - Complications & Complicating Factors
Thursday 11 Oct, 10:20AM - 11:20AM

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

Preventing Neurologic Injury During Direct Anterior Total Hip Arthroplasty (THA) Using the Hana Table: A Novel Technique Incorporating Neuromonitoring During THA
Timothy Niedzielak

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

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

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

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

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

Total Hip Replacement Patients Stratified by Functionality Present Different Implant Loadings
Enrico De Pieri; David Lunn; Kasper Rasmussen; Anthony Redmond; S J Ferguson

Effects of Using a Lipped Liner on the Occurrence of Impingement in THA
Gregory Pryce; Bismaaya Sabu; Mazen Al-Hajjar; Ruth Wilcox; Jonathan Thompson; Tim Board; Sophie Williams

Does Total Knee Arthroplasty Influence Hip Rotational Range of Motion?
Tatsunori Katayama; Yasushi Oshima; Atsushi Okubo; Norishige Izawa; Tokifumi Majima; Shinro Takai

Contact Surface Pathways in Total Hip Replacement Patients Stratified by Body Mass Index
David Lunn; Graham Chapman; Anthony Redmond

In Vivo Comparision of Normal Hip Kinematics With Degenerative Hips Before and After Tha
Jarrod Nachtigal; Garett Dessinger; Milad Khasian; Michael LaCour; Adrijja Sharma; Richard Komistek

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

Tranexamic Acid Reduces Transfusions Rates in Obese and Super Obese Patients Undergoing Total Joint Arthroplasty
Morteza Meftah; Ira Kirschenbaum

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 Ojar; 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; Yochi Shimada

11:02 The Effect Preoperative Discontinuation of Antiplatelet Agent on Blood Loss and Bleeding Related Complication in Total Knee Arthroplasty
Kwangnyoun 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 Randomized Controlled Trial
Duan Wang; Zong-Ke Zhou
11:55 Smart Hand-Hand 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 Condit; Daniel Lieffort; 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 Aldatmani; 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 Dubruel

11:28 Discussion

11:31 Hip Joint Mechanics Before and After Cam Femoroacetabular Impingement
K.C. Geoffrey Ng; Hadi El Daou; Marcua 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 Karunarathne; 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
12:01  **Spinalpelic Compensatory Mechanisms for Reduced Hip Motion in the Setting of Hip Osteoarthritis**
Jonathan Vigdorchik; Leah Steinmetz; Peter Zhou; Dennis Vasquez-Montes; Matthew T. Kingery; Nicholas Stekas; Nicholas Frangella; Christopher Varolita; 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**

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**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

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**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 Stubberg

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**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 Shallenberger; Bryan Kirking

**Q&A and Round Table Discussion**
Adam Shallenberger; Bryan Kirking; Julien Deckx; Sjoerd Kolk

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**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**
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

Quantitative Analysis of the Stand to Sit Pelvis Kinematics Using 3D Reconstructions From Bi-Planar X-Rays
Youngwoo Kim; Francois Giniron; Jean Yves Lazennec; Wafa Skalli

Discussion

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

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

Posterior Pelvic Tilt Increases Over Time and Affects Cup Position After Primary Total Hip Arthroplasty
Eduardo Garcia-Rey; Beatriz Garcia-Maya; Javier Gomez-Luque

Discussion

Jonathan Jeffers

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

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

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

Avoiding Intraoperative Fractures in Total Hip Arthroplasty Using a Practical Vibrational Analysis Technique During Bone Preparation
Zahra Ehteshami; Isaiah Adekannibi; Chris Hunt; Matthew Dressler

Antibacterial Properties of Bupivacaine-Loaded UHMWPE
Ebru Oral; Dmitry Gil; Scott Grindy; Ali Alici; Orhun Muratoglu; Hany Bedair; Sandra Bliss Nelson

Gentamicin Sulfate Eluting UHMWPE Spacer for Two-Stage Revision
Ebru Oral; Orhun Muratoglu; Ali Alici; Dmitry Gil; Rachel Connolly

The Reliability of Synovasure (Alfa Defensin-1 Assay) in Intra-Operative Diagnosis of Prosthetic Joint Infection
Chris Wilson; Vikas Singh

UKA With & Without Robotic Assistance

Improved Outcomes of UKA with PSI
Justin Cobb

Discussion

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

Kinematic Assessment of Anatomical Compartment Specific Partial Knee Arthroplasty
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 Vigdorchik

2:42 Lumbo-Pelvic Complex Degeneration Influences the Risk of THA Instability: A Case-Control Study
Charles Riviere; Stanislas Marouby; Cedric Mailiot; Francois Canovas; Louis Dagneaux

2:48 Long-Term Results of Anatomical Custom-Made Femoral Component in Total Hip Arthroplasty
Takashi Sakai; Kenji Ohzono; Takashi Nishi; Hidenobu Mikit; Masaki Takaao; 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
Takashi 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
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

Does Preoperative Diabetes Affect the Achievement of Forgotten Knee Status in TKR Patients
Sanjay Londhe; Ravish Shah; Atul Ranade

Influence of Femoral Component Sizing on Patient Satisfaction After TKA.
Stefaan Van Onsem; Matthias Verstraete; Dries Verrewaere; Catherine Van Der Straeten; Jan Victor

Early Patient Outcomes and Satisfaction of Robot-Assisted Total Knee Arthroplasty
Jan Albert Koenig; Karen Neuhauser-Daley; Sami Shalhoub; Christopher Plaskos

Getting Research Published and Achieving the Highest Impact
Fares Haddad

The Use of Social Media for Patient Recruitment and Follow-Up in Clinical Trials
Richard Field

An Announcement from ISTA: Building up the Journal of Technology in Arthroplasty
Hani Haider

Patient Perceptions of Robotically Assisted Hip and Knee Arthroplasty
John Kelly; Kieran Bochat; Dermot Collopy; Gavin Clark

YouTube as a Source of Patient Information for Knee Arthroplasty and Knee Arthritis
Michael Wong; Bhumit Desai; Michele Bautista; Ohmin Kwon; George Chimento

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

Reducing Post-Operative Costs in Elective Total Joint Arthroplasty: A Role for Virtual Care and Telehealth
Zlatan Cizmic; Christian Pean; Daniel Buchalter; Jonathan Vipondchik

Monitoring Patient Activity: Relevance, Technologies and Applications
Ben Stansfield

Wearable Plus App for Mobile Monitoring and Patient Feedback After TJR
Ward Servaes

Accelerometry to assess activity & sedentary behaviour: parameters & applications
Freek Boesten

Physical activity monitoring & orthopaedic patients: clinical data & opportunities
Ben Stansfield

Sensor Insoles for Performance Tests and Monitoring in Fracture and Fall Risk Patients
Benedikt Braun

Maximising the Usefulness of PROMs Through ePROMs and PCOMs
Emily Moore; Brogan Keane; Justin Cobb

PROMIS Computer Adaptive Tests Compared With Traditional Patient-Reported Outcome Measures: A Systematic Review
Stewart Richmond; Amir Kamali; Anna Turco; Diamuid De Faoite; Beate Hanson
The future of intelligent machines in arthroplasty. Will we still need human doctors and engineers?

William Walter

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
Alistair 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-Akt; Mario Rossi; Natalie Pizzimenti; Weiping Ren

4:27 The Potential Ototoxicity of Cobalt From Metal-on-Metal Hip Prostheses: Preliminary Results
Laura Leysens; 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
Cost-Effectiveness & Economic Challenges
Thursday 11 Oct, 5:15PM - 6:15PM
ePoster with Short Talk | Floor: Third | Kiosk: 1

Moderators: Richard Field, Jonathan Vigdorchik

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 Wixon; Lallit Puri

5:45 90-Day Costs and Clinical Results of Robotic-Assisted and Conventional TKA
Jan Albert Koering; 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 Vigdorchik

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

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; Critchley, Owen; Stuart Callary; David Campbell

5:45 Pelvic Tilt Cannot Be Accurately Predicted Using Anteroposterior Radiographs
Jonathan Vigdorchik; 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; Fumitake Tokimura; Tsuyoshi Miyazaki

5:57 Assessment of Limb Length and Offset in Total Hip Arthroplasty Using Intra-Operative Digital Radiography
Eytan Debib; Sean Rajaei; Brad L Penenberg
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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>5:15</td>
<td>Efficacy of Regional Adductor Canal Block Using Extended Release Liposomal Bupivacaine in Total Knee Arthroplasty: A Randomized Prospective Study</td>
<td>Morteza Meftah, Suhas Boenerjous-Abel, Vinay Siddappa, Peter White, Ira Kirschenbaum</td>
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<td>5:21</td>
<td>Accelerated Rehabilitation After TKA. a French Nationwide Study.</td>
<td>Jean-Yves Jenny, Aymard Deladoucette</td>
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<td>5:33</td>
<td>Feasibility of Using a Surface Sensor to Measure Activity Specific Outcomes After Total Knee Replacement</td>
<td>Ryan Harold, Daniel Hu, Lanie Woeltjen, Victoria Brander, S. David Stulberg</td>
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<td>5:39</td>
<td>A Pilot Study on Fracture Detection Using Vibration Frequency Analysis During Powered Impaction of THA</td>
<td>Isaiah Adekanmbi, Zahra Ehteshami, Chris Hunt, Matthew Dressler</td>
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<td>5:45</td>
<td>Mitigation of Surgical Outliers During Total Knee Arthroplasty With Navigation-Enhanced Instrumentation</td>
<td>Jake Mooney, James Huddleston, Derek Amanatullah</td>
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<td>5:57</td>
<td>Effects of Variability With Impaction Strike Conditions on Vibroacoustic Signals for Bone Fracture</td>
<td>Isaiah Adekanmbi, Zahra Ehteshami, Chris Hunt, Matthew Dressler</td>
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**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

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>5:15</td>
<td>Soft Tissue Balance in ACL Deficient Osteoarthritis Knee at Total Knee Arthroplasty</td>
<td>Satomi Abe, Hitoshi Nochi, Hiroshi Ito</td>
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<tr>
<td>5:27</td>
<td>Comparison of 3-Years Postoperative Knee Stability After PS-TKA Between Medial Preserving Gap Technique and Measured Resection Technique</td>
<td>Kemmei Ikuta, Hirotsugu Muratsu, Masato Kamimura, Shotaro Tachibana, Takashi Oshima, Takaaki Koga, Tomoyuki Matsumoto, Akiiro Maruo, Hitoshi Miyao, Ryosuke Kuroda</td>
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<td>5:33</td>
<td>Coronal Laxity in Total Knee Arthroplasty: an Intraoperative Measurement</td>
<td>Yifei Dai, Amaury Jung, Guillaume Brax, David Liu</td>
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<td>5:45</td>
<td>Less Compressive Force on the Posterolateral Compartment Can Correlate With More Flexion Angle Following Cruciate-Retaining TKA: A Retrospective Observational Study.</td>
<td>Yoshinori Okamoto, Shuhei Otsuki, Tomohiro Okayoshi, Hitoshi Wakama, Tomohiko Murakami, Kosuke Nakagawa, Masashi Neo</td>
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<td>5:57</td>
<td>Using a Novel Posterior Referenced Gap Sizer Improves Soft Tissue Balance Even After PCL Resection, Kinematic Analyses During Computer Assisted Total Knee Arthroplasty</td>
<td>Katsumasa Tan, Masaya Minoda, Shigeru Matsuda, Koji Takayama, Tomoyuki Matsumoto, Ryosuke Kuroda</td>
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**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

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<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>5:15</td>
<td>Can the Subvastus Approach for TKA Help in Achieving High Flexion in Highflex Knees ? Results of 242 Knees at 4 Years</td>
<td>Nilen Shah, Dr. Manish Vaishnav, Mohit Patel, Dr. Ujjwal Wankhade</td>
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<tr>
<td>5:21</td>
<td>Mid-Term Results of TKA by the Hybrid Navigation Technique (Combination of Navigation and Gap Technique)</td>
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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
Arum Mullaji; Gautam Shetty

5:33  On the Relationship Between Compartamental 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; Tokufumi 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 Twiggis; Ella Moore; Brad Miles; Andrew Shinmin; 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 X Sonhai; 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

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 Miyani

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 Welitzer; 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 Trunionnosis
Kambiz Behzadi

5:39  Fretting Initiated Crevase 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 Whittal; Richard W McCalden; Xunhua Yuan; Steven MacDonald; Brent Lanting; Douglas Naude

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 Baise; Gennaro Fiorentino; Francesco Catellani; Giovanni Ziveri; Lorenzo Banci; Alessio Mecoli; 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
Mazen Al-Hajjar; 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; Kempei Ikuta; Takashi Oshima; Takaaki Koga; Tomoyuki Matsumoto; Akihiro Maruo; Hitotoshi 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 Wake; Joshua Twigg; Justin Roe; Jonathan Bare; Andrew Shmim; 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 Al; Simon Harris; Richie Abel; Justin Cobb

5:54 Conservative Approaches to Kinematic Alignment and Their Impact on Patient Reported Outcomes
Joshua Twigg; Andrew Shmim; Michael Solomon; Edgar Wake; 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
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

Effect of Smoking Status on Pain Intensity and Opioid Consumption in Total Hip Arthroplasty Patients
Randa Elmallah; Jennifer I. Etcheson; Nicole E. George; Chukwueke U. Gwan; John M. Tanaz; Benjamin M. Stronach; Ronald Delanois

Relationship Between Muscle Strength and Functional Level in Patients With Revision Total Knee Arthroplasty
Musa Eymir; Bayram Unver; Vasti Karakasun

The Effect of Pain and Kinesiophobia Level on Postoperative Functional Outcomes in Patients With Total Knee Arthroplasty
Musa Eymir; Bayram Unver; Vasti Karakasun

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

Preparation of rGO/HA Composite Scaffold and Study on Osteogenesis Effect of It in Vitro and in Vivo
Kai Zhou; Tingxian Ling; Duan Wang; Haoa Yu; Zeyu Luo; Zongke Zhou

Fracture Toughness at the Interface Between Cortical Bone and Cancellous Bone
Rajesh Ghosh; Pankaj Shitole; Arpan Gupta

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

Assessment of Micro Architecture of Bone and Biomechanical Properties of Proximal Femur for Hip Fractures Risk : A Pilot Study
Rajendra Kumar Kanjoo

Evaluation of the Implanted Position of microMAX Stem Using Pre-Operative Planning Software
Yoshishiro Shibata; Hirota; Isamu; Satona Murakami; Hiroto Mitsui

Effectiveness of CT-Based Navigation for Femoral Neck Cut in Total Hip Arthroplasty
Takashi Tsujimoto; Nobuo Nakamura; Junghyo Kim; Nobuhiko Sugano

The Need for Patient-Specific "Safe Zones" in Total Hip Arthroplasty
Jonathan Vigochick; Zlatan Cizmic; Ameer Elbuluk; Michael Bradley; Michael Miranda; David Watson; Douglas Dennis; Stefan Kreuzer

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

Clinical Accuracy of a Smart Mechanical Navigation System for Cup Alignment as Measured by Post-Operative CT
William Murphy; Jens H. Kowal; Stephen Murphy

Measuring Pelvic Tilt Using Inertial Measurement Units for Optimising Total Hip Arthroplasty
Mark Elliott; Richard King; Xueyang Wang; Arham Qureshi; Abhinav Vepa

 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-Ngaonoongsong; Siwadol Wongnak; Chavarat Jarungvitayakon; Kawee Umsamutpetch; Thanaphot Channoom; Viroj Kawinwongwot

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 Tateishi; Shih Yamada; Satoshi Nagoya; Masashi Fujii; Ima Kosuge; Naisaka Miyakoshi; Yoichi Shimada

8:00 An Enhanced Understanding of Culture-Negative Periprosthetic Joint Infection With Next Generation Sequencing
Karan Goswami; Timothy Tan; Majid 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 Megaprostheses for Infection Control Following Tumor Resection
Robert Eberle; Richard Buch

7:42 Outcome of the Treatment of Knee Prosthetic Joint Infection
Yohisuke Matsuura; 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 Megaprostheses 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-Cimbrelo

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; Basochun Zhou; Hongyi Shao
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 Journey BCS
Taisei Kawamoto; Satoshi Iida

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

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

TKR - Outcomes
Friday 12 Oct, 7:30AM - 8:30AM
ePoster with Short Talk | Floor: Third | Kiosk: 6

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
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; Sunzori 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; Vash Karatosun

7:48 A Mid-Term Follow-Up Study of Quality of Life After Bilateral Total Knee Arthroplasty
Takehiko Sugita; Toshihmi 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; Yuko Akasaka; Yasuharu Nakashima

8:00 Missed Pathology- Is This the Cause of Unhappy TKR Patient?
Sanjay Londe; Ravi Shah

8:06 Patellofemoral Arthroplasty Improves Gait in Isolated Patellofemoral Arthritis, a Prospective Cohort Gait Analysis Study.
Alaya Choudhury; Eduard Avuiuet; Rhiannon Lambkin; Farhad Irapour; 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 Althaw; Xunhua Yuan; Matthew Teeter

7:42 Effect of Screw Length and Screw Number on Reverse Shoulder Glenoid Fixation
Christopher Roche; Jose Verges; 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
Andreas Faltin; 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 Schays

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; Hiroshiige Hamada; Scott Banks

7:36 Inter-Surgeon Variability in Using 3D Planning Software for Anatomic Total Shoulder Arthroplasty: an Analysis of 360 Cases
Alexander Greeng; 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; Kazunori 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.
Haqju 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

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 Ir'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 Arafamian; Catherine Van Der Straeten; Caroline Hing; Justin Cobb; Farhad Imampour

7:48 Evaluation of Tibial Component Rotation in Painful Total Knee Arthroplasties by MRI Enhanced With Metal Artifact Reduction Technique.
Mohamed Elkabban; 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 Ir’t Veld; Nico Verdonschot

8:02 Magic Angle Directional Imaging (MADI) in a Partially Torn Canine ACL Provides Quantification of Ligament Health.
Kerryn 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; Futoshiki Hamada; Takashi Sakai; Yoshinobu Sato; Nobuhiko Sugano

8:16 Accuracy of Different CT-Based Methods for Measuring Implant Placement Errors
Valentina Campanelli; Nathan Nemtavali; Hosna Akhlaghpour; Rocio Lozano; Joel Zuhars

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 Verstraeten; Catherine Van Der Straeten; Jan Victor

7:41 Differential Kinematics During Stair Ascent and Descent in Medial Pivot Design Total Knee Arthroplasty
Hayato Mine; Ryuchi Gejo; Makiko Nogami; Tomoatsu Kimura

7:48 Rotational Soft-Tissue Balance Highly Correlates With Rotational Kinematics in Total Knee Arthroplasty
Tomofumi Kenoshita; 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
Garett Dessinger; Manh Ta; Ian Zeller; Jarrod Nachtrieb; Adrijna 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; Tomaiko Kajiwara; Ryuji Nagamine

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
7:36 Influence of Physiological Loading Following Intra-Operative Lipid/Marrow Infiltration and Intra-Operative Motions Upon Micromotion
   
6 Eric Peckenpaugh; Chase Maag; Amber Metcalf; Jason Langhorn; Mark Heldreth

7:42 Distribution of Bone on-Growth in Tibial Metaphyseal Sleeves: A Retrieval Analysis
   
7 Lydia Weitzler; Ugonna Ihekweazu; Christina Esposito; Timothy Wright; Douglas E Padgett

7:48 Ps Devices Are Not Worst Case for Tray Fixation in Cementless Tk
   
3 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?
   
4 John Kyle Mueller; Brian Roach; Charlie Parduhn

8:00 Does Implant Fixation Affect Early Return to Function Following Primary Total Knee Arthroplasty?
   
1 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
   
4 Esther Sanchez; Christoph Schilling; Thomas M. Grupp; Nico Verdonschot; Dennis Janssen

8:12 Bone Ingrowth Into EBM Implants
   
5 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
   
5 John DesJardins; Eric Lucas; Kim Chilag; Frank Voss

7:36 Concept of a New Approach to Support Total Hip Replacement Procedures by Surgical Navigation
   
5 Juergen Wahrburg; Oliver Gieseler; Hubert Roth

7:42 Image Guided Surgery (Or Navigation) Software Optimization
   
5 Davor Saravanja; Greg Roger

7:48 iHip Surgical innovative Total Hip Arthroplasty Proposal
   
5 Anatol Podolsky

7:54 A Trial Femoral Head for Intraoperative Evaluation of Combined Anteversion
   
5 Kazutaka So

8:00 Fiducial Surgical Navigation Screw
   
5 Davor Saravanja; Greg Roger

8:06 Antimicrobial Dispensing Knee Spacer for Improved PJI Treatment
   
5 Chadd Clary; Jeff Castleberry

8:12 How Can an Electronic Tool Improve the Results After TKA? Comparing the Results Including 1 Year FU
   
5 Thomas Paszczynsky; Christoph Stiegler

8:18 A Novel Guide for Locating Femoral Head Center in Knee Surgeries
   
5 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?
   
5 Keith Tucker

8:41 Discussion

8:46 Higher Volume Surgeons Have Lower Cost, Readmissions, and Mortality After THA and TKA
   
2 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
   
2 William Franklin; Sergio Navarro; Heather Haebeler; Michael A Mont; Prem Ramkumar

   
2 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

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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  
Manwan Al-Zibari; Philippe Van Overschelde; Samuel Everett; Inum Afzal; John Skinner; Gareth Scott; Deiary Kader; Richard E Field

8:53 Concurrent 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

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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 Feskanic; 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 Hellenmont; Sjoerd Bulstra; Maarten Spruit

8:59 Discussion

9:05 Retrieval Analysis of 3D Printed Titanium Orthopaedic Implants  
Lorenzo Dal'Avà; Harry Hothi; Arianna Cenquiglini; 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; Aadi Munim; Melanie Coathup; Gordon Blunn

9:17 Material Properties of Laser 3D Printing Products and Conventional Role Titanium in Many Conditions  
Hirotaka Iuchi; Hirotoshi 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 Verdonschot

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 Szmyd; Jeffrey Bischoff

11:17 Assessing Effects of Implant Geometry on the Loaded Stability Envelope of the Contemporary Revision Knee System
Kathlyn Howard; Fallon Fitzwater; Joe Wyss; Amilkumar 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 Rulkoketler; 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 Greeng; Matthew Hamilton; Sandrine Polakovk; Nicole Mohajer; An Younderian; 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 Lef; 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 Vigdorchik

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

Emily Hampp; Laura Yanos-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
## TKA Wear & Retrieval Analysis: Lessons Learned

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

**Moderators:** Philippe Kretzer, Anne Neville

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>11:51</td>
<td>New RSA Technology for Assessment of Wear, Fixation and Kinematics of THA, TKA and Reversed Shoulder Arthroplasty</td>
<td>Matthew Teeter</td>
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<td>11:58</td>
<td>Discussion</td>
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<td>12:01</td>
<td>Wear Analysis of 1385 Tibial Inserts: What Factors Are Driving Performance?</td>
<td>Douglas Van Citters; Barbara Currier; Alexander Titus; John Currier</td>
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<td>12:07</td>
<td>Wear, Not Corrosion, Is a Feature of the Axles in Retrieved Distal Femoral Replacements</td>
<td>Pat Campbell; Michael S. Kung; Sang-Hyun Park</td>
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<td>12:13</td>
<td>Gait-Dependent Model of Wear From Retrieved Total Knee Replacement Components</td>
<td>Christopher Knowlton; Hannah Lundberg; Markus Wimmer</td>
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<td>12:19</td>
<td>Discussion</td>
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<td>12:25</td>
<td>In-Vivo Performance of Surface-Hardened Ti-Alloy Knee Prostheses</td>
<td>Hugh Jones; Joshua Choi; Ji Ma; Wilson Serem; Sabir Ismaily; Philip Noble</td>
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<td>12:31</td>
<td>In Vitro Wear at the Taper-Trunnion Junction of BIOLOXdelta Hips Shown in a Multi-Station Hip Simulator</td>
<td>Rohan Bhalekar; Simon Smith; Thomas Joyce</td>
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<td>12:37</td>
<td>Discussion</td>
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<td>12:40</td>
<td>Novel Assessment Methods of Wear Particles from Various Materials</td>
<td>Catherine Van Der Straeten</td>
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<td>12:47</td>
<td>Discussion</td>
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## Total Shoulder Arthroplasty: The Surgeon’s Perspective

**Friday 12 Oct, 11:50AM - 12:50PM**  
Podium | Floor: Second | Room: Gielgud

**Moderators:** Scott Banks, Angus Wallace

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<th>Time</th>
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<tr>
<td>11:51</td>
<td>Innovations in Shoulder Arthroplasty</td>
<td>Angus Wallace</td>
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<td>11:58</td>
<td>Discussion</td>
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<td>12:01</td>
<td>Biomechanical Testing of Innovative Designs for Reversed Shoulder Arthroplasty</td>
<td>Vani Sabesan</td>
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<td>Discussion</td>
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<td>12:11</td>
<td>Development of a Pre-Clinical Test to Evaluate Total Shoulder Arthroplasty</td>
<td>Antonio Ramos; Margarida Bola; Jose Antonio Simoes</td>
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<td>12:17</td>
<td>Novel 3D-Printed Patient-Specific Guide Improves Glenoid Pin Placement Compared to Standard TSA Guide: A Cadaveric Study</td>
<td>Brandon Cabarcas; Gregory Cvetanovich; Alejandro Espinosa Oria; Nozomu Inoue; Anirudh Gowd; Joseph Liu; Nikhil Verma</td>
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<td>12:23</td>
<td>Laboratory and Clinical Study for Using PSI in Positioning Gelnoid Components</td>
<td>Mahmoud Hafez</td>
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<td>12:29</td>
<td>Discussion</td>
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<td>12:41</td>
<td>Inter-Surgeon Variability in Using 3D Planning Software for Reverse Total Shoulder Arthroplasty: an Analysis of 360 Cases</td>
<td>Alexander Greene; Emilie Cheung; Sandrine Polakovic; Matthew Hamilton; Richard Jones; Ari Youderian; Thomas Wright; Paul Saadi; Joseph Zuckerman; Pierre Henri Flurin; Ira Parsons</td>
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<td>12:47</td>
<td>Discussion</td>
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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; Shanoo 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; Matthew 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 Haussler; 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 PJ 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
Chukwueke 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 Acri; 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
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

2:54  **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 Higuerac; Craig Della Valle; Javad Parvizic

2:57  **In Vivo Anti-Bacterial Effectiveness of Nanotextured Titanium Implant Surfaces**  
Craig R. Friedrich; Erin Baker; Sachin Bhosle; Daniel Justin

3:01  **Mechanical Analysis of Tigecycline Loaded Bone Cement and Comparison With Vancomycin and Daptomycin Loaded Bone Cements**  
S. Kivanc Muratlic; Vasfi Karatosun; Bora Uzun; Izge Gunal

3:04  **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; Apetska Rajamanthrilage; Nathan Carrington; Caleb Behrend; Jeffery Anker

2:57  **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
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 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 Minler; Guy Bellier; Andrew Amis

4:39 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

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 Stee

4:35 Discussion

4:44 Do PROMS reflect patients’ dreams rather than real outcomes? - Yes
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 Buttazzoni; 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 Vigdorchik; 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 Haag; Masanobu Saito; Keisuke Akiyama; Hirohito Abe; Kazuhsa Akawa

5:59 Treatment of Vancouver Type B2 and B3 Periprosthetic Fractures With Revision Total Hip Arthroplasty and Internal Fixation Using Locking Plate.
Toshiyuki Shiono

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
Kwangyoun Kim

6:17 Total Knee Arthroplasty With PSI Tecnique, 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
Jim Miyagi; Yoshitada Harada; Takeshi Miyasaka; Sota Klahara

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 Varus
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

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 Hamp; Vincent Alipit; Anil Bhave; 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 Hamp; Vincent Alipit; Manoshi Bhowmik-Stoker; Anil Bhave; Michael Mont; Antonia Chen

6:05 Robotic Knee Surgery Produces a Reproducible and Balanced Knee Construct When Compared to Conventional TKA.
William Manning; Arman Motesharei; 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

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; Mannui Zhang

Gregory Klingenstein; Scott Scholeif; 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 Hamp; Laura Yanoso-Scholl; Geoffrey H Westrich; Michael Mont

5:59 The Learning Curve Associated With Robotic-Arm Assisted Unicondylar 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; Karen Goswami; Carol Foltz; Antonia F Chen; William Hozack

6:11 Comparison of Blood Loss Between Robotics Assisted and Convention 1 Week Interval Staged Bilateral TKA
Sang Jin Park

THR - Resurfacing
Friday 12 Oct, 5:35PM - 6:35PM
ePoster with Short Talk | Floor: Third | Kiosk: 7
Development of a Multi-Station Shoulder Simulator for Wear Performance Analysis of Shoulder Implants
Dong Wang; Andrew Amis

Electrochemical Impedance Spectroscopy as a Method to Distinguish Corrosion Severity and Damage Modes in Retrieved Femoral Heads
Genymphas Higgs; Ryan Siskey; Clare Rinnac; William Mihalko; Jeremy Gilbert; Steven Kurtz

Gross Taper Failure of TMFZ Stems in Total Hip Arthroplasty
Emilie Dickinson; Valerie-Sophie Polster; Michael Morlock

Is There a Difference in the Wear Performance of MOM Pinnacle Implants Manufactured Before and After 2006?
Sean Bergiers; Harry Holth; Johann Henckel; Antti Eskelinen; Alistair Hart

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

Biological, Chemical and Mechanical Damage Modes in Corrosion of CoCrMo Acetabular Liners
Aarti Shenoy; Steven Kurtz; Jeremy Gilbert

Fretting Corrosion Characteristics of Ti6Al4V vs. TMZF Titanium Alloys in Simulated Body Fluid
Abimbola Olatekun; Yenal Vangolu; Zabeada Aslam; John Harrington; Andy Brown; Richard Hall; Anne Neville; Michael Bryant

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

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 Mites; 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 Guelke; Eric Harrison; Susan Heinrichs

8:27 Discussion

8:31 Debate
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 Conditt; 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 Bovier; 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 Goffton; Paul Edgar Beaulé; Chimmy 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; Adrijha Sharma; Richard Komistek

8:53 Discussion
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

   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 Chatelot; 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

   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 Verdonschot

9:08 Discussion

9:11 In Vivo Kinematics of the Medial Pivot Knee
   William Walter

9:18 Discussion

   Sourabh Bonah; 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 Taylor; 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

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.
Stefan Van Oorsom; 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; Emanuella de Candiisa Soares Pereira; Erika Cavalcante; Maria Paula Mariz Da Silveira Barros; Synara Nunes Medeiros De Souza; Victoria Brander; S. David Stulberg

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**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 Anteverision Predicts Stem Anteverision in Cementless Total Hip Arthroplasty
Christina Esposito; Sean Sulphen; 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 Anteverision 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
Tingsian Ling; Zongke Zhou

11:11 Can We Refer to the Contralateral Side for Restoring Coronal Plane Alignment in Reconstructive Knee Surgery?
Lucas Becker; 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

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**Innovations in TKA Kinematics**  
Saturday 13 Oct, 10:30AM - 11:30AM  
Podium | Floor: Third | Room: Fleming

Moderators: Nico Verdonschot, Peter Walker

10:31 Novel Evaluation Methods of Total Knee Mechanics
Peter Walker

10:38 Discussion

Hans Gray; Shanyuanye Guan; Tony Young; Michelle Dowsey; Peter Choong; Marcus Pandy

10:47 Kinematically Aligned Total Knee Arthroplasty Reduces Frontal Plane Knee Adduction Moment During Gait
Yasu Nib; Takeo Nagura; 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 Cerfetti; 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 Issa; John Fisher

10:57  The Influence of Contact Pressure and Cross-Shear on the Wear of UHMPE-on-PEEK-OPTIMA
  Raelene Cowie; Adam Bristoe; 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 Lef; Daniel Defosse

11:09  Discussion

11:15  Metallic Wear Debris Isolation and Characterization: A Cadaver TKA Study
  Christina Amrhein; Jayna Patel; Saurabh Lal; Meredith Perkins; William Milhalko; 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; Youasif 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 Prostheses
  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 Elmanlah; 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 Elmanlah; 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; Chukwuweke 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; Chukwuweke 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
Kazumori Hino; Hiromasa Miura; Tatsushi Kutsuna; Kunihiko 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 Iizumi

Post Traumatic Ankle and Foot Deformity, Correction by Multiple Osteotomy and Ilizarov Rings
Rajendra Kumar Kanodia; Rajendra Kumar Kanoja

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 Marinco; 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; Chirantan S. Ranawat

Total Joint Arthroplasty in Immunocompromised Patients: A Matched Pair Analysis for Co-Morbidities
Morteza Meftah; Ira Kirschenschbaum

Fracture Mechanism of Higher PTSA Angle Knee Using FE Simulation
Kohei Murase; Hiroshi Watanabe, DongWook Kim; Yusashi Oshima; Takeo Matsumoto; Tokifumi Majima; Shinro Takai

Evaluation of Lower Score in Patient-Reported Outcomes After Direct Anterior Total Hip Arthroplasty
Kazuhiko Murayama; Kazuhiru Onuma; Yoko Miura; Hidetaka Higashi; Tatsui Tamaki; Taisi Ninomiya; Kazuhsia 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 Damodor; 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 Deficiency and Ulnar and Median Nerve Symptoms After Total Elbow Arthroplasty