

Wednesday, June 30th

14:30 - 17:30

Workshop 1: The Tribology of PEEK

Workshop 2: High-Resolution MicroCT

14:30 - 17:30

Registration and poster set-up

18:00 - 19:00

Opening Ceremony with welcome from EORS President and Conference Chair

18:00 - 19:00

Thursday, July 1st

08:00 - 08:30

SESSION A

SESSION B

SESSION C

Registration and poster set-up

08:00 - 08:30

08:00 - 08:30

08:30 - 10:00

**A1 Stemcells**

**Chaired by Prof. Thimios Mitsiadis & Dr Martin Stoddart**

*Prof. Thimios Mitsiadis  
(University of Zurich);*

*"The Secret of a Smile: It's All About (Dental) Stem Cells"*

4 oral presentations (#356, 203, 236, 385)

Functionalized PCL Surfaces Drive Osteo/Chondrogenic Differentiation of Human Bone Marrow Mesenchymal Stem Cells

356

G.Vadalà, A.Rainer, M.Centola, M.Loppini, S.Carotti, S.Morini, M.Trombetta, V.Denaro  
Italy

Mesenchymal Stromal Cell Sensitivity to Substrate Compliance and Ligand Chemistry: Toward Engineering a Functional Tendon to Bone Transition

203

Rl. Sharma and JG. Snedeker  
Switzerland

236

Mouse bone marrow mesenchymal stem cellular response to nanostructured cp-ti substrate  
M.Novin and S.Faghihi  
Iran

385

A New GDF-5 Mutant with Improved Osteoinductivity Combines Positive Features Of GDF-5 and BMP-2 for Bone Repair *in vitro*

K. Kleinschmidt, F. Flöger, J. Glockenmeier, S. Kinkel, P.Kunz, W. Richter  
Germany

10:00 - 10:30

10:30 - 12:00

**A2 Spine**

**Chaired by Prof. Dr. med. Paul F. Heini & Dr Sibylle Grad**

*Prof. Dr. med. Paul F. Heini  
(Klinik Sonnenhof, Switzerland);*

*"Failure of Spinal Stabilization and Failure of the Stabilized Spine: Do We Really Understand the Mechanics of the Spine ?"*

5 oral presentations (#326, 247, 259, 244, 249)

Cement Augmentation of Human Spines Does Not Fully Restore their Kinematic Behavior under Complex Loading: An Experimental Study

326

RN. Alkaisy  
USA

247

Radiofrequency (RF) Kyphoplasty - a Novel Method for the Treatment of Osteoporotic Vertebral Compression Fractures  
S.G. Mattyasovszky, N. Bnejawi, S. Thomczyk, J. Gemidji, D. Proschek, K. Kafchitsas, A.A. Kurth, and Ph. Drees  
Germany

259

Biological Response to UHMWPE Particles in Cervical Spine - A New *in vivo* Model  
K. Kabir, J. Schwiesau, H. Goost, R. Pflugmacher, O. Weber, C. Burger, T.M Grupp, D.C. Wirtz  
Germany

244

Validation of the Loaded Disc Culture System; a Novel Bioreactor to Study the Effects of Loading on Large Species Intervertebral Discs.

CPL. Paul, HA. Zuidervaar, B. Zandieh Doulabi, AJ. vd Veen, TH. Smit, MN. Helder, BJ. van Royen, MG. Mullender  
Netherlands

249

Autografts for Spinal Fusion: Effectiveness of Bone Cell Supply of Bone Shavings Collected During Surgical Decompression Versus Laminectomy Bone Chips

C. Eder, A. Chavanne, J. Meissner, W. Bretschneider, A. Tuschel, P. Becker, M. Ogon  
Austria

12:00 - 13:30

**B1 Hip Arthroplasty**

**Chaired by Dr Michael Leunig & Dr Michiel Muller**

*Dr. Michael Leunig  
(Schulthess Klinik, Switzerland);*

*"Hip Resurfacing Arthroplasty: Current Status and Future Perspectives"*

4 oral presentations (#99, 243, 135, 225)

Implant Survival of Metal-on-Metal Hip Resurfacing: A Systematic Review

99

W. van der Weegen, HJ. Hoekstra, T. Sybesma, E. Bos, EH. Schemitsch, RW. Poolman  
Netherlands

Custom Made Femoral Guides for Resurfacing: Accuracy Study  
M. Muller, M. Raaijmakers, K. De Smedt, F. Gelaude  
Belgium

243

Dislocation Potential in Conventional and Dual Mobility Hip Joint Couples  
N. Dong, J. Nevelos, M. Thakore, A. Wang, M. Manley, H. Morris  
USA

135

Biomechanical Analysis of Leg Length Inequality Following Total Hip Replacement

J. Barnett, A. Redmond, D. White, M. Stone, A. Grainger, P. O'Connor, J. Fisher, TD. Stewart  
UK

225

Coffee Break

**B2 Hip and Knee Arthroplasty**

**Chaired by Prof. James Richardson & Dr Michiel Muller**

5 oral presentations (#55, 297, 186, 338, 330)

The Effect of Femoral Neck Notching with the Birmingham Mid-Head Resection  
M. Olesen, PM. Lewis, JP. Waddell, EH. Schemitsch  
Canada

55

Scorpio TKA With a Mobile or Fixed Bearing Polyethylene Insert. RCT Comparing Clinical, Radiological and Functional Test Results at Two Year Follow-Up

297

JJ. Arts, P. Deckers, EM Jutten, TM Lodwick, IM Punt, MJ van Steijn, LW van Rhijn.  
Netherlands

186

UHMWPE Wear Using the Mallory Head Cementless Total Hip Prosthesis. A Long Term Clinical Follow Up Study

338

W. van der Weegen and HJ. Hoekstra  
Netherlands

Gyrometer Assessed Sit-Stand-Sit Transfers Can Score Function in Patients with Knee Osteoarthritis

330

SAAN Bolink, S Schoeberichts, IC Heyligers, B Grimm  
Netherlands

Total Hip Replacement: Effect of Cement Mantle Thickness - An Integrated Computational Simulation and In Vitro Study

330

S.Lamvohee, J.Dowell, P.Ingle, K.Cheah, R.Mootanah  
UK

**C1 Fracture Treatment 1**

**Chaired by Dr. med Jürg Goldhahn & Dr Enrique Gómez-Barrena**

*Dr. med Jürg Goldhahn  
(Schulthess Klinik, Switzerland);*

*"Fracture Treatment in Osteoporotic Bone - Challenges and Solutions"*

4 oral presentations (#384, 272, 18, 217)

Unfocused extracorporeal shock waves induce anabolic responses in osteoporotic bone

384

O.P. van der Jagt, J.H. Waarsing, W. Schaden, N. Kops, J.A.N. Verhaar, H. Weinsans  
Netherlands and Austria

Implant Stability is Affected by Peri-Implant Bone Microstructure  
A.J. Wirth, R. Müller, GH. van Lenthe  
Switzerland

272

Retrospective X-Ray Analysis of Consecutive Failed DHS Over One Year in a Single Trauma Unit

18

G. Talawadekar, N. Ahmed, S. Sathyamurthy  
UK

217

Revision Surgery of Failed Dynamic Hip Screws

L. McGonagle, K. Randhawa, RA. Stevenson, NJ. Donnachie  
UK

08:00 - 08:30

08:30 - 10:00

10:00 - 10:30

10:30 - 12:00

**C2 Fracture Treatment 2**

**Chaired by Dr. Jürg Gasser & Prof Nick Athanasou**

5 oral presentations (#112, 25, 82, 37, 20)

Surgical Management of Distal Tibial Metaphyseal Fractures with a Locking Plate  
L. McGonagle, J. Kozdryk, J. Stamer  
UK

112

AO Approved Nailing System: Is It Effective?

25

KW. Chan, J. Wong, NW. Thompson  
UK

82

Comparative Cost Analysis of Combined Percutaneous External Fixateur and Early Surgical Fixation Versus Delayed Open Reduction & Internal Fixation in the Management of Tibial Pilon Fractures & Ankle Fractures - A One Year Study

37

GIN. Johnson-Ogbunike, B. McFadden, D. Seligson  
UK

82

Comparison of Medial, Lateral, and Posterior Screw Compression in Ankle Arthrodesis

37

SF. Baumbach, CL. Jeng, SM. Belkoff, JT. Campbell, MS. Myerson  
USA

20

Segmental Palmar Fasciotomy with McCash Open Wound Under Local Anesthesia

A. Vaughan, GS Carille, A. Al-Shawi  
UK

12:00 - 13:30

Break  
EORS Genral assembly

13:30 - 15:00

**A3 Cartilage**  
**Chaired by Prof. Charles Archer & Prof. Wiltrud Richter**  
*Prof. Charles Archer*  
*(Cardiff University, Wales, UK):*  
 "Acceleration of post-natal articular cartilage maturation"  
 4 oral presentations (#231, 222, 205, 109)

231 Differential Roles of Cyclooxygenase 1 and 2 During Chondrogenesis  
 MMJ. Caron, TJM. Welling, MME Coolsen, PJ. Emans, JJC. Arts, DAM. Surtel, A. Cremers, JW. Voncken, LW. van Rhijn  
 Netherlands

222 Enhanced Expression Of Htra1 and ITM2A in Human Osteoarthritic Cartilage  
 W. Richter, E. Steck, S. Boeuf, P. Schnatzer  
 Germany

Dynamic Modulus and Loss Angle of Articular Cartilage in Gait- and Nutrition-Related Test Modes  
 205 J. Friere, S. Ronken, AU. Daniels, B. Göpfert, D. Witz  
 France, Switzerland

Evaluation of Gel Hydration Lubrication on Cartilage Surface Using MPC-Polymer Grafted Surface  
 109 N. Tamura, K. Yamamoto, K. Yamada, Y. Iwasaki, K. Ishihara, N. Tomita,  
 Japan

15:00 - 15:30

15:30 - 17:00

**A4 Cartilage and Meniscus**  
**Chaired by Prof. Brian Johnstone & Prof Dr Wiltrud Richter**  
*Prof. Brian Johnstone*  
*(Oregon Health and Science University, Portland, USA):*  
 "Tissue Engineering Cartilage"  
 4 oral presentations (#265, 140, 262, 230)

Online Oxygen Monitoring for Cell Quantification During the Perfusion-Based Manufacture of Engineered Cartilage Grafts  
 265 R. Santoro, C. Krause, I. Martin, D. Wendt  
 Switzerland, Germany

140 Can a Polycarbonate-Urethane Meniscal Provide Chondroprotection? Results in a Sheep Model  
 E. Linder-Ganz, JJ. Elsner, G. Zur, J. Shani, O. Brenner, E. Hershman, A. Shterling, F. Guiliak  
 Israel, USA

Outcome of Combined Autologous Chondrocyte Implantation and Allograft Meniscal Transplantation: A minimum five-year follow up  
 262 KH. Sunil Kumar, R. Gilbert, A. Bhosale, P. Harrison, B. Ashton, JB. Richardson  
 UK

230 Analysis of Gene Expression Profiles of Healthy and Diseased Human Menisci  
 G. Reisis, B. Schneider-Wald, M. Kreinest, ML. Schwarz, C. Sticht, A. Büttner, O. Kessler, S. Fickert  
 Germany, Switzerland

17:00 - 19:00

**B3 Tribology**  
**Chaired by Dr Bernd Grimm & Dr Amy Kinbrum**  
*Dr. Bernd Grimm*  
*(Dept Orthopaedic Surgery & Traumatology Heerlen, Netherlands):*  
 "Status and Trends of In Vivo Wear Measurement"  
 4 oral presentations (#143, 364, 21, 115)

Wear Rate Evaluation of a Novel Polycarbonate-Urethane: Cushion Form Bearing for Artificial Hip Joints  
 143 E. Linder-Ganz, JJ. Elsner, Y. Mezape, A. Shterling, N. Eliaz  
 Israel

Tribological Performance of Deflection Compensation Hip Resurfacing Components After Physiologically Relevant Deformation  
 364 J. Daniel, J. Pamu, A. Hussain, A. Kamali  
 UK

21 Biotribology of a Mobile Unicompartmental Knee Bearing Design  
 TM. Grupp, S. Alfafato, V. Jansson, P. Müller, J. Schwiesau, B. Fritz, W. Blömer  
 Germany

115 Knee Wear Simulation Under High Demanding Daily Activities  
 TM. Grupp, J. Schwiesau, S. Utzschneider, C. Bosch, V. Jansson, B. Fritz, W. Blömer  
 Germany

Coffee Break

**B4 Vascularisation / / Gait Analysis**  
**Chaired by Prof. Dr. C. James Kirkpatrick & Dr Nico Verdonschot**  
*Prof. Dr. C. James Kirkpatrick*  
*(Johannes Gutenberg University, Germany):*  
 "Wiring up the circulation in tissue engineered bone: top down or bottom up?"  
 4 oral presentations (# 274, 350, 201, 187)

274 Human Adipose-Derived Cells Generate Large Vasculogenic and Osteogenic Grafts  
 S.Güven, A. Mehrkens, F. Saxer, DJ. Schaefer, Roberta Martinetti, Ivan Martin, Arnaud Scherberich  
 Switzerland, Italy

Which is the Best Way to Analyze an Acceleration-Based Gait Test for Routine Clinical Follow-Up?  
 350 R. Sanden, K. Meijer, I. Heyligers, H. Savelberg, K. Tilburgh, S. Schoeberichts, P. Willems, B. Grimm  
 Netherlands

Impact of one Ankle Foot Orthosis on the Support Phase During Gait for the Chronic Hemiplegic Patients  
 201 R. Talair, D. Pradon, E. Delpech, N. Roche  
 France

The Cemented Lémania Femoral Stem: Clinical and Radiological Results at 10 Years With Objective Gait Analysis  
 187 A. Grzesiak, K. Aminian, P. Morel, F. Jobin, E. Martin, B.M. Jolles  
 Switzerland

Poster session

**C3 Computer Assisted Orthopaedic Surgery**  
**Chaired by Prof. Florian Gebhard & Prof. Lutz Nolte**  
*Dr. Florian Gebhard*  
*(Universitäts Klinikum Ulm, Germany):*  
 "Computer assisted Trauma Surgery – current concepts"  
 4 oral presentations (# 253, 358, 88, 241)

X-Ray Based Compensation of Relative Motions for Non-Invasive Robotic Reduction of Femoral Shaft Fractures.  
 253 M. Oszwald, R. Westphal, S. Sattler, F. Wahl, C. Krettek, T. Gosling  
 Germany

Automated Fracture Reduction  
 358 T. Gosling, M. Oszwald, R. Westphal, S. Winkelbach, F. Wahl, C. Krettek  
 Germany

Image-Free Computer-Assisted Versus Conventional Femoral Component Positioning in Hip Resurfacing – A Sawbones® Study  
 88 J. Goronzy, M. Stehler, S. Kirschner, T. Schäfer, K.-P. Günther  
 Germany

241 Automated Reduction of Complete Joint Fractures  
 D. Raabe, S. Dogramadzi, RM. Atkins, N. Obi  
 UK

13:30 - 15:00

15:00 - 15:30

**C4 Fracture Treatment 3**  
**Chaired by Dr. Jürg Gasser & Dr. med Jürg Goldhahn**  
*Dr. Jürg Gasser*  
*(Novartis, CH)*  
 "Bone Regenerative Treatment For Bone Augmentation And Fracture Repair"  
 4 oral presentations (#200, 198, 210, 337)

Resistant Non Union Of Humerus Treated By Adjonction of BMP 7 - Prospective Continue Monocentric Study  
 200 F. Gindraux, A. Couesmes, D. Lepage, S. Rochet, G. Leclerc, P. Garbuio, L. Obert  
 France

Increased Callus Formation During Fracture Healing after Acute Spinal Cord Injury in a Rat Model  
 198 J. Holschbach, K. Kleinschmidt, W. Richter, A. Meyer-Lindenberg, M. Egermann  
 Germany

210 Erythropoietin stimulates fracture healing in small segmental defects in mice  
 P. Garcia, V. Speidel, C. Scheuer, M.W. Laschke, J.H. Holstein, T. Histing, T. Pohlemann and M.D. Menger  
 Germany

Can Joint Realignment Surgery Reveal Mechanically Regulated Signals That Influence Pain and Pathology In Humans?  
 337 DJ. Mason, G. Whattling, RS. Kotwal, K. Brakspear, H. Roberts, C. Wilson, R. Williams, J. Sultan, CA. Holt  
 UK

17:00 - 19:00

**Friday, July 2nd**

08:00 - 09:30

**A5 Biomaterials 1**

**Chaired by Prof. Marc Bohner & Dr Joanne Wilson**

*Prof. Marc Bohner:*  
(RMS Foundation, Switzerland)  
"Bone substitutes"

4 oral presentations (#235, 63, 101, 111)

Strontium Bioactive Glasses: Materials Characterisation *in vitro* Performance and Preliminary

235 Large Animal Data

MD. O'Donnell, P. Candarlioglu, E. Gentleman, C. Miller, A. Goodship, MM. Stevens

UK

Dead-burning Calcium Phosphate Bone Substitutes: A Physical Approach to Tune Chemical and Biological Properties

63

RJ. Egli, S. Gruenfelder, N. Doebelin, W. Hofstetter, R. Luginbuehl, M. Bohner  
Switzerland

Assessment of Bone Ingrowth Potential of E-Beam Produced Surface Topographies with a

101

Biomimetic Coating  
JE. Biemond, G.Hannink, N.Verdonschot, P.Buma

Netherlands

The Effect of E-Beam Engineered Surface Structures on Proliferation and Differentiation of

111

HMSCs  
JE. Biemond, G.Hannink, N.Verdonschot, P.Buma,  
Netherlands

09:30 - 10:30

10:30 - 12:00

**A6 Biomaterials 2**

**Chaired by Prof. Marc Bohner & Dr Alexandra Poulsson**

5 oral presentations (#374, 64, 100, 27, 98)

Biomechanical Evaluation of a Biological Alternative to PMMA Cement for Transpedicular Sacral Augmentation in Osteoporosis

374

S. Becker, K. Kropik, H. Redl, V. Krüger and M. Nilsson  
Austria, Sweden

64

What Solution for Complex-Shape Bone Defects?

M. Peroglio, L. Gremillard, D. Eglin, P. Lezuo, M. Alini, J. Chevallier

France, Switzerland

Regeneration of Bone in Femoral Condyle Defect Using Injectable Materials Based on

100

Mineralized Gelatin  
K. Gorna, G. Zanon, K. Singer, H. Redl, A. Goppelt, A. Goessl  
Austria

27

Oxidative Stability of Vitamin E Blended HX-UHMWPE Characterized by DSC

N.Stark, W.Schneider, M.Shen, J.Krevolin  
Switzerland, USA

98

A Contribution to Testing the Oxidative Stability of Vitamin E Stabilised, Cross-linked UHMWPE  
R. Lerrf, D. Zurbrugg, D. Delfosse  
Switzerland

12:00 - 13:30

**B5 Tumors**

**Chaired by Prof. Nicola Baldini (EORS President) & Dr med. Klemens Trieb**

*Prof. Nicola Baldini (President of the EORS)*

*(Istituto Ortopedico Rizzoli, Italy):*

"Identifying New Targets and Tools for the Treatment of Bone Metastases"

4 oral presentations (#154, 312, 325, 178)

154

Podoplanin Expression in Adamantinoma of Long Bones and Osteofibrous Dysplasia  
A.Dhongre, A. Flanagan, P. Hogendoorn, TG. Kashima, NA. Athanasou  
UK, Netherlands

312

Bcl-2 Correlates with Localization but not with Outcome in Human Osteosarcoma

K. Trieb

Austria

Un-Contained Osteolytic Defect Alters the Structural response of Human Spine Vertebral Body

325

Under Complex Loading: An Experimental Study

RN. Alkhalay

USA

Temperature Measurements in Conventional and Ultrasonically-assisted Drilling of Bone Using

178

Infrared thermography  
K. Alam, VV. Silberschmidt, A. Ghafoor

Pakistan and UK

**Coffee Break and Poster Session**

**B6 Stemcell Therapy**

**Chaired by Prof. Thimos Mitsiadis & Dr Sophie Verrier**

5 oral presentations (# 66, 316, 197, 193, 359)

Hybrid Construct Based in Allogeneic Mesenchymal Stem Cells and Glass-Ceramic for Reconstruction of a Critical-Sized Rabbit Bone Defect.

66

L. Meseguer-Olmo, A. Bernabeu-Escápez, S. Aznar-Cervantes, F. Rodríguez-Lozano, V. Vicente-Ortega, M. Alcaraz\_Baños, AB. Meseguer, JM. Moraleda-Jimenez

Spain

Autologous Mesenchymal Stem Cells and Platelet Rich Plasma Augmentation for Distal Tibial

316

Fractures; a Human in vivo Study

J.E. Schroder, R. Moshieff, S. Gazit, Y. Zilberman, L. Rasooly, A. Khoury, YA. Wei, A. Daskal, M. Liebergall

Israel

Mesenchymal Stromal Cells and Platelet Gel for the Treatment of Tibial Congenital

197

Pseudarthrosis: A Pre-Clinical and Clinical Study

V. Devescovi, D.Granchi, SR. Baglio, O. Donzelli, M. Magnani, A.Giunti, N. Baldini

Italy

Seeding a Human Tendon Matrix with Bone Marrow Aspirates Leads to Increased Cell

193

Proliferation Compared to Previously Isolated Hbmscs. An in vitro Study

M. Broese, I. Toma, C. Haasper, A. Simon, M. Petri, S. Budde, M. Wehmeier, C. Krettek, M. Jagodzinski

Germany

Mesenchymal Stem Cells Injection in Degenerated Intervertebral Discs: Cell Leakage May

359

Induces Osteophytes Formation  
G. Vadalá, W. Sowa, JD.Kang, V. Denaro

Italy, USA

**Break**

**C5 Modelling 1**

**Chaired by Prof. Dr. med. Nico Verdonshot & Dr. med. vet., Dr Stefano Brianza**

*Prof. Dr. med. Nico Verdonshot*

*(University Medical Centre, Nijmegen, Netherlands):*

"The Status of Finite Element Analyses of Orthopaedic Implants"

4 oral presentations (# 48, 91, 318, 168)

48

A Novel Cemented Hip Femoral Prosthesis Concept  
A. Ramos, A. Completo, C. Relvas, JA. Simões

Portugal

91

Uncemented Femoral Stem Length Effect on its Primary Stability

M. Reimeringer, N. Nuño, C.Desmarais-Trépanier, M. Lavigne, PA. Vendittoli

Canada

Reduction of Stress Shielding in Surface Replacement Arthroplasty by Using a Biomimetic

318

Composite Material  
N. Nuño, C. Caquette, PA. Vendittoli, M. Lavigne, MN. Bureau

Canada

168

Three-dimensional Assessment of Cam Engagement in Femoroacabular Impingement

E. Audenaert, C Pattyn

Belgium

08:00 - 09:30

09:30 - 10:30

10:30 - 12:00

**C6 Modelling 2**

**Chaired by Prof. Dr. med. Nico Verdonshot & Dr Edward R. Valstar**

5 oral presentations (#340, 92, 39, 376, 317)

A Computational Framework to Estimate *in vivo* Contact Pressure in Femoral-Pelvic Articulation During Level Walking

340

K. Mithraratne, V. Shim, IA. Anderson, PJ. Hunter

New Zealand

Which Young Modulus Should Be Chosen to Adequately Represent the Stress Distribution

92

Within the Femur?

M. Reimeringer, N. Nuño

Canada

Comparison Between Computed and Measured Knee-Joint Forces Following Total Knee

39

Arthroplasty

ST. Gornaa

USA

376

Stability of Augmented Total Knee Replacement

Y. Agarwal, AD. Crocombe, B. Frehill, N. Bradley

UK

317

A Novel Approach Using a FE-Foot Model for Clinical Applications

C. Wyss

Switzerland

12:00 - 13:30

13:30 - 15:00

**A7 Biomaterials 3**

**Chaired by Prof Sheila Laverty & Dr. med. Vet., Dr Stephan Zelter**

*Prof. Sheila Laverty  
(University of Montreal, Canada):  
"Animal Models"  
4 oral presentations (#126, 68, 211, 306)*

126 Osseous Response to CaSiO<sub>3</sub>-SiO<sub>2</sub>-Ca<sub>3</sub>(PO<sub>4</sub>) Glass-Ceramics. *An in vivo Study in Rabbits.*  
L. Clavel, L. Meseguer, Francesca Cragolini, V. Vicente, M. Alcaraz, M. Clavel-Sainz, F. Rodriguez, JM. Moraleda, A.B. Meseguer, Ci. Meseguer  
Spain.

68 In Vivo Evaluation of Bioeutectic Ceramics  
L. Meseguer-Olmo, F. Cragolini, V. Vicente-Ortega, PN. De Aza, FA. Lopez-Prats, AB. Meseguer, F. Rodriguez-Lozano, JM. Moraleda-Jimenez, Ci. Meseguer-Ortiz  
Spain

211 Development of an Innovative Animal Model of Bone Repair Deer Antlers  
F. Gindraux, L. Obert  
France

Effect of Different Biometric Signals Within a PLLA Matrix on the Behaviour of Human Marrow Stromal Cells  
189 G. Ciapetti, D. Granchi, V. Devescovi, E. Leonardi, MJ. Jurado, I. Alava, F. Walboomers, I. Armentano, N. Baldini  
Italy, Spain, Netherlands

15:00 - 15:30

15:30 - 16:45

**A8 European Society of Biomechanics**

**Chaired by Prof. Ralph Müller (President of ESBiomechanics) & Dr. Dominique Pioletti**  
*Prof. Ralph Müller (President of ESBiomechanics)  
(ETH Zurich, Switzerland):*

*"Biomechanical Imaging of Cortical Bone Structure and Function"*

3 oral presentations (#302, 346, 50)  
Elastomer Femoroplasty Prevents Dislocation After Hip Fracture. In vitro Biomechanical Study  
302 Comparing Two Minimal Invasive Femoroplasty Techniques.

T.J. van der Steenhoven, W. Schaasberg, AC. de Vries, ER. Valstar, RGHH. Nelissen  
Netherlands

346 Simulating Hip Fracture at Physiologic Sideways Fall Velocities  
B. Helgason, J. Chak, S. Gilchrist, P. Guy, and P.A. Crompton,  
Canada, Switzerland  
Effect of a Morphological Variation of the Proximal Humerus on the Glenohumeral Destabilizing  
50 Forces. A Numerical Sensitivity Study  
PO. Lemieux, N. Hagemeister, P. Têtreault, N. Nuño  
Canada

16:45 - 17:30

18:30 – open  
end

**B7 Shoulder**

**Chaired by Prof. Dr. med. Stefan Milz & Dr. med. Volker Braunstein**

5 oral presentations (# 314, 129, 137, 59, 308)

MRI Morphometry of Bone Reactions to Biodegradable Suture Anchors after Arthroscopic  
314 Rotator Cuff Repair  
W. Anderl, M. Neumaier, B. Krieglleder, D. Chatterjee, H. Plenk Jr.

Austria

129 Using FTIR To Differentiate Rotator Cuff Tears And Identify Treatment Biomarkers  
S. Chaudhury, C. Dicko, F. Vollrath, A. Carr

UK

Dynamic Shear Analysis: A Novel Technique for Comparing the Shear Mechanical Properties  
137 Normal and Torn Rotator Cuff Tendons  
S. Chaudhury, C. Holland, F. Vollrath, A. Carr

UK

Pathological Scapular Tiltting Alters the Load on the Glenoid Component of a Total Shoulder  
59 Arthroplasty  
M. Röhlisberger, DP. Pioletti, A. Farron, A. Terrier.  
Switzerland

Vibrational Techniques to Assess the Initial Stability of Spherical Press-Fitted Implants: In vitro  
308 Study  
S. Leuridan, LC. Pastrav, M. Mulier, H. Delport, P. Debeer, K. Denis, L. De Wilde, G. Van der Perre, W. Desmet, J. Vander Sloten  
Belgium

Coffee Break

**B8 Tendon and Ligament**

**Chaired by Prof. Dr. med. Stefan Milz & TBC**

3 oral presentations (#220, 304, 373, 295)  
Assessing the Potential of Exogenous Collagen Cross-linking to Arrest Tendon Tear  
220 Propagation.

G. Fessel, J. Wernli, Y. Li, C. Gerber, JG. Snedeker  
Switzerland

304 Phenytoin Accelerates Tendon Healing in Rat

B. Hajipour, R. Hemmati, L. Roshangar, G. Mousavi, BM. Saleh, Mutab, AM. Navali  
Iran

Functional Ultra Sound Elastography (FUSE) of Achilles Tendon: Is It the Missing Link Between  
373 Biomechanics and the Clinical Outcomes of TA Treatment?  
J. Alsousou, J. Li, E. McNally, A. Noble, K. Willett  
UK

295 Heterotopic Ossifications – New approaches  
CML. Werner, S. Zimmermann, CC. Wuerigler-Hauri, GA. Wanner, HP. Simmen  
Switzerland

Closing Ceremony with EORS Awards Session  
Poster take down

Conference Dinner

**C7 Infection**

**Chaired by Dr Thorsten Gehrke & Dr T. Fintan Moriarty**

*Dr Thorsten Gehrke  
(Endoklinik, Hamburg, Germany):  
"The Periprosthetic Infection - Diagnosis and Treatment"  
4 oral presentations (#240, 306, 159, 9)*

Individual Susceptibility to Periprosthetic Osteolysis/Prosthetic Joint Infection: Report From Our  
240 Research Projects

J. Gallo, F. Mrazek, Z. Navratilova, M. Petrek  
Czech Republic  
Antimicrobial Implant Coatings Based on Immobilized Furanones: Good Tissue Integration but  
74 Loss of Bacteriostatic Properties

R. Luginbuehl, M. Textor, H. Sigrist, W. Hofstetter, R. Landmann  
Switzerland

Multifunctional Surfaces: Pro-Osteogenic and Antibacterial Activity of Hyaluronan-Coated,  
159 Vancomycin-Releasing Fracture Fixation Devices  
D. Bollati, M. Morra, C. Cassinelli, G. Cascardo  
Italy

The infected bone graft - in-vitro evaluation of staphylococcal biofilm formation on fresh (fr),  
9 fresh-frozen (ff) or processed human (ph) and processed bovine (pb) spongiosa

M. Clauss, H.U. Furustrand, A. Bizzini, A. Trampuz, T. Ilchmann  
Switzerland

13:30 - 15:00

15:00 - 15:30

15:30 - 16:45

**C8 Imaging**

**Chaired by Dr Edward R. Valstar & Dr Andrea Tami**

*Dr Edward R. Valstar  
(Leiden University Medical Center / TU Delft, Netherlands)*

*"Early Clinical Use of RSA in Screening of New Orthopaedic Implants"*

3 oral presentations (# 292, 275, 386)  
Non- invasive in-vivo Monitoring of Angiogenesis and Vascularization  
292 during Musculoskeletal Healing Processes

B. Wieskoetter, R. Stange, H. Sahin, T. Persigehl, V. Vieth, MJ. Raschke  
Germany

Segmentation and Analysis of in-vivo Contrast Enhanced MicroCT Data: A Novel Methodology  
275 for Optimal Quantification of Cartilage Degeneration  
M. Siebelt, JH. Waarsing, T. Pijlsma, JAN. Verhaar, H. Wehans  
Netherlands

Correlation Between Hr-Pqct-Data and Mechanical Measurements: Assessment of Local Bone  
386 Quality and Implant Anchorage  
D. Schuma, S. Brianza, G. Röderer, A. Scola, F. Gebhard, AE. Tami  
Switzerland, Germany

16:45 - 17:30

18:30 – open  
end