

# 6<sup>th</sup> Biennial International RSA Meeting 2019

4<sup>th</sup>-6<sup>th</sup> April 2019



## **Aarhus University**

Søauditorierne (Merete Barker auditorium)  
Bartholin Allé 3, building 1253, room 211  
8000 Aarhus C, Denmark

# Final program

Thursday April 4th		
8.00	Registration in Søauditoriet, Aarhus University	
8.30	Welcome	Maiken Stilling
8.45	International RSA Society Update	Rob Nelissen
9.00	<b>Session 1</b>	
UPPER EXTREMITY  Session chair: Janni Thillemann Torben Bæk-Hansen	Long-term outcomes of the surface replacement trapeziometacarpal joint prosthesis: a radiostereometric study with 10 years of follow-up	Bart ten Brinke
	Increased migration and more revisions of MOTEC compared with ELECTRA cups. A 2-year RSA study of trapeziometacarpal prostheses	Lene Dremstrup
	Precision of elbow kinematics with dynamic RSA	Chalotte Krabbe Hemmingsen
	Distal Radioulnar Joint stability after foveal TFCC reinsertion compared to ligament reconstruction. A randomized experimental static radiostereometry study	Janni Kjærgaard Thillemann
	Evaluation of implant fixation in reverse total shoulder arthroplasty: A prospective, randomized clinical trial	Madeleine Van de Kleut
	Stable fixation of the stemless humeral component of the Simpliciti Shoulder System: a radiostereometric study with 12 months of follow-up	Bart ten Brinke
10.00	<i>Coffee/Tea</i>	
10.30	<p align="center"><b>Keynote 1</b> Associate Professor Dr. Ir. Bart L Kaptein Wear Measurements in Total Knee Arthroplasty</p>	
11.00	<b>Session 2</b>	
KNEE  Session chair: Søren Rytter Leif Ryd	Marker-based versus model-based radiostereometric analysis in randomized controlled trials to identify differences in migration of total knee arthroplasties	Koen van Hamersveld
	The effect of bone quality on migration in unicompartmental knee arthroplasty. A prospective cohort study using dual x-ray absorptiometry and radiostereometric analysis	Daan Koppens
	Similar and good fixation of cementless and cemented Oxford Partial Knee Tibial Trays at 5 years follow-up. A Randomized RSA Study	Maiken Stilling
	Tibial fixation of a bicruciate versus a posterior cruciate retaining TKA	Petra Heesterbeek
	Is a delayed reference exam more useful for predicting acceptable fixation in cemented and uncemented TKA?	Elise Laende
	Early follow-up of hybrid Total Knee Arthroplasty (TKA) using Persona® prostheses	Müjgan Yilmaz
12.00	<i>Lunch</i>	

13.00 <i>Session 3</i>		
<b>KNEE</b>  Session chair: Mike Dunbar Stuart Callary	Pilot study to evaluate fixation of tibial trays with metaphyseal sleeve revision total knee arthroplasty	Glen Richardson
	The effect of moulding versus machining on bearing wear in Oxford unicompartmental knee replacement	Stephen Mellon
	Micromotion of a cemented hinged type knee revision system with model-based RSA - preliminary results	Petra Heesterbeek
	An Uncemented 3D-printed versus a Cemented Cruciate-Retaining Total Knee Replacement: 2 years results of a randomized controlled trial using Radiostereometric Analysis	Shaho Hasan
	Implant migration of a cemented, fixed-bearing medial unicompartmental knee arthroplasty with mid-term follow-up	Daan Koppens
	Radiostereometric analysis of tibia and patella components from a 3-D printed total knee arthroplasty	Chad Munro
	Highly cross-linked polyethylene liner shows 10% of the annual wear rate of a conventional polyethylene liner	Halldor Bergvinsson
	Comparison of Migration and Kinematics Between Anatomically and Mechanically Designed Total Knee Arthroplasty Implants	Matthew Teeter
	Similar Proximal Migration but Inferior Stabilization of Cementless Compared with Cemented Dual Mobility Cups in Elderly Coxarthrosis Patients. A Blinded Randomized Radiostereometric and Dual-Energy X-Ray Absorptiometry Study with 24 months follow-up	Steffan Tabori Jensen
14.30 <i>University Guided Tour</i>		
15.30 <i>Coffee/Tea</i>		
15.30 <i>Work Group Meetings in Stakladen, Aarhus University</i>		
18.00 <i>Transport to NRT (30 min)</i>		
18.30	<i>Networking and showcasing of Adora RSA Hot dog stand and draft beer (supper)</i>	NRT
~21.00 <i>Transport to Aarhus City (30 min)</i>		

Friday April 5th

8.30

**Welcome**

*Professor, Head of Department of Clinical Medicine  
Jørgen Frøkiær*

8.50

*Session 4*

**EXPERIMENTAL**

Session chair:  
Bart Kaptein  
Martin Downing

Validating RSA precision in a low dose biplanar x-ray imager using an in-vivo TKA model

Jennifer Hurry

Feature Points vs. MTPM approach for the interpretation of a tibial total knee arthroplasty component migration using model-based RSA

Yutong Hong

A simulation environment for RSA devices

Marco Bontempi

Accuracy and precision of bead-based micro-motion analysis in biplanar pushbroom-projected radiographic scans

Kristian  
Kjærgaard

Model-based Roentgen Stereophotogrammetry (MBRSA) of Radiopaque Polyethylene prosthesis: a Pilot Study

Fedra Zaribaf

Validation of in vivo linear and volumetric wear measurement for reverse total shoulder arthroplasty using model-based radiostereometric analysis

Madeleine Van  
de Kleut

The pitfalls of statistical analysis among RSA studies: would further guidelines help?

Sami Finnilä

10.00

*Coffee/Tea*

10.30

**Keynote 2**

*Professor Dr. Ir. Nico Verdonschot*  
Using computer models to assist in safer clinical introduction of orthopaedic implants

11.00

*Session 5*

**CT and  
SOFTWARE**

Session chair:  
Nico Verdonschot  
Sepp de Raedt

Accuracy and precision of a CT method for assessing migration in shoulder arthroplasty: an experimental study

Cyrus Broden

CT-based micromotion analysis compared to RSA-based: precision and accuracy in patient and phantom hip

Olof Sandberg

Low dose CT-based implant micromotion analysis: precision data from three ongoing THA studies

Cyrus Brodén

Radiostereometric analysis as a limiting case of cone-beam CT reconstruction

David Holdsworth

Performance evaluation of a peripheral cone-beam CT scanner with weight-bearing capabilities

Rudy Baronette

Validation of RSA software and method for Glenoid stability and contact point assessment

Martin Downing

12.00

*Lunch*

13.00		Session 6	
BEST PAPER	Fixation and functional outcomes of Exceed cups with porous compared to electrochemically applied hydroxyapatite coating (BoneMaster). A randomized clinical radiostereometry study	Peter Bo Jørgensen	
Session chair: Rob Nelissen Maiken Stilling	Dynamic RSA and OpenSim: investigation of the joint biomechanic modifications after anterior cruciate ligament reconstruction	Marco Bontempi	
	A randomized, double-blind, non-inferiority trial, evaluating migration of a cemented vitamin-E stabilized highly cross-linked cup compared to a standard polyethylene cup in reverse hybrid total hip arthroplasty	Olof Sköldenberg	
	RSA and Registries: 1.850.000 total knee replacements with ten year follow-up	Shaho Hasan	
	Association between early inducible displacement and later continuous migration in cemented and uncemented tibial components	Elise Laende	
	Trabecular Metal Cup-Cage Construct in Immediate Total Hip Arthroplasty for Osteoporotic Acetabular Fractures. A Radiostereometric Analysis	Daud Chou	
14.00	<i>GENERAL ASSEMBLY for THE INTERNATIONAL RSA SOCIETY</i>		
15.00	<i>Coffee/Tea</i>		
15.30	<i>PRESENTATIONS FROM RSA WORK GROUPS</i>		
16.30	<i>Awards Presentation of 7th International RSA Meeting</i>		
18.30 - 22.30	<i>Dinner at Brdr. Koch Restaurant "Det Glade Vanvid" (Happy Madness)</i>		

Saturday April 6th

8.30

Session 7

<p>HIP SESSION</p> <p>Session chair:</p> <p>Johan Kärrholm</p> <p>Stephan Röhrli</p>	Femoral Impaction Bone Grafting at Two-Stage Revision Total Hip Arthroplasty for Infection	Stuart Callary
	Interrater-reliability of roentgen stereophotogrammetric analysis: A retrospective analysis with multi-raters	Jing Xu
	Early radiostereometric analysis of a 3-D printed uncemented acetabular cup	Chad Munro
	Vitamin E diffused THA liners show less head penetration after 5 years postoperatively compared to HXLPE in a randomized controlled trial	Kristian Kjærgaard
	Comparison of two roentgen stereophotogrammetry methods for the measurement of hip stem migration in a clinical retrospective study	Jing Xu
	Implant migration and patient reported hip function two year after primary uncemented THA	Nienke Willigenburg
	No effect of liner type on migration patterns and patient-reported hip function up to two years after primary Total Hip Arthroplasty (THA) using an innovative uncemented Trabecular Titanium™ cup	Amanda Klaassen
	Total Hip Arthroplasty Surgical Approach and Implant Design: Effects on Patient Function, Patient Activity, and Implant Migration	Matthew Teeter
	Three Year Wear and Migration of a Dual Mobility Hip Cup	Glen Richardson
	A Review of Acetabular Component Migration Measured using Radiostereometric Analysis following Revision Total Hip Arthroplasty	Stuart Callary

10.10

Coffee/Tea

10.40

**Keynote 3**

Associate Professor Scott Arthur Banks  
 In Regione Caecorum Rex Est Luscus  
 - Towards routine clinical examinations of joint kinematics.

11.10

Session 8

<p>DYNAMIC RSA</p> <p>Session chair:</p> <p>Scott Banks</p> <p>Marco Bontempi</p>	Can a medially stabilized TKA design approach a natural knee kinematics?	Laura Bragonzoni
	Measurement of knee kinematics during examiner applied pivot-shift test. A dynamic radiostereometric cadaver study	Emil Toft Nielsen
	Kinematic analysis of a cruciate-retaining TKA during the sit to stand	Umberto Cardinale
	Can different TKA design influence postural stability during a lounge?	Barone Giuseppe
	Dynamic radiostereometric analysis for pre- and postoperative evaluation of range of motion in the femoroacetabular impingement hip joint	Lars Hansen
	In vivo kinematics of a Fixed and Mobile Bearing TKA in the same patient: a case report	Umberto Cardinale
	In-Vivo Kinematic Evaluation Of A New Design Total Knee Arthroplasty Using Dynamic RSA	Laura Bragonzoni

12.20

Closing Remarks

Maiken Stilling

12.30

Lunch and Adjourn

Afternoon

Optional cultural event  
 AROS Art Gallery or "The Old Town"

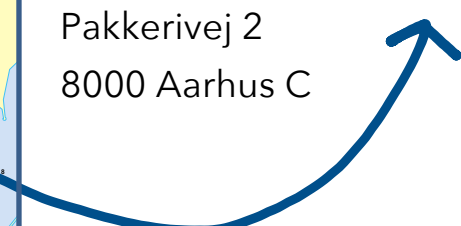
# Congress Venue

Aarhus University  
Søauditorierne  
(Merete Barker auditorium)  
Bartholin Allé 3  
building 1253, room 211  
8000 Aarhus C  
Denmark



# Dinner Venue Friday

"Det Glade Vanvid"  
Pakkerivej 2  
8000 Aarhus C



# Questions

Contact Maiken Stilling  
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## WiFi

"Eduroam" is supported. If you do not have Eduroam, you can use the Aarhus University guest network free of charge

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