Modena Joint Arthroplasty Enabling Technology Meeting

850th Anniversary Constitution of University of Modena and Reggio Emilia

4th July 2025 - Fondazione Collegio San Carlo Modena

SCIENTIFIC PROGRAM

7.45 **Registration of participants**

8.15 **Introduction of the meeting,** *F. Catani, Chief of the Orthopaedic Surgery Department*

8.20 **Speech of the Authorities,** *Prof C. Porro (Rector of the University); Prof. M. Zoli (Chief of the Faculty of Medicine Departments); Prof M. Dominici (Chief of the University Department); Ing Baldino (CEO of the University Hospital); M. Mezzetti (Mayor of the City of Modena); Prof. A. Troelsen (EKS), Prof. E. Tsiridis (EHS). Prof. P. S. Randelli (SIOT)*

Open coffee and beverages

I SESSION

Moderator: F. Catani, F. Haddad

8.40 **JA enabling technology: decision making process made by marketing or clinical needs?** *R. Cohen*

8.55 **Unmet surgical and clinical needs: the pillars for developing joint arthroplasty enabling technology**

8.55 **THA**, *F. Haddad*

9.05 **TKA,** *J. Victor*

9.15 **UKA**, *S. Lustig*

9.25 **Bi-Cruciate Retaining Knee,** *J. P. Cobb*

9.35 **TSA & RSA**, *G. Porcellini*

9.45 **Spine,** *A. Gasbarrini*

9.55 **Image-less and imaged-based enabled technology in primary and revision surgery: accuracy, precision and planning,** *F. Benazzo*

II SESSION: HIP enabling technology session

Moderator: *S. A. Jerabek, E. Tsiridis*

10.05 **Single wedge stem fixation with modified stem anteversion vs neck version with PLA**, *A. Marcovigi*

10.12 **Functional positioning data in RATHA with PLA**, *F. Haddad*

10.19 **DAA with RHTHA surgical technique and clinical outcomes**, *F. Camporese*

10.26 **RCT of manual vs robotic THA with PLA,** *F. Haddad*

10.33 **Advanced Navigation System in THA,** *A. Cevenini*

10.40 **Spino-pelvic motion and THA kinematic alignment,** *C. Rivier*

10.47 **Improvement in Back Pain and Disability in Patients with Hip-Spine Syndrome after THA,** *M. J. Anderst*

10.55 Discussion

III SESSION: KNEE ENABLING TECHNOLOGY SESSION

Alignment

Moderator: *M. Hirschmann, S. Lustig*

11.25 **Functional vs Mechanical TKA RCT,** *F. Haddad*

11.32 **Three-compartment phenotype concept (3D-FKP) of total knee arthroplasty alignment - Mismatch between distal femoral, posterior femoral and tibial joint lines in 83% of non-osteoarthritic and 88.8% of osteoarthritic knees**, *M. Hirschmann*

11.39 **Bone cut accuracy: new classification and rationale with image based robotic technology,** *S. Lustig*

11.46 **Associations Between REAL Classification, CPAK Phenotypes, Alignment Severity and Surgical Management in Personalized Robotic-Assisted Total Knee Arthroplasty,** *E. Tsiridis*

11.53 **The impact of Alignment philosophy in TKA on trochlear Anatomy restoration is strongly linked to the LDFA,** *T. Luyckx*

12.00 **Al-powered surgical planning for Total Knee Arthroplasty,** *J. Chaoui*

12.07 **The Basics about Functional Alignment in Total Knee Arthroplasty - How Does it Work?,** *A. Klasan*

12.15 Discussion

13.00 **Lunch**

Soft tissue balancing – *Is soft tissue balancing different based upon image-less or image-based systems?*

Moderator: *S. Zaffagnini, D. Barrett*

14.00 **Stability, Alignment, and Soft Tissue Balancing in Knee Biomechanics,** *B. Innocenti*

Soft tissue balancing, component alignment and implant design relationship in TKA, *J. Victor*

14.07 **Alignment and soft tissue balancing of Bi-cruciate TKA with CORI system**, *M. Schiraldi*

14.14 **Soft tissue balancing and alignment strategy with Omnibot system,** *A. Tripodo*

14.21 **Soft tissue balancing and alignment strategy with Skywalker system**, *T. Karachalios*

14.28 **Soft tissue balancing and alignment strategy with CR Mako system**, *M. Trevisan*

14.35 **Soft tissue balancing using image-less Velys system depending on alignment stategy,** *B. Bloch*

14.42 **A navigation-based analysis of native knee collateral ligament elongation patterns: CPAK classification subgroups exhibit phenotype-specific ligament behavior,** *G. Peersman*

14.49 **Achieving medial stability with Nextar,** *M. Engl*

14.56 **Soft-tissue management for TKA,** *A. Laurent*

Third space

15.03 **Anterior offset and patella tracking enhancement using robotic assisted technology for TKA,** *S. Lustig*

15.10 **In vivo PFJ loading in the third space: how do we get it so wrong?** *D. Barrett*

15.17 **Posterior lateral and distal lateral resections influence post-operative patellar tilt in robotic- assisted total knee arthroplasty**, *M. Pungitore*

15.24 **TKA component alignment and patellar tracking in well balanced knee**, *F. Zambianchi*

15.31 Discussion

HIP and Knee Revision

Moderator: *V. Vallemondt, S. Rossi*

15.55 **Mako hip revision,** *S. Jerabeck*

16.02 **Mako Robotic System in Revision of Unicompartmental Knee Arthroplasty: Surgical Technique and Outcomes,** *F. Haddad*

16.09 **Revision TKA with CORI system: tips and tricks,** *G. Van Vallemondt*

16.16 **Literature reviews on RTKS using assisted technology,** *M. Mantovani*

16.23 **TKA revision and soft tissue balancing,** *G. Giordano*

16.30 **The Use of an Imageless Robotic System in Revision of Unicompartmental Knee Arthroplasty (UKA): Surgical Technique and Outcomes,** *S. M. P. Rossi*

16.40 Discussion

IV SESSION. Shoulder enabling technology

Moderator: *A. Laurent, L. Tarallo*

17.10 **The role of the Scapula in Shoulder Diseases: Reasons to Assess, quantify and rehab it,** *M. Mantovani*

17.17 **Shoulder Arthroplasty enabled technology particularly related to CTbased Nav and sensors,** *A. Laurent*

17.24 **Intraoperative RSA motion and load sensor data using CT based navigation system,** *L. Tarallo*

17. 31 **Optimal glenoid components alignment with Augmented Reality Guidance**, *R.Castricini*

17.38 **Kinematic study of scapula-thoracic joint using the "slow motion" sensors in cohort of patients treated with Navigated RSA: how the scapula-thoracic joint can influence the clinical outcomes in RSA,** *L. Tarallo*

17.45 Mako Shoulder, *tbd*

17.52 **AI-powered preoperative surgical planning from Image to Implant: Shoulder Arthroplasty,** *J. Chaoui*

18.00 Discussion

18.30 **End of the meeting and conclusion**, *F. Catani*