



## Fellowship report

- Report by:** **Andreas Fontalis**
- Date of the fellowship:** 08 November 2022 – 06 December 2022
- Visited institutions:**
- Kirchberg (Luxembourg) | Hôpitaux Robert Schuman
  - Roeselare (Belgium) | AZ Delta Roeselare
  - Eeklo (Belgium) | AZ Alma Hospital
  - Zoetermeer (Netherlands) | Reinier Haga Orthopedisch Centrum
  - Utrecht (Netherlands) | St Antonius Hospital

I was delighted to receive confirmation that I was selected as the recipient of the EFORT Robotic Fellowship supported by Stryker. I had the pleasure to visit departments utilising Robotic-arm assistance across the Benelux area and enhance my clinical knowledge and skills in robotics by witnessing several workflows as well as learning numerous tips and tricks. Furthermore, as a PhD candidate studying the impact of robotic technology on arthroplasty, this fellowship was a vehicle to exchanging ideas with experts in the field of robotics in Europe and generated many research ideas.

My first week started by visiting the orthopaedic department at Hôpitaux Robert Schuman, where I was warmly greeted by Dr Pierre Putzeys. It was a real privilege to visit this institution and I am grateful to Dr Putzeys for being a generous host and for sharing his clinical expertise.



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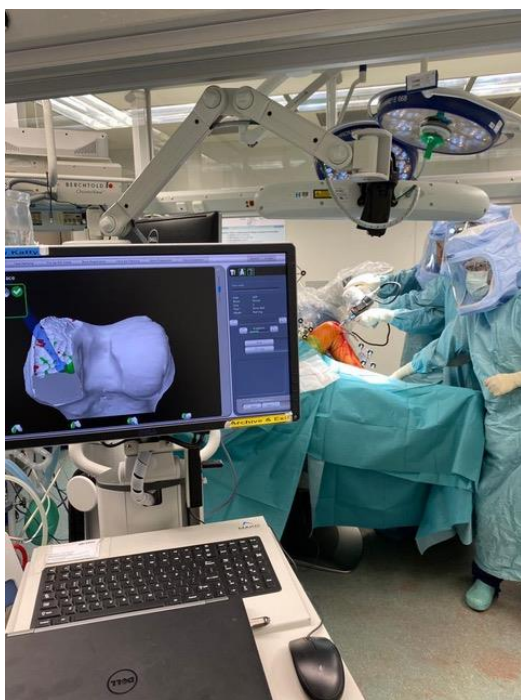


I was given the opportunity to benefit from the departmental teaching and share findings of our lab. I was really impressed by the level of organisation, in particular the policies to prevent infection and discipline of the staff. I would also like to express my profound gratitude to all the staff for their warm welcome and willingness to share their experience.

From a clinical perspective, I had the opportunity to participate and perform under supervision primary robotic-arm assisted TKA, UKA and THA procedures. I

was able to witness the advantages that robotic technology can offer in achieving individualised component positioning. What was particularly helpful for me and my learning, was the opportunity to explore the institutional workflow, allowing me to improve my efficiency and learn tips and tricks.

Furthermore, it was a pleasure to discuss with Dr Putzeys and apply in practice the principles of functional alignment in Total Knee Arthroplasty and functional component positioning in Total Hip Arthroplasty and exchange ideas.



The social component of the week was also excellent as both Dr Putzeys and myself share a passion for military history and had the opportunity to visit the Bastogne war museum, the Luxembourg American cemetery and Bois de la Paix.



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The second week of my fellowship was equally exciting both from a clinical and academic perspective. I spent the week at the Department of Trauma and Orthopaedic Surgery at AZ Delta in Roeselare, Belgium. On my first day, I received a very warm welcome from the Consultant body and had the opportunity to discuss the programme of the week and goals of the fellowship.

The clinical component of the week was truly amazing as I had the opportunity to scrub in more than 30 robotic arthroplasty cases and perform numerous steps under supervision. It was also a great opportunity to see the different starting points regarding the pre-operative plan in robotic-arm assisted Total Knee Arthroplasty; be it mechanical, kinematic or inverse kinematic. Moreover, I had the opportunity to observe the express workflow in robotic-arm assisted Total Hip Arthroplasty using the Direct Anterior Approach.



The Orthopaedic Department at AZ Delta is also very academically driven, and I very much enjoyed exchanging ideas and research findings. I am very grateful to have been given the opportunity to present our lab's findings at the weekly departmental meeting. Equally, it was very thought provoking to listen to the department's research findings, especially their results concerning the amount of distal and posterior femur removed and impact on flexion and extension gaps as well as the clinical results with the inverse kinematic alignment.



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I also took advantage of the weekly departmental teaching sessions concerning the Direct Anterior Approach and Posterior Approach in Total Hip Arthroplasty.



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Furthermore, we had great time outside the OR too as the team organised a beautiful dinner at an elegant restaurant and other social activities. A huge thank you to all the Consultants; Professor Thomas Luyckx, Dr Philip Winnock de Grave, Dr Pietr-Jan De Roo and Dr Alexander Ryckaert for the truly amazing week.



The third week of the robotic Fellowship was also in Belgium, at the Orthopaedic Department at AZ Alma in Eeklo. As soon as I arrived in Eeklo, I was warmly greeted by Dr Van Den Wyngaert and had the pleasure of discussing my aspirations as well as the Department's activities and achievements at a very cosy, traditional Belgian restaurant.



Clinically, I witnessed the great efficiency of the department and the big caseload of robotic arthroplasties. I was given the opportunity to scrub in a mix of cases and learn very useful tips and tricks. Clinically, I was privileged to learn about the Eeklo modified subvastus approach and spent my week at the centre where it was originally described. Furthermore, I had the opportunity to acquaint myself with the patella in place balancer that the department had developed and patented and explore its integration in the robotic Total Knee Arthroplasty workflow.







It was also fascinating to see the level of involvement of the MAKO Product Specialists and how knowledgeable they were, as well as the impeccable collaboration with the Surgeons.

Furthermore, I was delighted to learn about the department's publications and had fruitful discussions concerning balancing in robotic Total Knee Arthroplasty and different alignment techniques.



I am very grateful to all the Consultants Dr Van Den Wyngaert, Dr Ignace Ghijssels, Dr Alex Demurie, Dr Stefaan Van Onsem for the wonderful hospitality and the social component of the week. I had the opportunity to try local culinary delicacies at a lovely restaurant in addition to tasting some of the finest Belgian beers. Furthermore, Dr Van Den Wyngaert as a wonderful host, drove me to Den Haan and the beautiful Belgian coast, where we had dinner and educated me about the region's history.





Off to my fourth week and an amazing stop at the Reinier Haga Orthopedisch Centrum in Zoetermeer, Holland with superb hosting and clinical experience.



A special thank you to the consultants of the department for the warm welcome and the willingness to share their clinical expertise Dr Langendijk, Dr Leijs, Dr Rutgers, Dr van Der Linden, Dr Verburg and Dr de Ridder.

It was a very hands-on week for me, during which I was given the opportunity to perform under supervision more than five total / unicompartmental robotic-arm assisted arthroplasties. I very much enjoyed implanting cementless components for the first time and had fruitful discussions about their utility in arthroplasty and evolution of cementless implant designs in the last decade.

Furthermore, it was great to learn numerous clinical tips regarding the direct anterior approach to the hip.





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I was also amazed to see the research infrastructure available and enjoyed the discussions with the Consultant body about Radiostereometric Analysis and the research activities of the group.

Everyone was so hospitable and made me feel welcome, in addition to organising a wonderful dinner at a fine dining restaurant.



My last stop was at the orthopaedic Department in St Antonius Hospital in Utrecht, Holland, where I was warmly greeted by Dr Yang and his colleagues.

Despite my limited time spent at the department owing to academic commitments, they had an excellent line up of interesting cases.

Furthermore, it was very useful for my own learning to see different techniques for gap assessment during the robotic workflow in Total Knee Arthroplasty.

I also very much enjoyed our discussions with Ted Powell, MAKO product specialist, and was lucky to hear about the new features of the MAKO 2.0 knee software, projected to be launched in Europe in the next year.



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Overall, this fellowship allowed me to explore the utility of robotic-arm assistance in arthroplasty and witness the advantages offered to Surgeons including individualised, reproducible and accurate component positioning.

I am very grateful to EFORT and Stryker for supporting this robotic fellowship and for allowing me to gain invaluable clinical and academic experience in centres of excellence across Europe. Moreover, this fellowship allowed me to set the foundations for future academic collaborations and gave me the opportunity to witness different healthcare settings and meet wonderful hosts. I would also like to commend the EFORT Educational Programmes Coordinator, Ms Sabrina Marchal for the impeccable organisation of my fellowship and for always being available and supportive. I cannot recommend this fellowship enough.

