TIPS 2022 Highlights

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My name is Ruth and I am a PhD student at the University of Portsmouth. In my project, I am investigating illusions of limb movements and in particular, how they are experienced by people with limb differences.

I was pretty excited before the start of TIPS 2022, and now I must say, excitement was the right feeling in advance! I really enjoyed the days because the schedule offered a lot of variety with different types of presentations and multiple topics. I will share some of my highlights with you in this short post.

1. Patient Engagement

What I liked the most about the conference was that patients were included in the sessions and gave presentations as well. Already at the start of the first day, <u>Caroline Coster gave a talk</u> and shared her experience after having four (!) limb amputations. She invented many tools to assist her in daily life activities, for sure they can be of help for other people who have lost a limb. It was so inspiring to hear her talking!

2. Clinical and Technical Challenges

Another highlight of TIPS was for sure the clinical and technical challenge. Samantha, a patient of the Royal National Orthopaedic Hospital Stanmore was introduced, and her situation was presented. She would love to do flower arrangements as she did in the past. The organising team of the conference had the brilliant idea to ask the audience to form groups and to <u>find solutions</u> together.



So, four groups were formed, each with a mix of prosthetists, therapists and engineers and they had to present their solution on the last day of the conference. The audience voted then for the best solution which will now be built to improve a patient's life. The ideas were great and creative – it was impressive to see what is possible in two days! Hopefully we will get an update how the solution is put together and what Samantha thinks about it.

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3. Clinical Experience

Two sessions with presentations of clinical experience were given, one from the <u>University</u> <u>Medical Centre Groningen</u> and one from the <u>Royal National Orthopaedic Hospital Stanmore</u>. The clinical session from the Netherlands was interactive and challenging! They presented four cases of patients with finger amputations and the audience had to discuss which option of finger prostheses would be the most suitable. The session from the UK presented treatment options for phantom limb pain. It was a very interesting session as the team is multidisciplinary and engineers as well as clinicians were presenting.

4. Keynote Speakers

Every day had a keynote speaker, all with different topics but every single one was instructive and resourceful. Scott Frey gave insights in his work how the brain changes after an amputation and how it adapts again to transplants. Herta Flor gave an overview about her and related work about phantom limb pain and possible treatment options. Gerwin Smit presented his research group's impressive work on <u>3D printed prostheses</u>. It is amazing to get a deep insight to some people's work and it shows what can be achieved.

5. Free Paper Sessions

Altogether, eight free paper sessions completed the conference and gave the opportunity to early career as well as experienced researchers to give short talks about a project they are working on.

One highlight for me was the session 2 where research was presented that was underdone together with patients and a <u>decision-aid protocol</u> which helps patients to decide which prosthesis is the best option for them.



It is nice to see how funny and playful training as well as phantom limb treatment can be when virtual and augmented reality is used as presented in sessions <u>3</u> and <u>7</u>. The experience of prosthesis' users and their opinion to sensory feedback was the main topic in free paper sessions <u>4</u> and <u>7</u>. More engineering focused were the talks in the sessions <u>5</u> and <u>8</u>. In the latter one, Susanna Engdahl gave her talk about using <u>ultrasound in control for upper limb prosthesis</u> – the very well deserved best paper price! It was amazing to see on what methods other researchers are working.

The free paper sessions showed again what I love the most in this research field: How multidisciplinary it is and that people with different backgrounds are working together!

There is maybe only one thing that I would like to change about my experience of this year's TIPS: To meet and network with everyone not in Zoom breakout rooms but with coffee and biscuits! Hopefully the next time. Many thanks to the organisation committee and all presenters for their contributions in TIPS 2022!



