



# International Society for Technology in Arthroplasty

33<sup>rd</sup> Annual Congress, Maui, August 31 – Sept 3<sup>rd</sup> 2022

## Overview and Highlights

This Congress was originally scheduled for 2020 but the Covid pandemic led to an unprecedented 2 year delay. Despite remnant pandemic issues which prevented some delegates from attending, especially from the Far East, the Congress was a resounding success with over 500 attendees from all over the world enjoying three days of stimulating presentations, discussions and social interactions. The program included nearly 400 research presentations in 60 sessions and mini-symposia, 25 industrial exhibits on cutting edge technologies relating to joint replacement technologies, awards including a lifetime achievement award to one of the worlds biggest leaders in arthroplasty research, and a Shark Tank competition with some of the latest and hottest innovative concept inventors ranked by a live audience.

### Opening Events

The Congress started with a Young Investigator Round Table where subjects such as Research Commercialization, Big Data, 3D printing, as well as Diversity, Recognition and Advancement were discussed in an informal setting. The President's Reception on the opening evening was a long-awaited, "meet and greet"-session among the delegates, company partners, meeting organizers and guests. For many participants it was 3 years ago since they had seen each in person so there were many spontaneous greetings and hugs. The Congress President, Dr Hani Haider welcomed the attendees, thanked the sponsors and described the busy program for the following days.



### Scientific Sessions

In keeping with ISTA's mission to facilitate the exchange of information between clinicians, engineers, manufacturers and researchers, the speakers and moderators were a diverse and accomplished group of both seasoned ISTA members and a refreshing number of new delegates. The scientific program was selected from 780 submitted abstracts. Nearly 400 podium and e-poster presentations included a wide range of topics covering the main theme of the Congress "Emerging Technologies in Arthroplasty - the Implant and Beyond", spanning the current problems of hip, knee, spine and shoulder arthroplasties to the latest in disruptive technologies, material advances and robotics to name but a few. Although the nearby sunny beach and poolside bars beckoned, the busy scientific program held the delegates' attention. For example the 2-hour mini symposium on implant testing methods & standards had 19 papers presented. This provided a rare opportunity to bring together nearly 250 attendees from the testing community, engineers from the orthopaedic companies, academia, commercial implant test labs and regulators in one room with the scientists and surgeons who usually attend more clinical conferences.

Even the final day Saturday had another 2-hour highly attended mini-symposium on Computer modelling & simulation with 18 presentations from multiple world leading labs on this popular topic. The Saturday mini-symposium competed with two sessions in the same morning at the same time: Artificial Intelligence & Machine Learning, and a session on Wearables which were both also very well attended. The wearables session started with an invited talk titled “Look Who’s Talking - My Implant!” by Dr. Fred Cushner from the Hospital for Special Surgery of New York. With augmented and virtual reality, and with multiple 3D printing sessions, the theme and program were described as among the most exciting so far in ISTA’s long 33 year history.



## Awards

One highlight of every Annual ISTA Meeting is the Awards and this year was no exception. The Lifetime Achievement Award was presented to Dr William Harris, a legend in Orthopaedics. He gave an outstanding and inspiring lecture called “*My first 70 Years in Orthopaedic Surgery*” recalling his lifetime in Orthopaedics at the Massachusetts General Hospital affiliated with the Harvard Medical School, particularly featuring the major problems of infection, wear, and bone lysis. He injected in his stories very personal depictions of stress and fear undergone while tackling multiple significant research unknowns at the time. The gratification he felt with the eventual successes were both encouraging and inspiring to any researcher. Many esteemed Harris Lab Fellows who are now senior leading surgeons were present to provide further insights into their mentor’s many scientific contributions in a fascinating special session.

The HAP Paul Award for 2022 went to Andrew Jensen and colleagues, from the Universities of Florida, Cambridge (UK), and Denver. Their paper on Joint Track Machine Learning was judged to be an outstanding example of the type of collaboration and innovative work that ISTA supports.

The Early Career Investigator Awardee for 2022 was Andreas Fontalis and co-authors from University College Hospital, London, for their work on the Inflammatory Response in Robotic total Knee Arthroplasty versus Conventional Jig-Based TKA.





## Shark Tank

The meeting included an expanded popular Shark Tank session in which inventors, entrepreneurs and innovators presented their products and ideas. This time it was held in two parts: in the first session 16 individuals presented to the moderators and to the session audience who scored the presentations. The following afternoon, the five highest scoring presenters competed in the finals before a panel of judges and the session audience. In an unusually close vote, the judges declared a tie between Dr. Orhun Moratoghlu and team from the Harris Orthopaedics Lab for their work on the GPE Spacer: An Antibiotic-loaded Total Knee Prosthesis Made from UHMWPE, and Dr. Anthony Rapisarda and colleagues from OrthoDx for their Novel Host Response Assay, Synvlchor for discriminating infectious and non-infectious joint pain.



## Social Events

Some of the early arrivals enjoyed a round of golf at the nearby tropical course prior to the meeting. The Secretary General of ISTA Dr. Peter Walker hosted a soiree to thank members of the International Organizing Committee. Members voiced their predictions for the technologies of the future, around the World. Details of this are reported [here](#). The gala dinner at this year's meeting was uniquely suited to the beachside setting of the meeting venue. The Drums of the Pacific Luau was attended by 450 guests who enjoyed traditional Hawaiian music and dancing, and of course, the abundant and delicious local foods.



## Company Exhibits and Presentations

Twenty-six companies participated in the meeting and provided exhibit booths and knowledgeable representatives to discuss, display and demonstrate their products. The setup of the booths in relation to the meeting rooms and catering tables enabled easy access by the attendees. Furthermore, the daily Industry luncheons provided an additional time for meaningful interaction between the company delegates and other attendees on “hot-topic” issues.



## Acknowledgements

Dr. Hani Haider did a superb job to make this 33<sup>rd</sup> meeting such a scientific, social and financial success despite unprecedented challenges. In addition to Dr Haider’s Herculean efforts, Dr. Kevin Garvin co-chaired the congress, and many individuals on the program committee, international organizing committee, scientific review panel, funding committee, publicity committee and the abstract reviewers volunteered countless hours over the past months and, for some, years to make this meeting a reality. ISTA is very grateful to Diane Przepiorski for her heroic efforts on admin and hotel/venue arrangements under challenging time constraints.

ISTA is also extremely grateful for the continued partnership with the orthopaedic companies who participated in the meeting.

Finally, ISTA thanks the attendees who submitted their work, travelled from far afield to attend and whose enthusiastic participation made this meeting such a success. We have another exciting program being organized under the leadership of Dr. Mort Meftah, for the 34<sup>th</sup> Annual Meeting in New York in 2023. We look forward to seeing you there.