

YOUNGER MEMBERS' GROUP

In the Heart of Navigation: My ENC Experience

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Thanks to the Professor David Last Fund, I had the privilege of attending the European Navigation Conference (ENC) recently. This fund, established in memory of the late Professor David Last, supports students in participating and presenting at navigation conferences and symposia. Being awarded this opportunity, especially as a new PhD student, was an honour. Typically, PhD students attend such conferences at the end of their research; this unique experience allowed me to engage with the current state of the art early in my academic journey.

Award and Presentation at the Next Gen Nav Conference

I received this award for the best presentation (co-awarded to Fraser McGhan from the University of Cardiff and myself) at the Next Gen Nav conference held at Cranfield in October 2023. My presentation focused on my master's thesis on Navigating GNSS for Smartphones. I am currently pursuing a PhD in

Assured PNT at the University of Warwick. The award covered my attendance at an international conference, and I chose the ENC to broaden my knowledge and network within the navigation community.

Insights from ENC: Current Research and Gaps

Attending the ENC was a remarkable experience that gave me insights into

the latest advancements in navigation technology. One of the immediate observations was the emphasis on integrity in PNT, especially in GNSS. Despite its critical importance, this topic was covered by only a small section of presentations, highlighting a significant research gap. This point was often underscored by the (then) RIN Vice President Washington Yotto Ochieng, who persistently questioned presenters on the integrity aspects of their research, revealing a common oversight.

Keynote Speakers and Their Impact

The keynote speakers at the ENC were exceptional. Todd Humphreys' talk on "Electronic Warfare and its Civil Spillover Effects" was particularly impactful. Having a background in the Royal Air Force, I found this topic fascinating and closely related to my interests. His ability to captivate the audience through his presentation style was commendable. Additionally, Ramsey Faragher's engaging and humorous delivery added a unique flair to the conference, making complex topics more accessible and memorable.

Networking Opportunities

The networking dinner was a highlight, held at a picturesque beach bar/restaurant in Noordwijk. The beautiful beach sunset setting provided a perfect backdrop for mingling with fellow attendees, ranging from PhD peers to renowned professors. The



From L-R: John Pottle (Director of the RIN), myself, Pedro Thompson (2022 winner of best presentation at Next Gen Nav), and Clare Stead (Communications and Events Manager for the RIN) at the European Navigation Conference 2024.



By the ExoMars rover, inspired by the future of space navigation.

atmosphere was vibrant, with some brave attendees sporting impressive beach-themed shirts, adding a touch of fun to the professional environment. This informal setting facilitated meaningful conversations and the exchange of ideas, strengthening professional connections.

The Conference Venue: ESA's ESTEC Facility

The ENC was hosted at the European Space Agency (ESA) European Space Research and Technology Centre (ESTEC) facility, which provided an

inspiring backdrop for the conference. The location itself is a hub of space engineering and innovation, offering a glimpse into the future of navigation and space exploration. Attendees were treated to tours of the Navigation Lab and other impressive test facilities, showcasing ESA's cutting-edge projects.

It was particularly inspiring to see the range of projects, from satellites to the ExoMars rover. This exposure to the practical applications of navigation technology was both enlightening and motivating.

Personal Highlights

One of my personal highlights was meeting Dr Raphael Grech, my industrial partner from Spirent Communications, who was also attending the conference as a representative of one of the sponsors. This provided an excellent opportunity to discuss my research path and the relevant research presented at the ENC in relation to my PhD.

Conclusion

In conclusion, attending the ENC as a new PhD student was an invaluable experience. It broadened my understanding of the current trends and gaps in navigation research and allowed me to connect with leading experts in the field. The Professor David Last Fund played a crucial role in making this possible, for which I am deeply grateful. As I continue my PhD, the insights and connections gained from the ENC will undoubtedly guide and enrich my research.

The next award from the Professor David Last Fund will be granted in October 2024 at the Next Gen Nav conference. Scan the QR code to access the Next Gen Nav website to stay up to date as the details for the next event are released.



Discussing research paths with Raphael Grech, my industrial partner from Spirent Communications.

