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EARLY CAREER SCIENTIST NEWS

WELCOME BACK!

After an unexpectedly long hiatus, the IAPSO ECS committee is back to start the year with some exciting updates!

IUGG is back in town (Hello Berlin!),Young Trevor won a top award and Dr Wahl shares with us on the impact of changing tides on coastal flooding.

In the spirit of New Year's resolutions, update your "New Year, New Me" information with us here

Sharing is caring, so share this newsletter with your peers and get them to register with IAPSO ECS **here**.

Give the gift twice over and volunteer to share your oceanography research with us! (write in to **info@iapsoecs.org**)

Last but not least, help put an end to terrible Danni jokes (or make better ones) by joining our editor, Danielle Su on the newsletter team for 2023.

Website: https://www.iugg2023berlin.org

IAPSO Session Information:
https://www.iugg2023berlin.org/910-2/

Important dates
Abstract submission deadline: 14 Feb 2023
Early Bird Registration deadline: 28 April 2023

Join us for the 28th IUGG General Assembly, 11-20 July 2023 in Berlin, Germany!

Every four years, the IUGG brings together scientists from all aspects of Earth Science covered by its constituent organisations (e.g. oceans, atmosphere, cryosphere, seismology, and more).

With sessions unique to each constituent organisation, as well as symposia bridging two or several organisations, the conference is a platform for deep as well as broad discussions.

For students, Early Career Scientists, and attendees from low- to middle-income countries, travel grants are available. More information about abstract submission and travel grants can be found on the conference website.

During the conference, IAPSO ECS will co-organise an event for Early Career professionals from multiple constituent organisations. More information on the IAPSO ECS event will be updated in the next newsletter

IOC/UNESCO, Portugal and EurOcean Foundation are inviting early career ocean professionals (ECOPs) to apply to the newly launched **Mario Ruivo Memorial Lecture Series.**

Travel and accommodation will be sponsored for the winning applicant to present her/his research at the UNESCO Headquarters in Paris, France, in front of Governments, partners and stakeholders at the 32nd Session of the IOC/UNESCO Assembly (June 2023). This new opportunity for ECOPs will be available every two years.

Submissions of applications are open to projects developed and led by an ECOP up to 40 years of age as the principal investigator (PI) or as a co-PI.

Submission deadline: 13 February 2023
Website: https://oceandecade.org/news/mario-ruivo-memorial-lecture-ecops-invited-to-pay-tribute-through-their-outstanding-projects/

We would like to congratulate Trevor MacDougall, president of IAPSO, on winning the prestigious 2022 Prime Minister's Prize for Science awarded by the Australian government.

Professor MacDougall was awarded the prize with the following motivation:

"Professor McDougall has had a transformative impact on the study of oceanography and ocean thermodynamics, and in furthering our understanding of the role of the ocean in regulating the Earth's climate.
Professor McDougall is recognised for his discoveries of new ocean mixing processes and his work to redefine the thermodynamic definition of seawater. This has been adopted by the Intergovernmental Oceanographic Commission as the new international standard."

IAPSO ECS would like to send our warmest regards to young Trevor, who is an enthusiastic and cherished supporter of our work!

2021 IAPSO EARLY CAREER SCIENTIST MEDALLIST

DR THOMAS WAHL, UNIVERSITY OF CENTRAL FLORIDA , USA

Can you tell us a bit about your background and your career path?

I was born and raised in Germany, where I also attended university and obtained a Diploma and then a PhD in civil engineering at the University of Siegen, my hometown. While the coursework I took was quite traditional for a civil engineering degree and someone interested in water resources management, my diploma thesis topic already moved me in a slightly different direction: coastal engineering. While this is a very important sub-field of civil engineering, most students still don't know that it exists, at least when they enter a traditional civil engineering program where coastal topics are not part of the curriculum. Intrigued by the many possibilities but also the wicked problems of managing our coastlines in the face of sea-level rise and climate change, I focused my PhD research on mean sea level rise, storm surges, and changing coastal flooding risk in the German Bight.

After graduation, I applied for a fellowship from the German Academic Exchange Service (DAAD) to pursue a postdoc in the U.S. So after spending the first 30 years of my life in the same place I embarked on a journey to join the College of Marine Science at the University of South Florida in St. Petersburg. My career path became pretty non-traditional for a civil engineer and nowadays, **I usually introduce myself as a hybrid coastal engineer/coastal physical oceanographer.**

Working at the interface of those fields puts me in a unique position where I can contribute to the science but also translate the latest science into engineering applications. After spending 3 years in St. Petersburg, I received a Marie Sklodowska Curie fellowship from the European Union and continued my research at the University of Southampton in the UK. However, after 3 years in the Florida sun, it became clear that both my wife and I were no longer cut out for European winters and we returned to Florida 1 year later. In 2017, I started as an Assistant Professor at the University of Central Florida and since then, I have established a very dynamic research group in the Coastal Risks and Engineering Lab. I look forward to continuing my career spanning different science and engineering disciplines with the ultimate goal to help coastal communities make better informed decisions when combating the negative impacts of climate change.

How would you summarise (elevator pitch) the work that lead to you receiving this award?

The work which I presented at the award ceremony was the result of a project supported by the National Science Foundation with the goal of disentangling the climatic and geomorphic drivers of changes in coastal flooding risk in urbanized estuaries along the U.S. east coast.

Our research found that tidal ranges play an important role in coastal flooding, especially in estuarine systems. Changes in tidal range can be man-made and a main cause is the dredging of shipping channels. Increased dredging leads to larger water depths and less friction, which allows tides, to enter and leave the estuaries more freely. This can increase the tidal range and we quantified how these changes can contribute to what is known as high tide flooding, minor flooding, nuisance flooding, or sunny-day flooding.

Issues related to these flooding events are getting progressively worse, especially with sea-level rise. However, our analysis has shown that **human interventions can also have unintended negative consequences on coastal flooding.**

What does this award mean to you?

Receiving this award was a huge honor, but importantly, while it was given in my name, I never really considered it to be a personal award but rather testimony of the outstanding work done by my students and postdocs. They are the ones who really drive the research in my lab (including the study referenced above which was conducted by a visiting student from China). Without their dedication, drive, and technical skills, none of the work which I believe ultimately culminated in the award would have been completed at such a high level. At the same time, it is great to see that someone with a background like mine is considered for a physical oceanography award. It shows that the award committee and IAPSO recognize the importance of interdisciplinary work to take on the massive challenge of climate change adaptation and ensure that coastal communities become more resilient and continue to drive future economic prosperity. In the past, I sometimes felt like not being engineer enough for the engineers and not oceanographer enough for the oceanographers, but this has really changed and it's great to see that.

What is the most important piece of advice you've ever received or would give to other ECS?

I think the most important advice from someone who was a terrible student in high school is that you don't have to be a genius to have a successful career as a researcher (whether inside or outside academia). If there is something you are really passionate about and you pursue your goals then there is a fulfilling career path for you, the big challenge of course is to find it. My own career also shows that picking a certain field of study early on does not necessarily lock you into anything. Before moving into my current position as a principle investigator one of my mentors told me that one of the best things about the job was to be able to pick your collaborators.

After 4.5 years, I can second that and I am really enjoying the fact that I am able to choose to work with smart people with whom I connect on a professional but also on a personal level. **So I guess the (old and boring) rule to not work with anyone who you don't want to have a coffee with turns out to be true** and at least in my case is one of the pillars for the success of the group.