

## **iLEAPS - OzFlux joint conference 2023! An early career scientist perspective**

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### **When a record-shattering rainstorm meets a science conference**

This year's iLEAPS - OzFlux joint conference in Auckland, New Zealand (<https://www.ileaps-ozflux2021.org/>) was one for the history books. Delayed by COVID and disrupted by a record-shattering rainstorm, this was the first we've come together under the iLEAPS banner in over 5 years. Rather than being discouraged by the disruptions, scientists seemed more determined with The Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS). Some of our members literally travelled for days from across the world to attend, with the dramatic weather closing the Auckland's airport and airspace.

Despite the hardships of the Auckland floods, we forged both new friendships and shared new collaborative ideas. Special accommodations were made for those delayed by the closing of the airport, and we filled any gaps in the presentation schedule with impromptu workshops. With the altered schedule, we accommodated every presenter both online and in person, and it was well worth the effort.

### **Together, stronger**

I was anxious when conferences were either cancelled or moved completely online due to COVID disruptions. Like many other early career scientists, I knew how important in-person conferences are, they provide us a week or so of intense learning opportunities where we get to see brilliant science results and to meet and collaborate with the scientists behind those results.

iLEAPS – OzFlux joint conference finally happened! There were many great presentations on ground-breaking new research and informative keynote presentations that inspire us to keep pushing the boundary. Meanwhile, the workshops proved to be highly productive. For example, I was able to workshop current knowledge gaps and possible solutions with Dr. Caitlin Moore (<https://research-repository.uwa.edu.au/en/persons/caitlin-moore>), someone who has co-authored two journal articles with me and this face-to-face opportunity allowed us to have more in-depth discussion. I also met leaders there from all over the world, people like Associate Professor William Smith from the University of Arizona (<https://snre.cals.arizona.edu/william-smith>). After sharing each other's research stories, we saw synergy between our work and decided to collaborate on global research focused on drought impacts on vegetation dynamics. I heard many similar stories from my fellow attendees.

The highlight of the conference was the conference dinner on Thursday 2 February. It was touching to hear speeches from iLEAPS and OzFlux representatives who pushed forward the organisation process through the past 5 years with multiple delays.



Left: conference group photo; Right: conference dinner  
Source: <https://twitter.com/iLEAPS18>

## A synergy between established scientists and early career scientists

iLEAPS endeavors to extend interactions of early career scientists like myself, with established scientists. This was a special conference for me because it was my first time attending as an organiser. I was invited to convene Session 5.2 "Satellite-based vegetation monitoring, emerging techniques" with two world-renowned scientists Dr. Ben Poulter from NASA and Professor Kazuhito Ichii from Chiba University. I'd like to also extend my thanks to the dedicated work by other iLEAPS early careers scientists.



A snapshot at the conference when two keynote speakers, Distinguished Professor Belinda Medlyn (left) and Distinguished Professor Graham Farquhar (middle), were discussing with a rising Early Career Scientist Assistant Professor Xiangzhong Luo (right).



Left: my presentation titled “Land surface phenology retrieval across diverse ecosystems in Australia”; Right: I was awarded the Best Oral Presentation under the Early Career Scientists category

## Ending the conference with wonderful fieldtrips to see the nature in New Zealand

We were privileged to end the conference with wonderful field trips to see the stunning nature in Auckland, the only problem is that you can only pick one of the three field trips to join! It was a tough call to choose between West Coast Rainforest and Beach Trip, Rangitoto (the youngest of over 50 volcanoes that have erupted in the Auckland) Field Trip, and Waikato Peatland and Agricultural EC Sites Field Excursion.

I joined the West Coast Field Trip. We started our trip in a temperate rainforest Waitakere Ranges and our tour guide knows every species there! Most people in the field trip are tree experts, as a remote sensor myself, I was busy searching the names of species and taking in the knowledge about them from our tour guide. This will keep my research “grounded” by helping me to interpret satellite observations of these ecosystems. From the rainforest, we headed to our second and last stop O’Neil’s Beach, where we saw a black sand beach and learnt about how Maori people arrived and settled down in New Zealand before the European settlers.

iLEAPS – OzFlux joint conference felt like meeting an old friend as well as the beginning of something new all at the same time. It was undoubtedly the most memorable of all the conferences I've ever attended, and the friends and connections I made at the conference will continue to inspire me. The inspiration we sparked together at the conference will make its mark in next year's batch of research publications. This was my first time attending the iLEAPS conference, and it certainly won't be my last. Huge thanks to everyone who came to iLEAPS – OzFlux joint conference 2023 and stay tuned for the announcement of the next iLEAPS conference.





*West Coast Field Trip. Left: a temperate rainforest Waitakere Ranges; Right: A kauri tree that is over 600 years old*

Publications about the work I presented at iLEAPS - OzFlux joint conference 2023 are below.

Xie, Qiaoyun, et al. "Land surface phenology indicators retrieved across diverse ecosystems using a modified threshold algorithm." *Ecological Indicators* 147 (2023): 110000.  
<https://doi.org/10.1016/j.ecolind.2023.110000>

Xie, Qiaoyun, et al. "Land surface phenology retrievals for arid and semi-arid ecosystems." *ISPRS Journal of Photogrammetry and Remote Sensing* 185 (2022): 129-145.  
<https://doi.org/10.1016/j.isprsjprs.2022.01.017>

Xie, Qiaoyun, et al. "Satellite-observed shifts in C3/C4 abundance in Australian grasslands are associated with rainfall patterns." *Remote Sensing of Environment* 273 (2022): 112983.  
<https://doi.org/10.1016/j.rse.2022.112983>

