

# OKMR NEWSLETTER

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## AUV Interim Technical Director!

Thank you & congratulations to Sam Yoskovitz, who served as our term 1 interim technical director for the AUV division! After a close election, Sam assisted fellow director Eryk Halicki in coordinating the subteams, planning pool tests, and keeping the AUV team up to date on the club's status.



Sam is a third-year mechanical engineering student who has previously completed a 16-month co-op with AB InBev's 100+ Accelerator Program, where he worked on scaling sustainability technologies by collaborating with brewery managers, startup founders, and regional tech directors, and helped manage and coordinate the implementation of 10+ technologies across the Americas, Europe, and Asia. In his free time, Sam enjoys gaming (recently Arc Raiders & Space Marine 2), along with miniature painting (Warhammer), and jiu-jitsu. He also likes listening to music and scrolling Pinterest for inspo!



## The Hydrofoil

Alongside the AUV, UBC OKMR has opened up a new division in the club. Under the guidance of their technical director, Mateo Bravo, and team leads Andre Cox, Antoine Godin, Josh Chomiak, and Parker Brennaeur, the team is building a high-performance electric hydrofoil craft designed more similarly to an airplane than a traditional boat. Hydrofoils can achieve over 90% efficiency compared to normal boats, and this craft will be powered by up to 20 kW (~27 hp) of electric propulsion. Like an aircraft, it has 3 key degrees of freedom the team must learn to control (pitch, roll, yaw) and the driver will manage five different switches to pilot accurately.

The project also includes a custom 10 kWh battery and BMS capable of delivering the power required. While the craft is currently specced for 70 km/h, simulations indicate potential top speeds of over 120 km/h. To keep the structure strong and lightweight, the front masts, rear masts, front wing, and rear wing are being built from carbon fibre, and the finished craft will be proudly decorated with Canada flags painted all over – complete with a driver seat made from old car seats that have been broken down and weight-reduced.

### Message from Mateo

My name is Mateo Bravo, Technical Director of the new Hydrofoil Division, where our passionate team of engineers strives to bring innovation to a thriving industry, thank you for helping us turn this shared dream into reality!



## Outreach Events

OKMR had a busy stretch of outreach events connecting with students of all ages through hands-on marine robotics. At KSS Robotics, we set the sub in the center of the room for an interactive walkthrough, breaking down our sub-teams, explaining our competition, and highlighting similarities to requirements students recognize from their own club. After showing video of the sub in action, we opened it up to a lively Q&A about capabilities, how it was built, and key design choices.



At STEM Engagement Day for grades 3-5, we introduced the sub through videos and explained its mission as an "obstacle course" to make the tasks easy to picture. Students then designed and built their own mini "robot hands" from craft materials (with lots of help!)

and testing them by using their working closing grip and picking up a cotton ball, completing our challenge course.



During the Grade 6 Marine Activity Day, we ran a similar activity with a smaller group and more time to iterate further; adding fingers or joints, experimenting with performance, and observing how those changes affected performance, while also asking questions about our competition and design choices.



A big shoutout and thank you to our outreach coordinator, Cheyenne Gawley (right)!

## Our Team!



Club bonding (with lots of pizza) was so much fun, we love getting to know each other!



Our new Hydrofoil team leads (minus Parker)!

## Thank You to Our Sponsors!

None of this would have been possible without their support, thank you so much!

## Get Involved!

We are always looking for prospective members! Feel free to check out our instagram @okmarinerobotics and shoot us a message or check out the information in our LinkTree!

### Interested in becoming a sponsor?

Feel free to send us an email at okmarinerobotics@gmail.com or find more information on our website: okmarinerobotics.com.

