

## Preface

In the words of Kenneth Grahame “*there is nothing-absolutely nothing-half so much worth doing as simply messing about in boats.*” With that in mind, the 2018 International Robotic Sailing Conference (IRSC) and World Robotic Sailing Championship (WRSC), hosted by the University of Southampton, was no exception!

This year’s event, not only marked the 10th anniversary of WRSC & IRSC, but also coincided with a long awaited success: the first robotic sailing vessel to successfully complete the Microtransat challenge, the first crossing of the Atlantic Ocean since the competition conception in 2005. The WRSC event, which ran from 26th August through to the 1st September 2018 was held at the historical Calshot Hanger – a spit of land extending into the Solent, just outside Southampton. An area renowned for sailing, the hovercraft, the Spitfire and the Titanic. This provided a spectacular backdrop for the 5 day competition, with a variety of Ocean liners, cruise ships, container ships, ferries and yachts passing by as they came into and out of Southampton!

With industry and research in the maritime sector increasingly focusing on algorithms for planning and control of vehicles as part of collaborative tasks, WRSC and the development of autonomous boats through friendly competition continue to become more prominent and important. Inspired by the collaborative missions of surface and underwater vehicles demonstrated by the National Oceanography Centre and ASV global, the difficulty of the area scanning challenge was increased by making it a collaborative task. This led to, in one afternoon, an impressive 28 000+ square metres being scanned at a resolution of 4 m x 4 m.

Following the World Robotic Sailing Championship, the International Robotic Sailing Conference provided a forum to further discuss and share both WRSC vessel designs (including sensor developments, modelling and control methods) as well as discuss the development of maritime autonomous vehicles more widely. The 2 day conference, hosted at the University of Southampton Boldrewood Campus, included presentations of the eleven peer reviewed papers (published here). In addition a series of lighting talks, discussion sessions, and further discussions during the conference dinner and tour of the National Oceanography Centre (NOC) inspired the competitors and researchers for next year’s event.

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