

White Rose University Collaboration Project 2022 Summer School

“Innovating the Future of Bio-Inspired Autonomous Robots for Offshore Renewable Energy Inspection”



Morning Section: Presentations (Ron Cooke Hub: RCH248+250 University of York)

August 24th 2022 (9:30am – 14:00pm), Registration is at 9:30am on the 24th August 2022

9:45am-10:00am Prof Paul Mitchell (University of York): Research activities at York and Underwater Communications

10:00am-10:15am Dr. Edgar Buchanen and Prof Andy Tyrrell (University of York): Bio-inspired robotics and Autonomous Robot Evolution

10:15am-10:30am Prof Qing Xiao (University of Strathclyde): Computational fluid dynamics and fluid structure Interaction

10:30am-10:45am Ross Mitchell (Verlume Ltd.): Intelligent power delivery for autonomous inspection vehicles

10:45am-11:00am Professor Kirill Horoshenkov (University of Sheffield): Activities at Sheffield and research results from Pipebots – Zoom

11:00am-11:15am Prof Jongrae Kim (University of Leeds): Estimation & Control Algorithms for Autonomous Systems: Robust Lab (robustlab.org) – Zoom

11:15am-11:30am Mr Alex Loudon (ORE Catapult): Introduction to Offshore Renewable Energy and Opportunities for Robotic Inspection – Zoom

11:30pm-11:45pm, refreshments, Tea and Coffee

11:45am-12:00pm Dr Mark Post (University of York): RoboFish and modular underwater technology for AUVs

12:00am-12:15pm Mr Andrew Durrant (Pic-Sea Ltd): Marine robotics in real the real world: Playing in hard mode

12:15pm-12:30pm Prof Dan Gladwin (University of Sheffield): Power systems and wireless power transfer

12:30pm-12:45pm Dr Lu Shen (University of York): Underwater acoustic communications with full-duplex technology

12:45pm-13:00pm Mr Marvin Wright (University of Strathclyde): Biomimetic swimming locomotion

13:00-14:00 Lunch buffet will be provided outdoors in Marquee G - Piazza Building (the Tipi adjacent to Ron Cooke Hub)

Afternoon Section: Underwater Vehicles, Robots, and Communications Demonstrations

Outside Ron Cooke Hub and at the East Campus Lake

August 24th 2022 (14.30pm – 16:30pm)

14:30-15:00 *RoboFish* prototype bio-inspired AUV, Robotics and Autonomous Systems Research Group, School of PET, University of York

15:00-15:30 *Undersea Acoustic Networking*, Underwater Information Systems Research Group, School of PET, University of York

15:30-16:00 *Biomimetic Swimming Robot*, Computational Fluid Dynamics & Fluid Structure Interaction Research Group, Department of NAOME, University of Strathclyde

16:00-16:30 *Picsea 300 AUV*, Andrew Durrant, Pic-Sea Ltd, Edinburgh, Scotland.

Discussion and Networking (16:30pm-17:00pm at the Tipi)

Refreshments, Tea and Coffee will be provided.