UNIVERSITY OF LIVERPOOL | THE ACADEMY
Developing Liverpool

Technically Speaking

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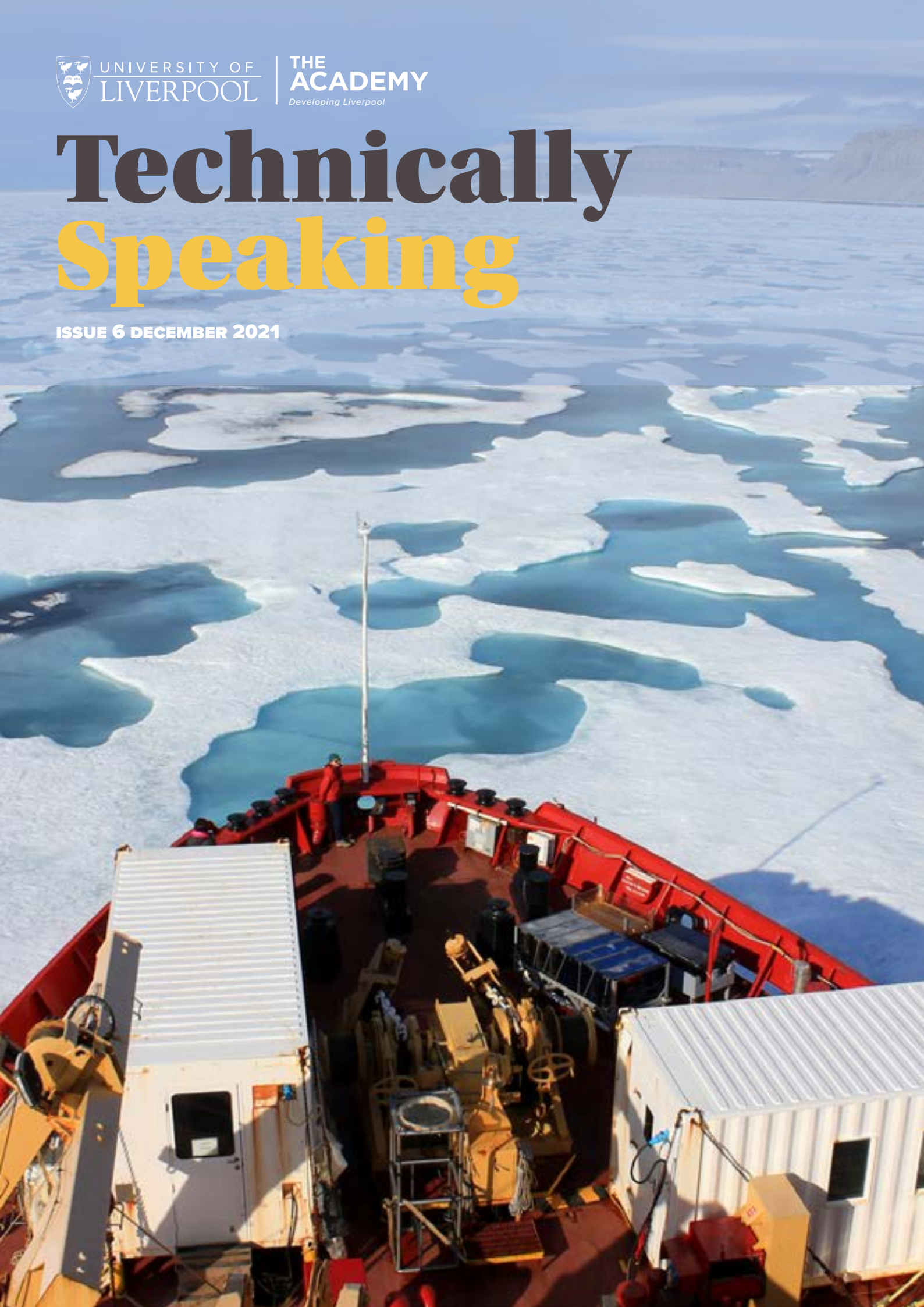

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Foreword

Welcome to Technically Speaking

Dr James Howard
Director of The Academy

Welcome to the 6th edition of Technically Speaking, a newsletter by Technicians for Technicians and the wider university community.

The work of the Technicians Commitment Steering Group continues as we aim to meet the objectives of our relatively new action plan.

One of the key actions is to create a career pathway for technicians which enables them to progress within the University outside of a traditional management role. This piece of work is extremely challenging given the multitude of technical roles within the university. However, I'm please to say that despite COVID and competing priorities that this work has been kick-started again.

The plan is for an initial outline of the criteria for a pathway to go out for consultation before the end of February so please look out for the communications that will be coming your way.

This 6th issue of 'Technically Speaking' provides yet more examples of the innovation, dedication and hard work of our technical community from Josh Hicks supporting work in the Central Teaching Hub to incredible journey undertaken by Sabena Blackbird in the North Atlantic ocean.

If you would like to contact us about anything mentioned in the newsletter, or if you want to get involved with the work of the Technician Commitment, please email us at:

theacademy@liverpool.ac.uk

or

technet.contact@liverpool.ac.uk

#TechniciansMakeItHappen

Technicians Bio

Josh Hicks,

Josh Hicks is an Instrument Technician/Deputy Supervisor in the Central Teaching Laboratory.

Describe your work area and your role.

My name is Josh Hicks, I work in the Central Teaching Laboratories (CTL) as the Instrument Technician/deputy supervisor and have worked at the University for over 9 years. The CTL is made up of 12 amazing technicians providing support to multi-disciplinary undergraduate teaching. We look after students from Chemistry, Physics, Environmental sciences, Archaeology and many more, but also provide support to many other users of CTL. My role is ensuring all analytical equipment is working correctly and ensuring any problems with equipment are resolved promptly.

What does a typical day look like for you?

Every day is different in the CTL due to the nature of the facility, having so many users mean there is always something new going on. Now most of the time is spent supporting teaching, and ensuring all equipment is in full working order.

What's your favourite bit of kit?

My favourite piece of equipment is the GC, it is such a versatile yet challenging piece of equipment requiring my skills and lots of experience to run efficiently.

What's your favourite task?

My favourite task that I complete every week is filling the NMR with liquid nitrogen, it is very cool .

What's the best project you have worked on?

The best project I have worked on was last summer, helping to build visors for the frontline COVID-19 workers. We spent days manufacturing visors to help ensure the safety of those who needed it most. The project was run by the engineering team, but we provided several technicians to help with the manufacture process.

Describe your career path. How did you get to where you are now?

I started at the university in 2012 as an apprentice in the CTL, after completing my BTEC and NVQ I successfully gained employment as a teaching lab technician in the CTL looking after the undergraduate teaching on the ENVS floor, after gaining experience across the different disciplines in CTL I then applied for the job as instrument technician and was successful.

"... We are an awesome team who work so well together and seeing this day in day out makes it easy to come to work every day."

What part of your job do you most enjoy or get the most reward from?

The part most rewarding is repairing equipment, sometimes it can be a quick easy fix which is nice. Sometimes it can be a more complex issue and can take some time to repair with support from other technicians and engineers, and the team work to get to a final fixed product.

What's the best thing about being a technician?

The best thing about being a technician, especially in the CTL is the team we have. We are an awesome team who work so well together and seeing this day in day out makes it easy to come to work every day. The commitment from the team to ensure every user of the CTL is happy and having the best possible experience is second to none and seeing happy users at the end of it is extremely rewarding.

A Technicians Adventure with ATLAS

Image: SB Atlas, Canada, Davis Strait

In 2016 researchers from Europe, the United States and Canada embarked on an ambitious project 'ATLAS' to improve our understanding of deep ocean ecosystems in the North Atlantic. Funded by the EU's Horizon 2020 programme ATLAS (A Trans-AtLantic Assessment and deep-water ecosystem-based Spatial management plan for Europe) was led by Professor Murray Roberts of the University of Edinburgh.

Atlantic ecosystems comprise a wide variety of habitats from cold water coral reefs, sponge beds to hydrothermal vents and are increasingly under threat through human induced climate change, fishing activities, seabed mining, marine biotechnology, renewable energy and expanding oil and gas production.

Taking a multidisciplinary approach ATLAS addressed gaps in our knowledge through a variety of integrated work packages (WP) examining ocean circulation and dynamics, ecosystem function, biodiversity and connectivity that has fed into socioeconomic, spatial planning and policy integration. The aim being that through science-led marine policy and regulation, good ecosystem management and sustainable Blue Growth is achievable. The project also fostered trans-Atlantic collaboration and the wider objectives of the Galway Statement on Atlantic Ocean Cooperation.

I was involved in WP2 "Functional Ecosystems" alongside Professor George Wolff (UoL) and Principal Investigator Dr Dick van Oevelen (NIOZ) focussing on understanding the food sources and food delivery pathways to sponge grounds, cold-water corals (CWCs) and coral gardens at our three case study sites in the Atlantic. This involved much forward planning before participation in field work cruises followed by a great deal of laboratory work and data interpretation on the collected samples.

In 2017 I travelled to the Royal Netherlands Institute of Sea Research (NIOZ) at Texel, Netherlands for training on the in-situ pump system I would be using to collect particulate organic matter (POM) - the food source utilised through respiration by

the benthic communities. Scientists and crew set sail from Texel on board the NIOZ Research Vessel (RV) Pelagia for the transit to the Logachev Mound province, close to the Rockall Bank off the west coast of Ireland. Here there are flourishing CWC reefs on carbonate mounds comprising *Lophelia pertusa* and *Madrepora oculata* and the solitary coral *Desmophyllum dianthus*. I sampled at a number of the CWC mounds and slopes and watched with awe the live feed images as the remotely operated vehicle (ROV) manoeuvred along a transect from the bottom to the top of the Oreo mound. As well as the CWCs, some deep-sea glass sponges *Aphrocallistes* sp., many Northern Cut-throat Eels *Synaphobranchus kaupi* and a few Ox-eyed Oreo *Oreosoma atlanticum*, after which the mound is named, were seen.

In 2018 whilst George Wolff headed across to Condor seamount off the Azores with coral gardens dominated by the octocorals *Viminella flagellum* and *Dentomuricea* cf. meteor my case study site was a little colder...

After reaching Iqaluit on Baffin Island, Canada it was a short helicopter transfer to the Canadian Coast Guard Ship (CCGS) Amundsen and transit to the Davis Strait on the Canadian shelf of the Labrador Sea. Along with ArcticNet scientists I was joined by ATLAS partner Graham Tulloch (BGS) whose role was the attachment and programming of equipment including oxygen & turbidity sensors, fluorometers, and sediment traps to the two benthic landers that were to be deployed and sit on the sea bed for a year collecting data before their recovery in 2019.

The lander sites were specifically chosen to be in contrasting locations in Southern Baffin Bay – a 'non-sponge site' which had the lowest sponge bycatch value from trawl surveys and a 'sponge site' with abundant sponges including *Geodia, Asconema* and *Polymastia* sp. along with soft corals including the stunning red tree coral *Primnoa resedaeformis*. My role was processing of seawater collected from CTD rosette Niskin bottles on two shelf/slope transects, each with five stations (sampling positions), across the lander sites. The samples would be later analysed in the laboratory for various biogeochemical parameters including nutrients, POM, dissolved organic carbon (DOC), chlorophyll and two different types of flow cytometry samples – phytoplankton; bacteria & viruses. It was a gruelling sampling regime in many instances working through the night.

'All work and no play' the proverb goes – well there was certainly going to be some fun as many of the scientists were going to be crossing the Arctic Circle for the first time. Those initiates, myself included, needed to endure a number of challenges over the course of three days and be thoroughly vetted by King Neptune (and his missus) before being allowed into the Order of the Blue Nose!

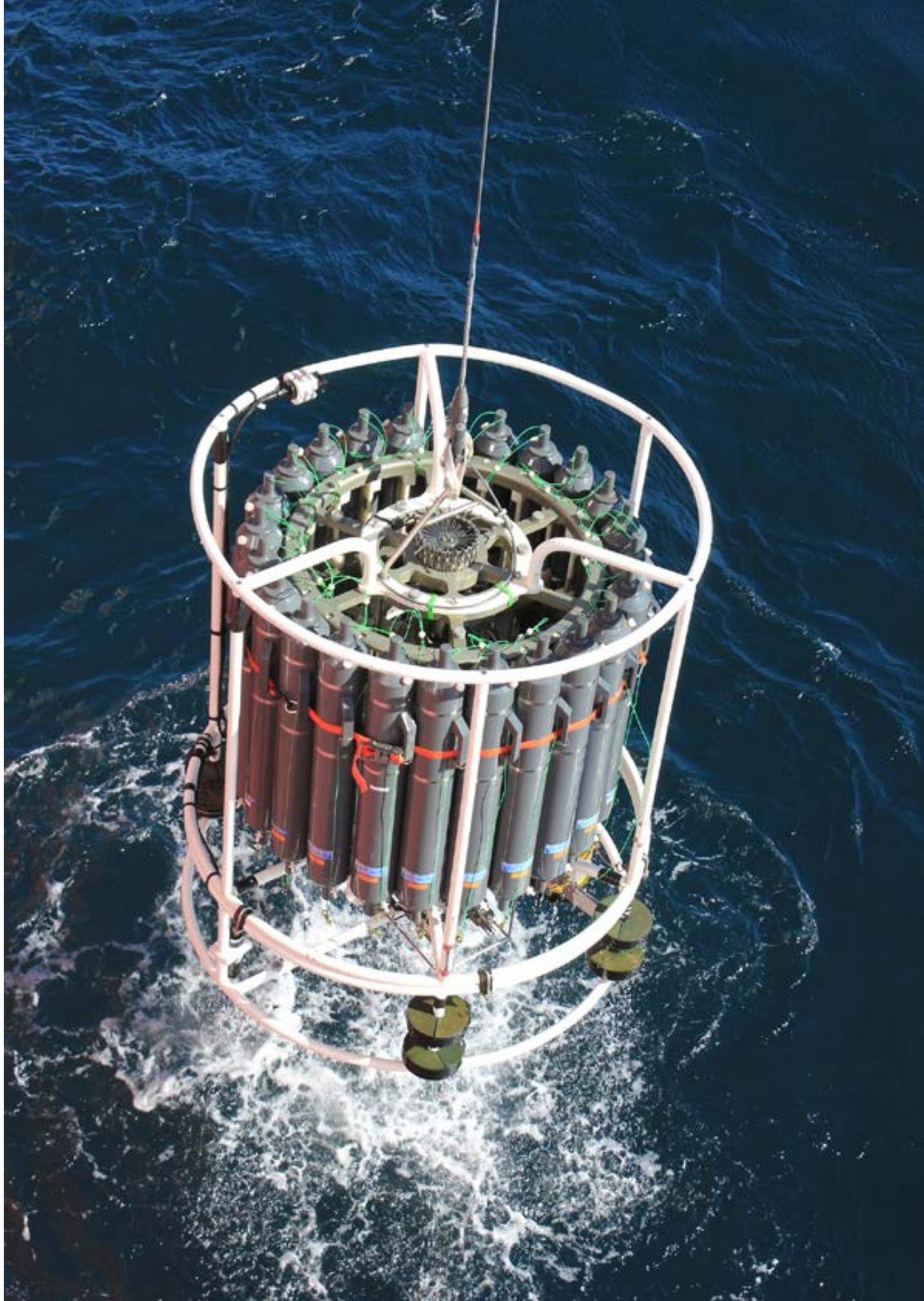
The ATLAS mission complete we continued our journey towards Resolute Bay testing the ice-breaking capabilities of the CCGS Amundsen as we broke through thick ice whilst sailing along Lancaster Sound close to the edge of Devon Island.
Our final WP report to the EU reviewers was duly appraised – "an excellent piece of work, very nicely written with information beyond the state of the art in terms of knowledge on the functioning of CWCs and sponges ground ecosystems and on their role in the mediation of biogeochemical cycles"

With the four year ATLAS journey coming to an end there have been some notable achievements including the discovery of: - At least 12 new species including a bivalve *Myonera atlasiana* named after the project. A field of hydrothermal vents in the Azores, these ecosystems are biologically productive with complex communities surviving in extreme temperatures and pressure amidst mineral laden plumes. Findings also suggest that ocean warming, acidification, and decreased food supply could drastically alter the availability and location of suitable habitats for habitat-forming cold-water corals and commercially important deep-sea fish by 2100.

Sabena J Blackbird BSc MSc MIEnvSc FRGS

Above: Cold-water corals and anemones at the ROCKALL BANK - CREDIT UNIVERSITY OF EDINBURGH

Right: SB Atlas Canada Amundsen CTD Rosette



STEM-Change, Changemaker Placement Programme

Lara Gerrard
Workshop Technician
School of the Arts

"I found it a hugely valuable experience being able to network with new technical colleagues from across the STEM-CHANGE consortium"

This programme is open to Technical staff from any discipline who are from an under represented/minority group (Female, Disabled, BAME, LGBT+). It aims to remove barriers and improve equality of consistently under represented groups in management and leadership teams in the Technical community. It is a programme designed for personal and professional development of these groups through placement at another University.

I saw this opportunity online before the pandemic and jumped at the chance. I applied and was successfully placed at Newcastle University. I began researching travel and accommodation, but the placement was postponed until the following year because of travel restrictions. It was difficult to arrange a date when myself and the University were available but a small window of opportunity presented itself in September 2021. With one day's notice, I had to arrange travel and accommodation for the remainder of the week, but I made it happen. After all 'technicians make it happen.'

My placement was at Newcastle University visiting the staff and facilities in Fine Art, Architecture and Medical Science departments.

I found the experience very insightful. I found that there are similarities and differences across the UK with all Technicians in all departments. There seems to be this barrier where a practical and hands-on technician gets to a certain point in their career where they can either stay content at where they are or venture slightly into another way of working. This could be moving into a management role, teaching & lecturer role or Health & Safety advisor/ enforcer. This of course depends on what kind of work-life balance you want to achieve too.

Many people believe that technicians are not supported to develop in the same way that academics are, but it's up to everyone to stand up and change this perception of negative divide between the two and work with each other. Most technicians in the arts for teaching and learning educational establishments are very student facing and often spend more time with students

than the tutors do. All of these student facing technicians are involved in an element of teaching and demonstrating which is not well recognised. Art and/or design technicians are a mix between the two worlds of technical **and** teaching.

It was incredibly interesting to learn each technicians story of how they got to where they are and where they want to go. In particular I met an inspirational woman who had managed to bridge the gap between technician and lecturer.

Whilst there, I found it a hugely valuable experience being able to network with new technical colleagues from across the STEM-CHANGE consortium. We could share our experiences, skills, knowledge, challenges and successes of being a technician. Once I returned I could reflect on the experience and share with the team how they operate their facilities in comparison to ours.

The experience was a thoroughly enjoyable and a useful networking and development opportunity that I would recommend to anyone. Technicians should continue to network, share skills and be recognised for the work that we do.

Images: Newcastle University Campus

Twelve of Our Own Begin Herschel Programme

This is a national programme, open to technical staff who identify as women. The development opportunity aims to address the lack of women in technical leadership positions across the sector. It provides a space for colleagues to learn new skills to develop themselves in a current technical leadership role or equip them if they aspire to be in the future.

The programme is named after Caroline Herschel, a pioneer in the discovery of comets and other astronomy work, assisting her brother William. Caroline was an early 'technician' at the turn of the 19th century and paved the way for the women of the future to contribute to and play key roles in scientific endeavours. Find out more at https://www.mitalent.ac.uk/The-Herschel-Programme

The twelve staff are:

Dr Valentina Iorio

Senior Technician,

Institute of Systems, Molecular and Integrative Biology

Eve Wilcock

Research Technician,

Institute of Infection, Veterinary and Ecological Sciences

Lara Gerrard

Workshop Technician,

Architechure, School of the Arts

Val Tilston

Histology Lab Manager,

Institute of Infection, Veterinary and Ecological Sciences

Rachael Bell

Technical Coordinator,

Tung Auditorium, School of the Arts

Gemma Charlesworth

Histology SRF Facility Manager,

Technology, Infrastructure and Environment Directorate

Sarah Northey

Senior Technician,

Institute of Life Course and Medical Sciences

Nicola White

Research Technician,

Institute of Infection, Veterinary and Ecological Sciences

Iona Horner

Research Technician,

Institute of Systems, Molecular and Integrative Biology

Sandra C. P. Cachinho

Research Technician,

Technology, Infrastructure and Environment Directorate

Dr Samantha Williams

Senior Technician,

Institute of Life Course & Medical Sciences

Ashleigh Thurston

Veterinary Nurse,

Institute of Infection, Veterinary and Ecological Sciences

"As much as we need a prosperous economy, we also need a prosperity of kindness and decency"

Caroline Herschel

Image: Caroline Herschel 1750 - 1848

THE ACADEMY
Developing Liverpool

Making the Case For Your Own Development

By now many of you will be aware of the various development opportunities the academy provides to University staff. Technical staff able to access the vast majority of the activities from our teaching, leadership and research specific programmes to our bespoke 'Making an Impact' sessions and the 'Academy Developing Practice Series (ADPS)'.

In addition to our own development activities we have been able to set up a Technicians Development Fund.

To make an application to the fund you can simply fill out the online form found at https://www.liverpool.ac.uk/researcher/technicians-hub/development/development-fund/ or download the paper application form and email it to theacademy@liverpool.ac.uk.

Making a solid case for the funds is key. You must ensure you have considered all of the possible benefits for yourself, your department and the University. Applications that have been discussed with Head of Departments and already have match funding agreed will stand a far better chance of being approved than not.

At the time of publication we have received and approved 5 applications to the 2021-2022 fund totalling development worth £5662.

We also continue to invest in the membership of HEaTED which allows our technical staff access to 100's of discounted CPS courses which can be attended face to face or online.

In addition to the subscription, we procured 30 course credits for staff to use during this academic year. So far we have given out course credits to 7 technicians to enable them to attend HEaTED courses at no charge to them or their departments. At the time of publication we still have 16 course credits available to all technicians.

To apply you must first find the course you wish to attend via https://heated.org.uk/cpd/explore-courses/ get agreement from a line manager and finally send an email to matthew.davis@liverpool.ac.uk who will be able to arrange the use of any remaining course credits with HEaTED.

Please note: some courses require more than 1 credit. E.g. a course that lasts for multiple days will require multiple credits.

Lastly, its worth giving a special mention to ULTRA.

The University of Liverpool Teaching Recognition and Accreditation (ULTRA) Framework has been developed to ensure that all those who support learning at the University have the opportunity to engage in effective Continuing Professional Development (CPD) and gain Advance HE recognition.

The ULTRA framework is a six month programme (although it takes some participants far less time) and is available to staff who have 3+ years' substantial experience of supporting learning in higher education. The programme is asynchronous in nature and so participants can work through the modules at their own speed within the six month window.

If you have been a technician for more than 3 years and have substantial experience of supporting learning in higher education then you likely qualify to apply for Associate Fellowship through ULTRA. If you would like to discuss this opportunity please do contact The Academy (theacademy@liverpool.ac.uk) to arrange to speak to a member of the Academic Development Team.

To register for ULTRA please complete the Registration form. You will then be added to the ULTRA Canvas Site where there is clear guidance for how to complete the programme and submit your application. This programme is free of charge for University of Liverpool employees.

Matt Davis
Organisational Developer,
The Academy

Image: Materials Innovation Factory (MIF)

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Do you have a story to tell?

If you have a contribution or idea for future newsletters then please email theacademy@liverpool.ac.uk