

SONAR

CAMPUS
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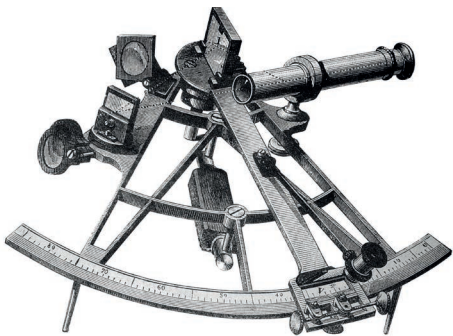


P.[03] **MARINE TECHNOLOGY AND INNOVATION: 70.8 LINKS RESEARCHERS, BUSINESSES AND THE PUBLIC**

P.[06] **EXPÉDITION H2O: A WORLD TOUR OF COASTAL COMMUNITIES**

P.[07] **EUROCEAN: THE “EUROPEAN BROKER FOR MARINE SCIENCE AND TECHNOLOGY”**

WHEN SCIENCE OPENS UP TO SOCIETY



SONAR

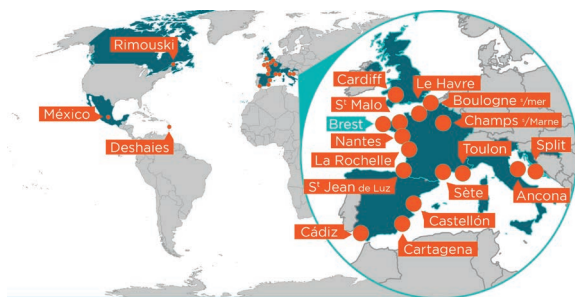
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CAMPUS
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NEWS IN BRIEF

THE 5TH EDITION OF OCEAN HACKATHON® WILL BE HELD SIMULTANEOUSLY IN 19 CITIES.

After a first deployment of the event in 2019, Ocean Hackathon® 2020 shows a dynamic that is becoming more and more international. Campus mondial de la mer is very happy to welcome again advisers who participated in 2019 and to enlarge its community. The call for challenges is open until 30 June 2020: www.ocean-hackathon.fr



MAJOR FUND RAISING FOR FOIL AND CO

The Breton startup specialising in the design and manufacture of composite parts for water sports is raising € 750,000 to finance its growth. Launched in September 2016, **Foil and Co** is a company specialising in the development and manufacture of prepreg carbon parts. The successful gamble was to relocate a high-tech composites workshop in France coupled with an experienced design office in order to face Asian competition.

FOREWORD

Stéphane Maby - Director of Océanopolis

EVER SINCE IT WAS FIRST ESTABLISHED, OCÉANOPOLIS HAS PLAYED THE ROLE OF INTERMEDIARY, SHARING KNOWLEDGE FROM THE SCIENTIFIC COMMUNITY WITH THE WIDER PUBLIC. THE AIM IN DISSEMINATING SCIENTIFIC INFORMATION IS TO ENABLE OUR VISITORS TO BECOME ENLIGHTENED CITIZENS WHO ARE EQUIPPED TO MAKE REASONED CHOICES AND LOOK AT CURRENT ENVIRONMENTAL CHALLENGES WITH A CRITICAL EYE.

The role of intermediary is increasingly crucial: the public continues to be wary of science, controversial topics are springing up everywhere and fake news is widespread, while knowledge and expertise are greater and more widely available than ever before.

At Océanopolis, researchers, science communicators and the general public come together all year round. We organise events like our Science Festival, Young Arts and Science Reporters initiative and the European Researchers' Night which are mainly attended by school students and others with enquiring minds.

The question constantly facing our science communicators is how to harness the momentum we currently have and reach out to an even wider audience.

In practical terms, this is a matter of designing innovative ways of disseminating information and raising awareness, cutting across

sector and industry divides, and getting stakeholders from civil society, the public and private sectors more involved. For example, citizen science projects engage individuals in large-scale data gathering and help many research programmes make progress. One such example is Objectif Plancton.

More unusual projects which combine art, science and research, such as SONARS¹, David Wahl's creations², or the DONVOR show³, expand the horizons of what is possible. These productions have inspired researchers, who see them as a unique new way to express their feelings and share their findings. For the artists involved, they open up worlds which were previously unexplored, or at the outer extreme of their creative practice. Audiences have loved these unexpected and successful ventures into marrying research and art.

The health crisis we are currently experiencing provides a reminder, if one were needed, of the imperative for scientific issues to be communicated and embedded in society, guiding all our decisions. Our fellow citizens are now understanding that science moves at a very different pace from everyday life.

Many scientists are now taking it upon themselves to speak out in public. They are writing opinion pieces, alerting us to the climate emergency and joining in with the public debate about the changes we urgently need to make. Thus science is opening up to society, and society needs to listen, both today and in the long term. Here in France, we need now more than ever for Océanopolis and our other dedicated cultural centres for the public understanding of science, technology and industry (CCSTIs) to play their role in society.

(1) La Carène - Laboratoire BeBEST/Fovearts partnership, Centre d'Art Contemporain Passerelle, Océanopolis, Ateliers des Capucins, Astropolis festival, Stereolux, La Cordonnerie, SAT, and many more.

Supported by: the City of Brest, Brest Métropole, Brittany Region, DRAC Bretagne, the French National Centre for Scientific Research CNRS, Fondation Daniel et Nina Carasso and Fondation Crédit Agricole du Finistère.

(2) <http://davidwahl.fr/>

(3) Coproductions Le Quartz, Scène nationale de Brest; La Maison du Théâtre, Brest; cooperation between Nantes, Rennes and Brest; Au bout du plongeur, Rennes métropole, La chapelle Dérézo, La Ville de Brest, Les Fabriques Chantenay, Nantes métropole.

Supported by: Ifremer Brest, EMSO-Azores; ANR Lucky Scales; Ocean Networks Canada; Itinéraires d'Artistes; UBO LabexMer; Brittany Region; Institut Français Région Bretagne; Conseil départemental du Finistère; Consulate General of France in Vancouver; University of Victoria, British Columbia; Spedidam.



MARINE TECHNOLOGY AND INNOVATION: 70.8 LINKS RESEARCHERS, BUSINESSES AND THE PUBLIC

Picture: Céline Liret.

70.8: THERE'S NOWHERE LIKE IT ANYWHERE IN THE WORLD, AND IT WILL SHORTLY OPEN ITS DOORS IN THE CAPUCINS QUARTER OF BREST. THIS PERMANENT EXHIBITION SPACE IS DEDICATED TO SHOWCASING INNOVATION AND MARINE TECHNOLOGIES TO THE PUBLIC. WE TAKE A TOUR WITH CÉLINE LIRET, WHO IS SCIENTIFIC DIRECTOR OF OCÉANOPOLIS AND EXPERT CURATOR AT 70.8.

THE NAME IS DERIVED FROM THE FACT THAT 70.8% OF THE EARTH'S SURFACE IS COVERED BY WATER. BUT WHY CREATE A NEW SCIENCE CULTURE DESTINATION IN BRITTANY, DEDICATED TO INNOVATION AND MARINE TECHNOLOGY?

It's true that there are already several places in Brittany where the public can explore the rich life of our oceans. Each of them highlights a different aspect: at Brest's Musée de la Marine, it's history; at Océanopolis, it's biodiversity. So with 70.8 we provide a new focal point for science culture, and in particular ocean observation, marine technology and marine innovation. The space will serve as a meeting point for marine stations, universities, engineering research institutes and other organisations, as well as businesses, large and small. We focus in particular on knowledge sharing in relation to the ocean and innovations developed in response to the major challenges associated with global change today, chiefly climate catastrophe and the loss of biodiversity.

IT SOUNDS LIKE 70.8 FORMS A BRIDGE BETWEEN OCEAN TECHNOLOGY AND SCIENCE INNOVATORS AND THE GENERAL PUBLIC. WHERE WILL THIS BRIDGE TAKE YOUR VISITORS?

Our visitors will be able to explore a variety of key themes: marine renewable energy - especially wind and tidal turbines, deep-sea exploration, oceanographic instruments and maritime law. We ask who the ocean belongs to. These various themes combine to create a panorama of the issues currently being played out at sea. Visitors of all ages will enjoy uncovering the world of marine biotech, one of Brittany's areas of excellence and a source of innovation in the pharmaceutical, medicine, cosmetics and agrifoods sectors

alike. They will have the opportunity to explore the many uses of algae and seaweed, the properties of specific marine animal molecules, and the way some research labs and companies use marine biomolecules.

We also feature the ships of the future, with a wide array of technologies that have been developed on board vessels. We've got oceanography laboratories, racing yachts on the open ocean, cargo being transported under sail, and much more.

An entire community has rallied round our venture - almost 130 partners have made valuable contributions. We have a team of graphic designers, model makers, scriptwriters and video artists who have created playful, immersive formats to engage our visitors.

SO YOU'RE SHARING KNOWLEDGE AS WIDELY AS POSSIBLE. WHAT ARE THE MAIN CHALLENGES IN RELATION TO PEOPLE AND THE PLANET?

The idea of sharing is in the DNA of Océanopolis, which in turn curates the scientific content at 70.8. In this era when fake news is rife, it's essential that the public can access accurate, good-quality information. They need to know what happens in business, in laboratories, in research and development and shipbuilding. We therefore provide information on the entire marine industry and on every link in the chain of design, innovation and development of new technologies. 70.8 plays the role of intermediary, sharing knowledge with individuals so they gain a better understanding of the sea, the marine economy, the variety of work related to it, and the current issues. We'll share science culture as a way of engaging with our fellow citizens!

CINAV: ALL ABOARD FOR A VOYAGE OF DISCOVERY IN THE MARITIME SECTOR

SINCE 2017, THE MARITIME SECTOR HAS BEEN GROWING STRONGLY IN COASTAL FRANCE. THE INDUSTRY ESTIMATES THAT IT WILL NEED 72,000 NEW RECRUITS OVERALL IN THE NEXT TEN YEARS, INCLUDING 22,000 NET NEW JOBS, IN A VARIETY OF AREAS. THE CAMPUS DES INDUSTRIES NAVALES (CINAV), BASED IN BREST, AIMS TO BOOST THE ENTIRE MARITIME SECTOR (SHIPBUILDING, BOATING, RENEWABLES, AND OIL AND GAS).

Dominique Sennedot, Director of CiNav, explains: "Our task is to demonstrate the rich and diverse range of careers available in the maritime sector, to show how attractive our industry is. There are jobs based at sea, in shipyards, in consultancies and in industry... People are often unaware that some of these jobs exist, which makes it more difficult for employers to recruit."

Our Navire des métiers roadshow takes visitors on a voyage of discovery as it tours French towns and cities. In refitted, modular shipping containers, visitors hear personal accounts from trainees,



trainers and business leaders about their careers, be it in sheet metalwork, naval architecture or welding. The roadshow has already dropped anchor in 23 towns and cities since January 2020, and welcomed over 11,000 people looking for career guidance or retraining.



Explore all CiNav's aims at www.cinav.fr



CONCARNEAU MARINE STATION: WHERE CITIZENS DO SCIENCE

ALONGSIDE ITS MARINE RESEARCH, EDUCATION, CONSULTANCY AND KNOWLEDGE-SHARING ROLES, CONCARNEAU MARINE STATION GETS THE PUBLIC ON BOARD WITH CITIZEN SCIENCE PROGRAMMES.

Nadia Améziane, Director of Concarneau Marine Station, told us "Whether through schools or other organisations, we involve the public in our scientific enquiry through observation and data acquisition campaigns, with a particular focus on two projects."

STUDYING PLANKTON.

This project was initiated by Océanopolis and involves cooperating with several different establishments. It uses yachts to sample plankton four times a year. "In return, we grant participants access to the latest research - to which they themselves have contributed. They become active participants in the science."

TIDE LINE OBSERVATION PLAGES VIVANTES, LAISSE DE MER.

As part of this programme on living beaches, participants learn to mark out a grid as their observation area, and identify the seaweed which the sea leaves behind. "People walking on the beach often think anything deposited there is litter, but in fact what we find between the high and low water marks is a veritable ecosystem of its own. Our research objective is to understand what it comprises and how it is affected by global environmental changes. Citizen science means we can involve the public in our research, which ultimately also raises awareness."



www.stationmarinedeconcarneau.fr

JCOMMOPS: AN INTERNATIONAL CENTRE OF EXCELLENCE COORDINATING THE GLOBAL OCEAN OBSERVATION SYSTEM

FOR 20 YEARS NOW, JCOMMOPS HAS COORDINATED, MONITORED AND HARMONISED A NETWORK OF 10,000 IN SITU OCEAN AND WEATHER OBSERVING SYSTEMS DEDICATED TO OCEANOGRAPHY. ITS TEAMS ALSO DESIGN ONLINE TOOLS FOR MONITORING THE STATUS AND DEVELOPMENT OF THE GLOBAL OBSERVATION NETWORK.

JCOMMOPS has been based in Brest since 2015, and was developed jointly by the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) and the World Meteorological Organization (WMO).

JCOMMOPS' work focuses in particular on implementing and maintaining the Argo network, which has launched almost 4,000 autonomous underwater profilers since it was first established. In addition, JCOMMOPS is responsible for a network of fixed and floating buoys, OceanGlider piloted profilers, and other research vessels and ships of opportunity.



JCOMMOPS has also developed partnerships with civil society, in particular with merchant ships and racing yachts. Their role is to deploy observation instruments on routes which are not normally investigated by research vessels, to ensure research networks can operate constantly. This enables these research networks to serve communities worldwide, and to raise awareness as widely as possible about the state of the world's oceans.

INFO + To observe the state of the oceans and the in situ and satellite observation systems, visit JCOMMOPS.org at www.jcommops.org/reportcard2019 www.jcommops.org



TRAINING COURSE ON ENVIRONMENTAL ISSUES AND THE BLUE ECONOMY

INFO + If you would like any further information, please contact Ms Anaëlle Le Roux at the Department of Lifelong Learning (SUFCA) at the Université de Bretagne Occidentale: anaelle.leroux@univ-brest.fr

This three-day professional development course on Environmental issues and the Blue Economy is provided by Campus mondial de la mer with the support of the Université de Bretagne Occidentale (UBO). It's aimed at elected representatives, managers, and people working in public administrations, local authorities and companies. The course is for anyone in a public or private organisation seeking to combine blue economy growth with littoral and coastal conservation.

The content is based on theory sessions, practical illustrations and a field visit to the Bay of Morlaix. Éric Thiébaud, Deputy Director of Roscoff Marine Station, is involved in the training and explains: "The Bay of Morlaix is a microcosm of everything you might encounter at sea and on the coast, in terms of both the exploitation and the management of our marine and coastal heritage and resources. The course gives an overview of the issues associated with changes in human activity at sea and the transitions now under way and brings in several contributors from bodies around western Brittany. The next time the course is run, we plan to hold sessions where we swap experiences with participants from Quebec, thanks to our strong partnership with the Institut France-Québec Maritime".



BUILDING BRIDGES ACROSS THE ATLANTIC

NICOLAS TOUPOINT, ORIGINALLY FROM FRANCE, CONDUCTS INDUSTRIAL RESEARCH FOR MERINOV. HE IS ALSO AN EXTERNAL RESEARCHER, WHO HAS BEEN ATTACHED TO ROSCOFF MARINE STATION SINCE 2018.

From 2007 to 2018, Nicolas Toupoint lived and worked in Quebec, notably on the Magdalen Islands, where he completed his PhD in biological oceanography and worked in Merinov's teams. Nicolas feels an affinity with islands, and now lives on the île de Batz, just a few leagues from Roscoff Marine Station. "In Quebec and on the Magdalen Islands, my work involved addressing the issues and challenges associated with the fishing industry, aquaculture and seafood processing. This work always had a strong vein of environmental awareness running through it, especially as regards climate change, and the sustainability of both resources and

industries." In the spirit of international collaboration which already characterised relations between Merinov and Roscoff Marine Station, Nicolas returned to France. He is determined to help researchers from Quebec and France join forces to tackle maritime issues. Building bridges across the Atlantic like this could extend to activities such as processing seaweed or monitoring resources.

INFO + www.merinov.ca/fr



EXPÉDITION H2O: A WORLD TOUR OF COASTAL COMMUNITIES

THE H2O PROJECT IS AN EDUCATIONAL WORLD TOUR FOR SCIENTISTS, DIVERS, SPONSORS AND CHILDREN IN OVER 40 STAGES.

Having sailed several times in the Arctic and Antarctic, free diver Laurent Marie is now gearing up for a four-year world tour with over 40 different calling points. His crew will comprise children, researchers, business people, divers and camera operators who will take turns on board the good ship H2O. The vessel will have a classroom, a laboratory, and even its own submarine to explore the deep ocean. Laurent Marie explains: "Our main aim is to educate young people in a living classroom environment. Throughout the voyage, scientific research and encounters will help us share knowledge with children and the wider public, and raise awareness of the

risks to people and the environment which are playing out in our oceans. Meeting over 30 different communities who live at the water's edge will form an integral part of our learning journey."

MEETING COASTAL COMMUNITIES

At each calling point in a waterfront city, the H2O will act as an ambassador for the causes it champions, supported by UNESCO. "The oceans and their communities are under threat from various sources of pollution. We want to help these communities by making sure their voices are heard loud and clear on the international stage."

The aim of the project is to work with local NGOs to raise awareness among sponsors

and involve them in major, pressing issues such as the destruction of coral reefs and the development of ecotourism. The H2O project's main sponsor is the Help The Planet fund, run by Pierre Milza. It is still seeking more partners to secure financial and logistical support for its grand adventure.

42 PLANNED PORTS OF CALL
35 COASTAL COMMUNITIES TO MEET

INFO + To read about the whole H2O project and the many stakeholders involved, visit www.amebleue.fr

IODYSSEUS: HARVESTING FLYING PLANKTON FROM THE OCEAN

IODYSSEUS IS A SAILBOAT-BASED OCEANOGRAPHY, PUBLIC EDUCATION AND MARINE PROTECTION PROGRAMME. IT SPECIALISES IN SAMPLING AEROSOLISED MARINE MICRO-ORGANISMS ('FLYING' PLANKTON), IN CLOSE COLLABORATION WITH PIERRE AMATO'S TEAM AT THE UNIVERSITY OF CLERMONT AUVERGNE ATMOSPHERIC RESEARCH LABORATORY.

The team conducted its first scientific expeditions in spring 2019, tracking a phytoplankton bloom in the Bay of Biscay. Atmospheric samples were taken, and two biogeochemical profiler buoys were deployed. Ocean surface parameters were measured continuously, and the results are now available to the international scientific community on an open-access basis. The contribution made by Iodysséus has been acknowledged with a certificate awarded by the World Meteorological Organization (WMO) and the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO).

A UNIQUE AIR/WATER COMBO

In 2020, Iodysséus will strengthen its scientific partnership with Roscoff Marine Station. For the first time, a multidisciplinary team will



work with the marine ecology and atmospheric microbiology labs at the French National Centre for Scientific Research (CNRS) to investigate the ocean-atmosphere interface and cloud formation, as well as the planet's main thermostat: the Ocean itself.

In parallel with this, the team continues to raise awareness by publishing a magazine and hosting events and conferences aimed at the general public. The United Nations has just selected Iodysséus as part of its programme of Ocean Science for Sustainable Development.

INFO + Find out about the various aspects of the Iodysséus programme at www.iodysséus.org



The president and the executive director of EurOcean, the director of "Today We have" and some EurOcean employees celebrating with the Portuguese President, the joint organisation of the international youth challenge "Live By the Sea" which took place last year in Lisbon during the European maritime day.

EUROCEAN, THE "EUROPEAN BROKER FOR MARINE SCIENCE AND TECHNOLOGY"

CAMPUS MONDIAL DE LA MER JOINED FORCES WITH EUROCEAN LAST NOVEMBER BY BECOMING ONE OF ITS COOPERATING MEMBERS. HERE WE PROVIDE YOU WITH A FOCUS ON THE "EUROPEAN BROKER FOR MARINE SCIENCE AND TECHNOLOGY" WITH ITS EXECUTIVE DIRECTOR, SÉRGIO BRYTON.

EurOcean, the European Centre for Information on Marine Science and Technology, is an independent, non-profit, scientific organisation. Sérgio Bryton, its Executive Director since January 2019, described the organisation and its work:

"EurOcean is based in Lisbon. It was founded in 2002 by the Portuguese Foundation for Science and Technology and IFREMER. Our mission is to support European marine science and technology advances by fostering information exchange, cooperation and collaboration among our members, the ocean community and society. Over the past five years we have participated in 13 research and innovation projects, and we manage the most comprehensive research infrastructures database (RID) in Europe. Communication, knowledge transfer and information management are our core skills.

"We have two types of members. Our full members, which include IFREMER and Nausicaá, comprise over 150 marine research infrastructures and more than 3,150 researchers. They have participated in over 400 research and innovation projects in the last five years. Cooperating members are organisations like IOC-UNESCO, with a regional or global focus and activities which complement ours. They enhance our capacity and reach through cooperation and I am delighted that Campus mondial de la mer is now one of them."

A WIN-WIN RELATIONSHIP WITH CAMPUS MONDIAL DE LA MER

Although EurOcean has long hosted information from Campus mondial de la mer about more than 500 research facilities, a more in-depth partnership only began in late 2019.

"Our relationship reached a new level last year, as we saw the opportunity to expand our cooperation beyond the marine research infrastructures and facilities portal. Last November, they accepted our offer to become a cooperating member, and our full members formally and unanimously endorsed this partnership. Since then, we have been very active, promoting networking between our members, working on joint proposals and organising events together.

"I had the privilege and honour of being invited to the Strategic Planning and Future Orientation Committee and the General Council of Campus mondial de la mer, which took place last December in Brittany, and I must say I was very impressed with the energy, dynamism and capabilities I saw there. Now it's very important that our members have the chance to meet and work together, to exploit new opportunities and leverage existing resources. In this way we can advance European marine science, technology and knowledge and maritime economics, and tackle the ocean threats that increasingly have an impact on our lives", says Bryton.

EurOcean expects this cooperation to be a win-win arrangement. "We can help Campus mondial de la mer to gain visibility and credit

in Europe and worldwide, by disseminating their achievements and capabilities and promoting their interactions with other relevant stakeholders. To be acknowledged outside your region, it is not enough to be known. You have to work with people from other regions, demonstrate your competencies and value, and establish trust and long-lasting relationships."

According to Bryton, meeting the members of Campus mondial de la mer will benefit EurOcean members and the other way around, as it will lead to cross-fertilization, innovation and opportunities for research and business development. "Campus mondial de la mer comprises mature organisations that work in many strategic areas and have a solid reputation. It's a fantastic opportunity that our members can work with yours. In this regard, it is important to get to know Campus mondial de la mer better. At present we are just getting started, but the potential is already very clear.

"We expect this strategic partnership to strengthen even more as results start to appear, as it is our mission to promote this type of cooperation and information exchange between ocean stakeholders. We are committed to supporting and participating in future activities of the Campus. Likewise, we look forward to having Campus involved in our upcoming initiatives."





BREST MÉTROPOLE, TO BE A BASTION OF NATIONAL MARITIME CYBER SECURITY

AT A TIME WHEN CYBER ATTACKS AGAINST VESSELS AND PORTS ARE ON THE RISE, BREST IS AIMING TO BE THE FOCAL POINT FOR MARITIME CYBER SECURITY AT NATIONAL, AND EVEN EUROPEAN LEVEL. ÉRIC VANDENBROUCKE, DIRECTOR FOR ECONOMIC AND INTERNATIONAL DEVELOPMENT FOR BREST MÉTROPOLE, HELPED TO PUT US IN THE PICTURE.



©Naval Group

WHAT ARE THE CHALLENGES FACING MARITIME CYBER SECURITY?

Cyber security is now an integral part of overall maritime security. It certainly needs to be, because the security threats to vessels and port infrastructure have evolved in terms of technology – and they can cause major economic and environmental disasters. Whether they are at sea or in port, ships can be victims and sources of cyber attacks and related incidents. This includes both military and civilian vessels, and these attacks can have dire consequences on a large scale. What if the IT systems for an oil tanker were hijacked, or its radar signals were scrambled? It is crucial nowadays that we have the capacity to respond effectively to such threats, both in France and worldwide.

WHAT ROLE DOES MARITIME CYBER SECURITY PLAY IN THE BREST MÉTROPOLE AREA, AND HOW IS THE SECTOR ORGANISED?

This sector has civilian and military stakeholders, which is very relevant in Brest, as it's home to one of the two main French naval bases. The French Navy is a key player in the sector, with the skills and internal resources required to forestall and counteract cyber threats targeting its fleet. Industry also plays an active part, both through large corporations such as Naval Group and Thales and in the form of world-class SMEs like DIATEAM. Last but not least, this region boasts a rich fabric of academic excellence on cyber security with, for example, IMT Atlantique, Ecole Navale, ENSTA Bretagne, Université de Bretagne Occidentale and ISEN.

Since its launch in 2014, the Cyber SSI project has provided the scientific community with research equipment and helped hone its cyber skills. This initiative gave rise to the Naval Defence Cyber Chair organisation. Its research focuses on applications within the

maritime sector such as vessels' IT systems, specific instruments, robots, communication methods and port infrastructure. Its term has been extended by three years, and it will launch a unique course in September 2020: a Masters in Port and Maritime Systems Cybersecurity.

BREST AIMS TO BECOME HOME TO THE NATIONAL CENTRE FOR MARITIME CYBER SECURITY. WHY BREST?

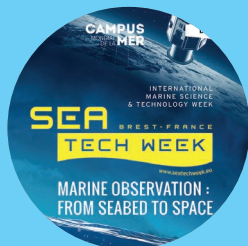
Major disasters at sea along the coast of Brittany, such as the Amoco Cadiz oil spill, provided Brittany and France with early motivation back in the late 1970s to get organised to prevent and manage such accidents. Cedre is one of the organisations which was established at that time. Brest has set the standard internationally in terms of maritime security. Adding the management of cyber threats to the other aspects of maritime security is a logical and consistent step for us to take. Our community of stakeholders therefore acted as soon as the decision was taken at national level to create a French Centre to coordinate maritime cyber security. This decision was taken at the Interministerial Committee of the Sea in November 2018. The planned Centre will include a Computer Emergency Response Team (CERT) – a central emergency platform to field calls for help and respond to the victims of cyber attacks. All the players in the cyber security sector of our territory have expressed an interest in coming on board, with the support of the Brittany region. So Brest has a legitimate claim as a leader in the field at the national and even European level. If the French government takes decisions quickly on the proposals drafted by our stakeholder community, the Centre could be up and running by late 2020.



Ocean Hackathon® 2020 [9 > 11 October 2020 worldwide]

For 48 hours non-stop, teams respond to challenges by developing an innovative project integrating a demonstrator and using various marine and maritime data made available for the occasion. 19 cities in 7 countries will organize this 5th edition of Ocean Hackathon®: Canada, Croatia, France, Italy, Mexico, Spain and the United Kingdom.

More information on www.ocean-hackathon.fr



Sea Tech Week® 2020 [12 > 16 October 2020 in Brest]

The 12th edition will have as its main theme observation: from seabed to space, with Australia as the featured country. Crossing disciplines as well as the worlds of research and business, this is the specificity of the event which includes more than 30 scientific and technological sessions and more than 200 BtoB meetings.

More information on www.seatechweek.eu

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