Christopher Dobbs started his career as an archaeological supervisor on the Mary Rose excavations in 1979 – a job that amongst other things involved teaching volunteer divers, from all walks of life, what to do underwater on an archaeological site. The scale of the Mary Rose excavation meant that up to 50 divers had to work in shifts each day to carry out the work. Hence the team of archaeologists had to create an effective training programme to teach them what to do.

After the excavation and raising of the ship in 1982, many of the team were still convinced of the need to continue training avocational divers through the NAS, building on previous ‘stand-alone’ courses run at the University of Bristol by Toby Parker or at Fort Bovisand by Alan Bax and colleagues.

This talk will outline the ideas and thoughts behind those early years including the first official NAS course in 1986, the development of the 4-Part scheme in 1988 and the lead up to the appointment of the first paid NAS Training Officer in 1991. Chris has been involved with the NAS since the first meeting of the NAS Steering Committee in December 1980. He was the NAS Honorary Training and Development Officer from 1988 to 1990, Chairman from 1991 to 1994 and is now a Vice President of NAS. In the course of recounting these early years, the talk will also give insights into and reflections on his own career over the last 40 years.

I think that the NAS training program and myself are linked somehow. 30 years ago, the training program started and so I did at university as a first undergraduate student in Geography and History. Without knowing it, I have follow a path to meet the NAS.

I have always trying to learn as much as possible on maritime archaeology, taking NAS courses (I have even obtained more than 200 points) on anchor recording, gun recording, rope making, surveying…, and attending other courses and conferences both in Spain and abroad (IKUWA, ISBSA). Being first a student, I have been starting to be accepted as speaker, involved as a tutor for some courses in Spanish (guns & anchor recording), as director of courses on traditional boatbuilding and underwater projects (Bakio shipwreck).
So, NAS has been the backbone of my skills as a maritime freelancer; whenever I approach a project, I always go back to my NAS skills. I will present how NAS has contributed to be who I am now in maritime archaeology by presenting my own projects which have a NAS motto on all of them.

11.30 - 12.00  **The Voyage of Discovery with CITiZAN**, Alex Bellisario, CITiZAN South-West

Every year along the beautiful coastline of England new archaeological remains are exposed and placed under threat from erosion, sea and storms. Once identified they start an avalanche of questions: what is it?, why is it here?, what do we do with it? The first and second question can often take the finder on a voyage of discovery but it is the last question which poses the biggest problem and is often the most unanswered – What do we do with it?

CITiZAN (The Coastal and Intertidal Zone Archaeological Network) works on a programme of non-intervention. Archaeological monitoring via photography, survey and a mobile phone app is used to create a detailed record of exposed remains before they are destroyed. The only way this is possible with such a large ‘archaeological site’ is to run this project as a community archaeology programme, getting people who really know their local coastline involved. Over the past two years we have run over 100 training events where we have developed the skills of our ever expanding, 1000 volunteer team, and increased awareness of this threatened and often overlooked form of heritage by engaging over 7000 people at over 200 outreach events.

This paper will look at three major case studies in the south west. Firstly the discovery of a Roman settlement on the coast of Somerset, secondly the disappearing Brick Kiln of Brownsea Island in Dorset and thirdly the major D-Day remains which lie on the coast of Hampshire which hide their secrets – even today. We will use these case studies to explore the question of Discovery and what do we do with it, and demonstrate that using local knowledge is the key to investigating and recording these remains before they inevitably disappear.

12.00 - 12.30  **Patrão Lopes, a wreck with multiple beginnings**, Jorge Russo, Portuguese Navy Research Centre

The ship *Patrão Lopes* and her wreck are examples of a historical, cultural, and patrimonial complex of multiple beginnings.

Although this is not a NAS program research project, one of its coordinators had direct NAS training and another was trained in Lisbon in the 1990’s according to its principles, by the Museu Nacional de Arqueologia (Dr. Francisco Alves). But, as with their every other projects, some of them Adopt-a-Wreck awarded, the *Patrão Lopes* Project is deeply embedded in the spirit and practices of the NAS, mainly when it comes to the involvement of the local population and their identity elements, as we have a great concern for its dissemination by the public and in its educational aspects. The *Patrão Lopes* wreck was also included as an UNESCO Example of Best Practices in 2017 meeting. An example of this is the publications in the National Geographic Magazine Portugal and the graphic content produced on *Patrão Lopes*, adopted by UNESCO for a publication aimed at raising awareness of the 2001 Convention in Portuguese-speaking language countries.
12.30 – 13.00  **NAS Cyprus Underwater Archaeology Fieldschools: Lessons Learned,**  
Andonis Neophytou, MARE Lab, University of Cyprus

The Maritime Archaeological Research Laboratory (MARELab) of the University of Cyprus in collaboration with the Nautical Archaeology Society (NAS) have organised a series of field schools in Cyprus directed to both archaeologists and divers. The project was entitled ‘Training the Next Generation’ and was funded by the Honor Frost Foundation. The primary objective was to enhance the capacity building in underwater archaeology, with an emphasis on the region of Eastern Mediterranean where the domain is still in its first steps.

The first field school, for students of archaeology, took place at a block assemblage, in the ancient anchorage of Xylophagou, Larnaca, in 2015. The team’s main goal was to map the site using tape measurements plotted in the Site Recorder Software and compare the results with a previously conducted photogrammetric survey. A more advanced fieldschool, also for archaeology students, took place in 2017, at the Nissia Shipwreck site, Paralimni. This time the goal was to train the students in underwater excavation techniques and methodology of finds documentation. The field school for divers was integrated into the 2016 excavation season, at the site of the Mazotos shipwreck. The trainees participated in diverse activities, in order to be able to assist archaeologists with surveying, excavating, photography, tagging and other tasks, both underwater and on land.

Diverse issues had to be tackled in each one of the three fieldschools, since the sites, the curricula and the learning objectives were different in each case. The most instructive ones were related with the often-conflicting priorities of an excavation and a training school, as well as with the different level of diving skills and experience of the trainees. Thus, not only did the project succeed in introducing 36 young archaeologists and divers, from Cyprus and elsewhere, in underwater archaeological methods and techniques, but also it provided very useful feedback regarding essential aspects of underwater archaeological training, in general.

14.10 – 15.00  **Scanning the SS Thistlegorm - The approach, technique, methods and results of using photogrammetry to scan one of the world’s most popular dive sites,** Simon Brown, Deep 3D

At 131m long and sitting in 32m of water the use of photogrammetry to scan the SS Thistlegorm for the Presence in the Past project presented a series of challenges. Just over 24,000 high resolution images were required to cover the ship, seabed, cargo and internal features. In the field the immediate requirement for on site image management was paramount: to reduce the risk of individual images, or a small series of images, being lost in the volume of data.

To gather large areas of the seabed efficiently, to reduce the risk of a decompression incident and diver fatigue a means of image gathering automation was required. Finally, the processing of such a large dataset dictated the concurrent use of multiple computers and the use of cloud based virtual PC hardware.

Simon Brown will reveal how the challenges, both predicted and unforeseen, were overcome to deliver the project in time for the 76th anniversary of the loss of the ship.
The protection of underwater cultural heritage benefits from a public fascination with archaeology, and particularly visible wrecks that look like ships. It is relatively easy to convey information about underwater cultural heritage and shipwrecks like Grace Dieu or Holland 5. What becomes more challenging is presenting information on wrecks that are broken apart, or located in low to zero visibility water. How do we engage the public with submerged archaeological sites that don’t include ships, like Doggerland?

The Nautical Archaeology Society is at the forefront of maritime education and public outreach and routinely offers online courses, intensive training programs, and opportunities for public participation. In 2017 alone, NAS has offered courses on GIS, side scan sonar, 3D surveying, flintknapping, heritage law, and report writing. While these skills are essential for professionals, they also engage the public and aid them in understanding the increasingly technical products of archaeological survey. Not all sites can be photographed, but many can be imaged remotely. Laboratory analyses of environmental data present a bigger picture of the past, and how a place has changed over time. These methods, however, don’t always generate immediately recognizable products for public consumption. Geophysical products require explanation and interpretation, but like a second language, once learned, they can lead to a larger understanding of archaeological sites.

Public efforts to support proper use and preservation of Florida’s historic shipwrecks began in earnest in the late 1980s. One of the most successful and popular programs developed by the state is the Underwater Archaeological Preserve system. As part of this process, state archaeologists begin by working with sport divers and local governments to develop new Preserves. Once established, the interpreted sites facilitate hands-on, non-disturbance survey and documentation trainings for these and other groups.

Using the same framework, the Florida Public Archaeology Network continues to engage the public’s interest in Florida’s shipwrecks and other submerged cultural heritage sites. This paper describes the Submerged Sites Education & Archaeological Stewardship (SSEAS) program, which also provides NAS Introduction to Foreshore and Underwater Archaeology certification, and how this program encourages divers to become active in monitoring wreck sites and making their own discoveries. Ultimately, divers are enabled to produce information instead of simply consuming it. While initial results have been encouraging, they also provide a lesson for orienting collaborative programs to the needs of the audience, rather than only to the needs of archaeologists.
The early steam powered submarine Resurgam was designed and built by an eccentric curate from Manchester, England, and was lost in mysterious circumstances off North Wales in 1880. The submarine was relocated in 1995 and was investigated in June 1997 by a mixed team of more than 150 avocational and professional divers, archaeologists and scientists during the SubMap project.

Fieldwork tasks completed during SubMap included a marine geophysical survey, target relocation and recording, site mapping, detailed recording of the submarine, a biological survey, corrosion analysis and the relocation and excavation of buried cladding timbers. In addition the project ran NAS training courses for a large number of sports divers and provided the opportunity for them to contribute to the work on site.

A summary of the results of this and later investigations is presented along with a new analysis of the Resurgam submarine's capabilities. The paper concludes with a brief re-evaluation of Resurgam's place in the sequence of development of early powered submarines.
Day 2: Sunday 19th November 2017

09.40 - 10.15  
**Secrets from the Seabed - The Antikythera Mechanism Shipwreck**, Phil Short & Gemma Smith, Dark Water Explorations

One of the most famous recovered artefacts in Maritime archaeology is the Antikythera Mechanism, dubbed the world’s first computer! In 1901 Greek sponge divers descended in search of sponges to find the sea bed off the island of Antikythera littered with bodies... of marble and bronze. Using standard dress and compressed air “the Titanic of the Ancient World” had been found. In the following 100 plus years technologies from Standard dress to SCUBA to CCR Rebreathers, autonomous vehicles and 1 atmosphere diving suits have begun to unravel the mysteries of this famous wreck site.

10.15 - 10.35  
**Maritime Archaeology when it’s cold, wet & windy – the winter activities of the NAS Members Research Group**, Sheilah Openshaw

Finding a Wreck is only the first step! The NAS Members research group is a group of NAS members who enjoy diving not only into water, but into archives to dredge up information. Our history is hiding in plain sight we just have to look for it. Bringing together people who enjoy looking for information with people who want the information but are unable to travel to the repositories has led to NASMRG involvement in many projects and is helping NAS members locate wrecks, build up information around the wreck so valuable in report writing and support individual members’ projects.

10.35 - 11.00  
**Excavating Invincible**, Daniel Pascoe, Bournemouth University

In June 2017 excavations started once more on the wreck of HMS Invincible by a team from MAST and Bournemouth University. Invincible was a 74-gunship captured from the French by the British in 1747 and wrecked in the Eastern Solent in 1758. The first season of work revealed a section of the bow comprising the gundeck, the orlop and the hold. As well as revealing the inside of the ship many artefacts were recovered, which, once conserved, will be put on display at the National Museum of the Royal Navy. This talk will discuss the origins of the project and a summary of the findings from a successful first season.
NAS Conference 2017
Discovery is just the Beginning

11.30 – 12.00  **NAS and Service Learning in Costa Rica: Investigating Slave Ships, Fishing Culture, and Oil Rigs**, Dr Lynn Harris, East Carolina University

Capacity building in underwater archaeology is currently in the foreground of initiatives facilitated by international organizations like UNESCO and Nautical Archaeology Society (NAS). The NAS infrastructure, as a public outreach format, is an invaluable tool for reaching local communities. It also provides our Program of Maritime Studies MA students East Carolina University valuable opportunities for service learning and leadership roles as mentors in collaborative field schools offered annually in Costa Rica since 2015. The overarching educational goal was to introduce students to a rich maritime culture in the vibrant towns of Puerto Viejo and Cahuita, whilst embracing an interdisciplinary approach. Diverse data sets included a former Panamanian iron rig now a fishing pier, locally-built watercraft utilized in subsistence fishing and lobster diving, graffiti, artwork and music with maritime connections.

Archaeological sites selected for the underwater component of the training, known as Brick Site and Cannon Site, are potential candidates for two Danish slave ships wrecked at Punta Cahuita in 1710. The complex historical narrative weaves together a colorful fabric of Danish, Dutch, Nigerian, Spanish, Miskito Indian, and African legacies with stories that appeal to a wide audience. It encompasses themes of slave and sailor mutiny, maroon societies, and early shipwreck salvage by the Cahuita community. These underwater sites have potential as a centerpiece resource to answer questions about nuances of slave trade and significant stories of Afro-Caribbean origins along the south Caribbean coast of Costa Rica.

12.00 - 12.45  **Profits and losses. The story about the 18th century Dutch East Indiaman Rooswijk swallowed by the Goodwin Sands**, Martijn Manders, Dutch Cultural Heritage Agency, #Rooswijk1740 Project

The VOC ship Rooswijk sank in the winter of 1740 on the Goodwin Sands. Nobody survived and the ship disappeared into the deep. It was only around 2000 that the wreck was discovered and excavation under a salvaging contract with the Dutch Government started. A lot of bullion was raised from the wreck and sold at auctions. But this wasn’t the end of it. After being first protected and then placed on the Heritage at Risk list by Historic England, in 2016 the wreck has been assessed and as a result partly excavated in 2017 to save information still present in the wreck, before it is lost.

The #Rooswijk1740 project has focused on scientific questions like ship type, the people on board and the silver trade to the East. This talk will give some preliminary answers to these questions, gained through archaeological and historical research that was conducted at the same time. The project not only focussed on the scientific archaeological and historical research. Other focal points were training and public engagement. In this talk I will show how this was done and what the outcomes were.
14.00 - 14.30  
*The winner of the Keith Muckelroy Award 2017. To be announced on the day*

14.30 - 15.00  
**Warship Hazardous Project - 30 years of avocational custodianship of a protected wreck site**, Iain Grant & David Johnston, Warship Hazardous Team

Built by the French in 1699, captured by the British in 1703 and recommissioned into the British Navy, Warship Hazardous Prize was lost in November 1706, having been deliberately run aground in Bracklesham Bay, West Sussex, following a disastrous voyage escorting a convoy from the Virginias. The site was located in 1977 and worked for many years by local volunteers from 308 Branch Sub Aqua Association and more recently by the Warship Hazardous Prize (1706) Project Group. The site was amongst the first to encourage visiting divers by establishing a diver trail. Work on site has produced multiple monitoring surveys, documenting its ongoing destruction and resulting in “Heritage at Risk” status. Many artefacts have been recovered, conserved and displayed. In recent years, limited excavation permissions have been granted and funded by Historic England. These works are ongoing, supplemented by recent advances like photogrammetry.

15.30 – 16.00  
**Harnessing the power of the masses – using social media for recording**, Nick Reed

Used correctly social media can provide a valuable tool for sharing and recording information about maritime artefacts. The presentation will look at how the Big Anchor Project (BAP) facebook page has created a world wide variety community of anchor recorders. It will also look at how the BAP has led to the creation of a number of similar facebook sites recording cannons, boats and dock cranes?

The presentation will also explore some of the potential developments for the future that will enhance and improve the level of recording.

The conference has been supported by: Historic England, Dive Master Insurance, BSAC, Wessex Archaeology, MSDS Marine and The Mary Rose Trust
For many years, the Nautical Archaeology Society has been working on two of the protected wrecks off the Sussex coast. The two sites could not be more different. One, the Holland No.5 submarine, lost in 1912 sank 9m offshore in 32m of water and is virtually intact on the seabed. The site is easily navigated in visibility that normally exceeds four-five meters. The other protected wreck is an (as yet) unidentified cannon site in 12m of water only one mile offshore. Visiting divers mostly experience very poor visibility of less than a meter and need a system of ground line to navigate their way around the wreck.

Since 2009 the NAS has facilitated access to both these sites by running Protected Wreck Days, inviting qualified divers to come and find out why such wrecks are protected by law and trying to inspire them to take an active interest in exploring and researching shipwrecks. For the last two years the NAS has been working with Historic England funding to bring these wrecks alive to the non-diving public by creating virtual diver trails. This paper will illustrate the contribution that NAS members have made to both these projects and how in only 8 years our ability to record and understand these wrecks has improved beyond our imagination.