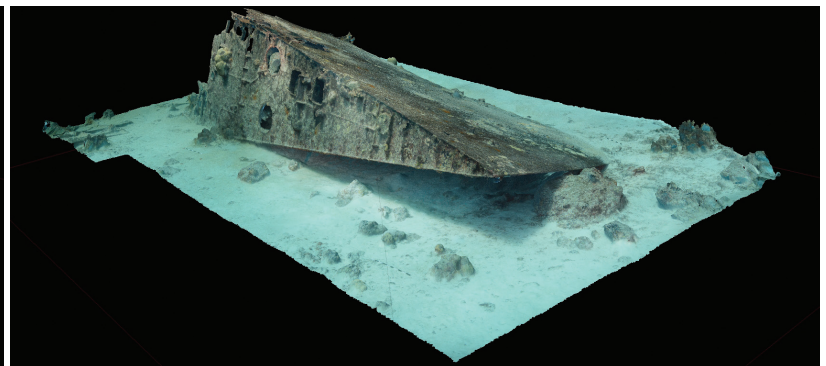
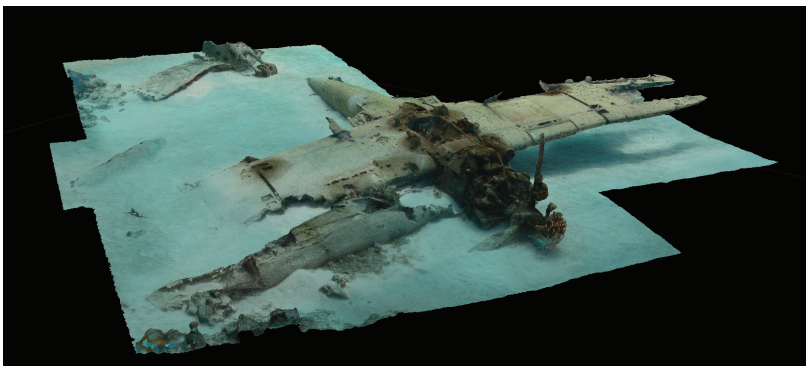
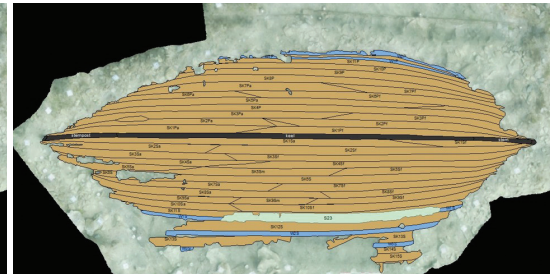
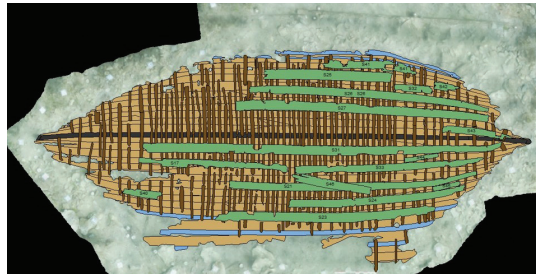
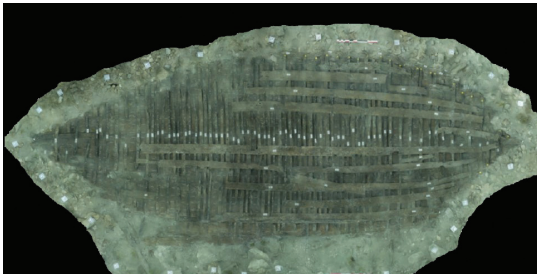
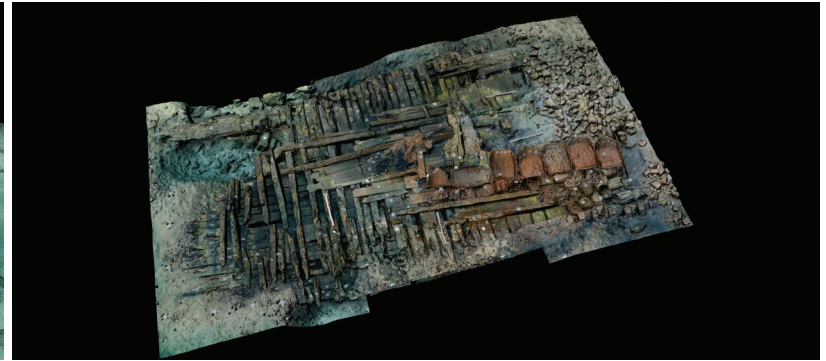


ARS NAUTICA – SEAFARING THROUGH THE AGES – INTERNATIONAL COURSE WORKSHOP PHOTOGRAMMETRY IN UNDERWATER ARCHAEOLOGY THEORY AND PRACTICE



Inter
University
Centre
Dubrovnik

IUC

An independent
international
centre for
advanced
studies

LOCATION

Dubrovnik, Croatia,
25 - 31 August 2019

ACCOMMODATION

Inter-University Centre, Dubrovnik

ORGANIZERS

Dubrovnik - Neretva
Regional Development
Agency:
Bluemed Project

COURSE DIRECTORS

Dr Kotaro Yamafune,
A.P.P.A.R.A.T.U.S. Lc., Japan
Asst. Prof. Dr Irena Radić Rossi,
University of Zadar, Croatia



United Nations
Educational, Scientific and
Cultural Organization



Unitwin Network
for Underwater
Archaeology

LEARN WHAT PHOTOGRAMMETRY IS, AND HOW TO USE IT IN UNDERWATER ARCHAEOLOGY!

SHOOT THE PHOTOS AND LEARN HOW TO PROCESS THEM INTO 3D MODELS!

PRACTICE PHOTOGRAMMETRY FOR ARTIFACTS!

LEARN HOW TO SCALE-CONSTRAIN YOUR 3D MODELS, AND HOW TO TAKE MEASUREMENTS FROM THEM!

DISCOVER HOW TO CREATE A LOCAL COORDINATE SYSTEM ON YOUR ARCHAEOLOGICAL SITE!

GENERATE ORTHOPHOTOS, GENERAL ELEVATION MAPS, DRAWINGS FROM ORTHOPHOTOS, AND SECTION PROFILES!

EXPERIMENT WITH POINTS BASES DEVIATION ANALYSIS SOFTWARE!

SHARE YOUR 3D MODELS ON A WEBSITE!

AND ABOVE ALL, ENJOY THE FRIENDLY WORKING ATMOSPHERE OF THE INTER UNIVERSITY CENTRE IN BEAUTIFUL DUBROVNIK!!!

PROGRAMME SUMMARY

During the past decade, photogrammetry rapidly evolved from a sophisticated skill practised by a small group of devoted experts with appropriate equipment and special software, to a broadly available tool, which can be managed by anybody, with no restrictions regarding educational level, professional background, or virtual modelling experience.

Photogrammetry is now a common, indispensable tool, which, in skillful hands, can produce excellent results within the working process for which it is designed. Although technological upgrades continue to improve the hardware, software and accuracy of photogrammetric recording, the true innovation lies in avoiding over-reliance on photogrammetry, but instead striving to understand its drawbacks and limitations. Simply performing photogrammetry as the end goal of an underwater excavation is not sufficient.

Considering the stated premises, the International Course Workshop Photogrammetry in Underwater Archaeological Research - Theory and Practice aims at introducing the participants to the theory and practice of the photogrammetric photo and video recording, for the needs of underwater archaeological research, taking into consideration all its advantages and constraints.



TUITION FEES:

The tuition fee is 350 EUR, including accommodation for 6 days (double rooms) at the Inter-University Centre, breakfast included.

FOOD:

Four meals will be provided by the BLUEMED Project. For the rest of the meals participants are kindly asked to arrange them on their own.

TRAVEL EXPENCES:

Participants have to cover their own travel expenses.

APPLICATION PROCEDURE:

In order to apply, please, respect the following steps:

1. Fill in the attached application form in PDF format;
2. Send the documents via e-mail to ars.nautica.institute@gmail.com.

PAYMENT:

The applicants will receive timely communication about the payment details after admission to the Course Workshop.

APPLICATION DEADLINE:

The application deadline is 31st July 2019.

All the applicants will be notified about the admission to the course workshop by 5th August 2019.

REQUIREMENTS:

The Course Workshop ARS NAUTICA welcomes undergraduate, graduate and PhD students, and professionals interested in the underwater archaeological research, regardless of their professional background. Previous experience in documentation and research of underwater cultural heritage is welcomed, but not required.

The workshop is limited to 20 participants.

CERTIFICATE OF ATTENDANCE:

A certificate of attendance, signed by the rector of the University of Zadar, representative of the Inter-university Centre, and the course directors will be provided to all the participants which actively attended the full programme.

ABOUT THE LECTURER



KOTARO YAMAFUNE received his Bachelor of Arts degree in history from Hosei University in Tokyo in 2006. He enrolled in the Nautical Archaeology Program in the Anthropology Department at Texas A&M University in September 2009 and received his Master of Arts degree in August 2012. He continued his studies in the Texas A&M University Nautical Archaeology Program and earned his doctorate in May 2016. His research interests include shipbuilding in Medieval Europe and the European Age of Discovery, and ship reconstruction both manually and through the use of digital tools such as 3D modelling software. He also focuses on photogrammetric recording of submerged cultural heritage, including shipwreck sites. He expands his study interest to museology for nautical and maritime archaeology. In September 2016, he founded A.P.P.A.R.A.T.U.S. Llc. (*Agency of Photogrammetry and Photography for Archaeological Analysis on Terrestrial and Underwater Sites*), as its president. Currently he is helping both terrestrial and underwater archaeological projects and providing workshops in many countries using his photogrammetry skills.

PROGRAMME STRUCTURE

LECTURER: Kotaro Yamafune, A.P.P.A.R.A.T.U.S. Llc.

ASSISTANTS: Katarina Batur

OFFICIAL LANGUAGE: English

25 August 2019 Sunday	26 August 2019 Monday	27 August 2019 Tuesday	28 August 2019 Wednesday	29 August 2019 Thursday	30 August 2019 Friday	31 August 2019 Saturday	
	INTRODUCTION TO UNDERWATER PHOTOGRAMMETRY	ARCHAEOLOGICAL PHOTOGRAMMETRY	SKILLS ON ARCHAEOLOGICAL SITES	UNDERWATER PHOTOGRAMMETRY	CONVERTING 3D MODELS INTO ARCHAEOLOGICAL DATA		
Morning							
8:00 – 8:45 Breakfast							
Arrival of the participants	9:00 – 10:15 Welcome Speech Presentation of the Programme	9:00 – 10:15 Photogrammetry from Videos	9:00 – 10:15 How to create local coordinate system	9:00 – 10:15 Methodology for underwater photogrammetry	9:00 – 10:15 Generating Orthophotos	Departure of the participants	
	10:30 – 11:30 Introduction to Photogrammetric recording	10:30 – 11:30 How to Scale-Constrain 3D Models	10:30 – 11:30 Preparation for Recording	10:30 – 11:30 Camera Settings for Underwater Photogrammetry	10:30 – 11:30 Generating General Elevation Maps (GEMs)		
	11:45 – 13:15 Photography for Photogrammetry	11:45 – 13:15 How to Take Measurements from 3D models	11:45 – 13:15 Record a Simulated Archaeological Site	11:45 – 13:15 Record a Simulated (UW) Archaeological Site	11:45 – 13:15 Generating Sketch-like Drawings from Orthophotos		
	Lunch break						
	Afternoon						
	14:00 - 19:00 Photo Shooting Practice at Cavtat	14:00 - 19:00 Photo Shooting Practice at Cavtat	15:00 – 16:00 Processing Data	15:00 – 16:00 Processing Data	15:00 – 16:00 Generating Section Profiles in Rhinoceros		
			16:15 – 18:15 Sharing 3D Models on Webpage (Sketchfab)	16:15 – 18:15 Creating Underwater Local Coordinate System (Rhino)	16:15 – 18:15 Using Points Bases Deviation Analysis Software (CloudCompare)		
	Dinner						



GENERAL INFORMATION:

Venue:
Inter-University Centre
Don Frana Bulića 4, 20000 Dubrovnik, Croatia

Tel.: +385 20 413 626, 413 627
Fax: +385 20 413 628
e-mail: iuc@iuc.hr

FOR FURTHER INFORMATION PLEASE CONTACT :

Katarina Batur, kbatur@unizd.hr

