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## Welcome to 1<sup>st</sup> IMEKO TC19 International Workshop on *Metrology for the Sea*

*“Learning to measure sea health parameters”*

On behalf of the Organizing Committee, we cordially welcome you to the 1<sup>st</sup> IMEKO TC19 International Conference on Metrology for the Sea (MetroSea).

The Sea is the medium that allowed people to travel from one continent to another using vessels and even today despite the use of aircraft. It has been acting also as a great reservoir and source of foods for all living beings. However, for many generations it served as a landfill for depositing conventional and nuclear wastes, especially in its deep seabeds and there is a race to exploit minerals and resources, different from foods, encompassed in it. Its health is a very challenge for the survival of all humanity since it is one the most important environmental components targeted by the global warming.

So, *“Learning to measure sea health parameters”* is a challenge for the whole humanity. This is underlined by the growing interest for the marine sciences. In this field new technologies and analysis techniques have recently improved the combined use of numerical approach and metrology systems to get more detailed marine data. For example, advances in computer science, data acquisition and modelling, new spectrometric techniques, analysis and remote sensing have encouraged interactions among these scientific disciplines based on measurement data and marine data interpretations.

The benefits of a multidisciplinary approach have reduced the level of uncertainty in marine technical studies. The 1<sup>st</sup> IMEKO TC19 International Workshop on Metrology for the Sea aims to gather people who work in developing instrumentation and measurement methods for the sea. Attention is paid, but not limited to, new technology for sea environment monitoring, metrology-assisted production in sea industry, ship component measurement, sensors and associated signal conditioning for the sea, and calibration methods for electronic test and measurement for marine applications. It is also an “imprint” of IMEKO Technical Committee 19 which is dedicated to environmental measurement.

The first edition of *MetroSea* will be held at *University of Naples “Parthenope”*. It was an obvious choice, due the fact that this University is one of the most important and old Italian Institution dealing with the sea. As a matter of fact, *University of Naples “Parthenope”* was founded in 1920 as the *Royal Naval Technical Institute* of the Kingdom of Italy. Initially, its purpose was to be a “support” institute for the promotion of studies aimed at improving maritime economy and naval technology. In the 1930s it was further enlarged and improved, and its name was changed to *Istituto Universitario Navale*. Finally, after a deep and wide reformation in the last years it was transformed in *University of Naples “Parthenope”*.

We are sure that the universally recognized beauty of Naples will be a perfect frame for this prestigious conference. It is, in fact, a further occasion, not only to meet old friends and new people from all over the world, but, moreover, to engage with them a continuous comparison directed to make wider the views on the technological progress of *Metrology for the Sea*.

The *MetroSea* organization was a complex task due to the large and increasing interest of our research and application areas. Efforts from many people were required to shape the technical program, arrange



accommodation, manage the administrative aspects, and set up the social functions. We like to take this opportunity to thank all and each of them. We like also to thank the public and private organizations that supported the meeting in different ways. Special thank to Italian Navy for the official support to the event and the attending of Italian Navy experts to the Technical Program.

The *MetroSea* Technical Program consists of 16 oral, poster and demo sessions scheduled over two days. The technical program encompasses several events and activities. With the wide range of technical sessions covering the many fields of metrology for the sea we are happy to welcome you to the variety of technical presentations that await you this year.

Thanks to all of the Technical Program Committee members and the reviewers who have contributed to make this outstanding program possible. We received 92 abstracts from all over the world. We wish to highlight that the papers published on the Proceedings of the Workshop will be included in Scopus and Compendex data bases. All contributions have been peer reviewed on the basis of an abstract and acceptance was based on quality, originality and relevance. Accepted papers have been published in the Workshop Proceedings and expanded versions of presented papers are eligible for publication, on Measurement Journal (Elsevier) and Acta IMEKO.

The keynote speeches will be held by experts in the field of metrology for the sea; Prof. Michele Scardi, from Tor Vergata University Rome, Italy, will speak about *Measuring marine ecosystems: challenges from the Marine Strategy EU Directive*, Prof. Pierre-Marie Poulain, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, Italy will present *The New Frontiers in In-Situ Ocean Observing Systems*. We are honoured to have them as plenary speakers and thank them in advance for coming to our conference to share their knowledge and experiences with us.

Furthermore, attendees have the possibility to follow tutorials about the role of measurements for the sea that will be held on October 11. In particular, three sessions will be offered on:

- SATELLITE OCEANOGRAPHY, Maurizio Migliaccio, *University of Naples "Parthenope", Italy*;
- MULTIBEAM SWATH BATHYMETRY, FROM METHOD TO APPLICATION, Francesco Chiocci, *Sapienza University of Rome, Italy*;
- SURVEYING IN ITALY: NATIONAL STANDARDS, Nicola Marco Pizzeghello, *Italian Hydrographic Institute, Italian Navy, Italy*.

The technical programme includes a visit to the R/V Vettoria oceanographic boat of the *Stazione Zoologica Anton Dohrn* used for scientific research in coastal oceanography. It will be possible to see the onboard equipment used by researchers to study the physical, chemical and biological characteristics of the sea.

With the aim of providing a common ground for researches to share their findings about the metrology for the sea, the conference includes a significant number of Special Sessions. A first reason is that so many are the application fields of the metrology for the sea that a single track could have been too much dispersive. A second reason is that, in spite of a centralized research address definition, a spontaneous aggregation of well-focused themes has been gathered, with specific aim of providing a forum of dedicated debate very close to the single research field. Therefore, some application-oriented Special Sessions have been organized. We wish to thank the organizers of these Special Sessions for their cooperation and support to the conference organization.



Some Awards will be assigned;

- Best Paper Award, *The Giuseppe Bottiglieri Shipping Company S.p.A.* dedicates the Best Paper Award to the memory of Prof. Felice Cennamo. The award consists of a model of one of *Bottiglieri* naval vessels type Post -Panama bulkcarrier (cargo ships of 94000 tons capacity that may transit through the new Panama Canal).
- Best Paper Presented by a Young Researcher, this award is offered by *Rotary Club Napoli Posillipo D2100 – Italy*, it will be given for the best paper authored and presented by a researcher younger than 35 years in age.
- Best Poster Award, it will be assigned to a paper presented as a poster. The poster must be presented by one of its Authors. The award is sponsored by *CoNISMa*.
- Best Demo Award, To highlight the importance of the Demo Session, an award will be given for the best demo presentation. The award is sponsored by the *Italian Associations of researchers in the field of electrical and electronic measurements (GMEE) and mechanical and thermal measurements (GMMT)*.

The 1<sup>st</sup> International IMEKO TC19 Workshop on Metrology for the Sea is about to begin. You are now in a position to enjoy the fellowship of colleagues and experts and to pass free time in natural and artistic beauties. It is up to you to appreciate the conference worth! Be critical! We, metrologists, sea experts, engineers, colleagues, and friends, all know that this is the best way to improve quality, and to achieve lasting excellences.



**General Co-Chair**

Pasquale Daponte,  
*University of Sannio, Italy*



**General Co-Chair**

Giorgio Budillon,  
*University of Naples, Parthenope,  
 Italy*



**Technical Program Co-Chair**

Francesco Chiocci,  
*University of Roma "La Sapienza",  
 Italy*



**Technical Program Co-Chair**

Ennio Marsella,  
*IAMC-CNR, Naples, Italy*



## MetroSea 2017 Committee

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Aimé Lay-Ekuakille, *University of Salento, Italy*

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Pasquale Daponte, *University of Sannio, Italy*

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Daniele Contini, *ISAC - CNR, Italy*

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Ivana Durickovic, *University Paul Verlaine, France*

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Domenico Grimaldi, *University of Calabria, Italy*

Satoshi Ikezawa, *Earthquake Research Institute, Japan*

Marina Iorio, *IAMC, Italy*

Olfa Kanoun, *Chemnitz University of Technology, Germany*



Theodore Laopoulos, *Aristotle University of Thessaloniki, Greece*  
Martin Lloyd, *Farside Technology, United Kingdom*  
Sabino Maggi, *IRSA - CNR, Italy*  
Alessandro Massaro, *CNR-IMIP, Italy*  
Janusz Mindykowski, *Gdynia Maritime University, Poland*  
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Maurizio Torrente, *University of Sannio, Italy*  
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Jari Walden, *Finnish Meteorological Institute, Finland*  
Sunao Yamashita, *DKK-TOA Corporation, Japan*

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Luca De Vito, *University of Sannio, Italy*  
Maddalena Falco, *University of Sannio, Italy*  
Giannetta Fusco, *University of Naples Parthenope, Italy*  
Francesco Lamonaca, *University of Sannio, Italy*  
Gianluca Mazzilli, *University of Sannio, Italy*  
Agostino Meo, *University of Sannio, Italy*  
Francesco Picariello, *University of Sannio, Italy*  
Maria Riccio, *University of Sannio, Italy*  
Ioan Tudosa, *University of Sannio, Italy*

#### **LOCAL ARRANGEMENTS**



## MetroSea 2017 Keynote Speakers

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*Keynote Thursday, October 12, 2017*

### **The New Frontiers in In-Situ Ocean Observing Systems**

Pierre-Marie Poulain

*Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, Italy*



Dr. Pierre-Marie Poulain obtained his Ph. D. in Oceanography from the University of California San Diego in 1989. After a postdoc at the University of Miami, he worked as a physical oceanographer for a NATO research laboratory, for the Naval Postgraduate School and finally for an Italian state-funded research institute (OGS). Since his graduate studies Dr. Poulain's research activities have been focused on the monitoring of ocean circulation and water mass properties using mobile autonomous instruments, such as drifter, profiling floats and gliders. He has published the results on his studies on ocean dynamics in more than 100 research papers in peer-reviewed journals. At OGS, Dr. Poulain is coordinating the drifter and profiling float programs in the Mediterranean and Black Sea in order to guarantee an efficient and sustained observational array based on freely-drifting instruments.

Dr. Poulain is an operational partner of the Global Drifter Program since its infancy in the late 1980's. In 2014, Dr. Poulain was appointed as the Chairman of the Management Committee of the Euro-Argo ERIC, an European research infrastructure and important contributor to the international Argo program.



*Keynote Friday, October 13, 2017*

**Measuring marine ecosystems:  
challenges from the Marine Strategy EU Directive**

Michele Scardi

*Tor Vergata University of Rome, Italy*

*Vice President of CoNISMa*



Michele Scardi (Napoli, 11/1/1956) is associate professor of Ecology at the Tor Vergata University (Rome, Italy). He authored about 150 scientific papers and is a member of the Editorial Board of *Freshwater Biology* (Wiley), *Ecological Informatics* (Elsevier) and *Scientific Reports* (Nature Publishing Group). Moreover, he has also been a guest editor for *Ecological Modelling* (Elsevier).

From 2007 to 2011 he has been a member of the Italian National Scientific Committee for Antarctica and from 2016 is vice-president of CoNISMa. Since February 2012 he has been appointed as expert for the implementation of the Marine Strategy Framework Directive by the Italian Ministry of the Environment. His present research activities include ecological applications of neural networks and other machine learning techniques, phytoplankton primary production models, methods for assessment of ecosystem status and development and application of data analysis techniques in ecology.



## Technical Visit - Thursday, October 12, 2017

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*Visit the R/V Vettoria oceanographic boat of the Stazione Zoologica Anton Dohrn of Naples used for scientific research in coastal oceanography.*

*It will be possible to see the onboard equipment used by researchers to study the physical, chemical and biological characteristics of the sea.*

*The Research Vessel Vettoria is equipped with:*

- *GPS*
- *Radar*
- *Echo sounder*
- *VHF*
- *Multiparametric Probe SBE 911Plus*
- *Hydraulic portal for oceanographic instruments and sampling of planktonic and benthic communities*
- *Hydraulic winch with double drum*
- *Cable (1500 m) for multiparameter probes and samplers*
- *Automatic sampler Carousell SBE with 12 bottles of 10 liters*
- *Steel cord (600 m, 5 mm diameter)*
- *Wet laboratory for filtration and first processing of samples for chemical and biological analysis*



## Maps



### Conference Rooms

*University of Naples Parthenope*

Aula Magna; Hall n. 1; Hall n. 2; Hall n. 5

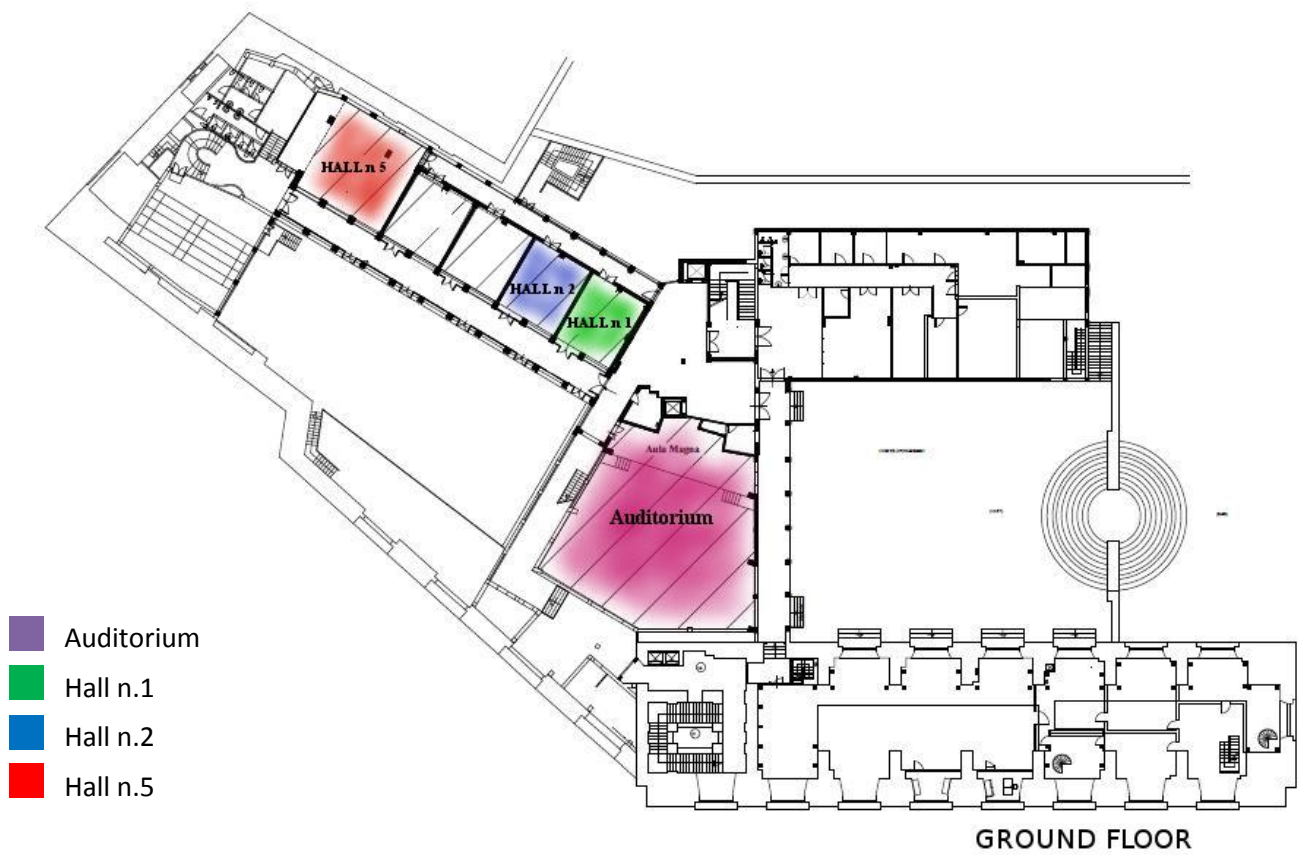
Via Ammiraglio Ferdinando Acton

Naples, Italy



## Planimetry

### University of Naples "Parthenope" - Ground Floor



## Awards

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### BEST PAPER AWARD

The *Giuseppe Bottiglieri Shipping Company S.p.A.* dedicates the Best Paper Award to the memory of Prof. Felice Cennamo.

The award consists of a model of one of *Giuseppe Bottiglieri Shipping Company S.p.A.* naval vessels type Post-Panama bulkcarrier (cargo ships of 94000 tons capacity that may transit through the new Panama Canal).

The Best Paper Award will be selected on the basis of the review process and on the paper presentation during the congress. The final assessment and selection criteria will be based on several key parameters, including: technical quality of the paper, authors' knowledge of the field, presentation effectiveness and clarity, engagement in substantive question & answer, etc.



### BEST PAPER PRESENTED BY A YOUNG RESEARCHER

To highlight the importance of the paper presented and authored by a young researcher, *Rotary Club of Napoli-Posillipo* offers an exclusive plaque to a researcher younger than 35 years in age.

Basis for Judging: Technical merit, originality, potential impact on the field, clarity of the written paper, and quality of the oral or other presentation.



### BEST POSTER AWARD

The Best Poster Award will be assigned to a paper, which is presented as a poster. The award is sponsored by *CoNISMa*.

The Best Poster will be selected on the basis of the review process and on an interview (by unidentified judges) during the poster sessions. The judges will assess the quality and clarity of the poster, as well as the effectiveness of the presenter explanations to the poster viewers. The poster must be presented by one of its Authors. The Authors interested in this award are kindly invited to put up their posters at the beginning of the Conference.



**CoNISMa**  
Consorzio Nazionale  
Interuniversitario  
per le Scienze del Mare

### BEST DEMO AWARD

To highlight the importance of the Demo Session, an award will be given for the best demo. The award is sponsored by *GMEE* and *GMMT*, the Italian Associations of researchers in the field of electrical and electronic measurements (*GMEE*) and mechanical and thermal measurements (*GMMT*).





## Social Functions

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### WELCOME PARTY

We are happy to invite MetroSea 2017 attendees to the Welcome Party on Wednesday October 11, 2017.

The Welcome Party will be organized at the *University of Naples "Parthenope"*, Via Ammiraglio Ferdinando Acton.

### GALA DINNER

We are happy to invite MetroSea 2017 attendees to social event: the **Gala Dinner** on Thursday October 12.

The Gala Dinner Ticket is included in Regular Registration Fee (Three Days). It can be purchased as "*Additional Ticket*" in the Registration Form or at Registration Desk.

The Gala Dinner will be held at the **Regina Margherita** restaurant located in Via Partenope 19 ([www.reginamargheritanapoli.it](http://www.reginamargheritanapoli.it)), very close to the conference venue and in the heart of the pedestrian area of the promenade of the city of Naples. We are sure you will enjoy the Neapolitan atmosphere and the best and famous pizza in the world!



## Accompanying Persons Program

The "Marine Turtles Research Centre" of the Stazione Zoologica Anton Dohrn is located in the Municipality of Portici. The structure is spread over 600 m<sup>2</sup> covered and 7000 m<sup>2</sup> outdoor and is an exceptional example of urban redevelopment.

The Center has advanced laboratories for environmental and biological analyzes, a veterinary and radiology clinic, a rich didactic exhibition, two multimedia rooms, and of course the areas dedicated to the treatment and rehabilitation of marine wounded turtles.



The Sea Turtle Recovery Centre started its research activities in 1983, in response to the growing number of specimens of sea turtles recovered stranded or debilitated or injured because of the interaction with human activities at sea.

The Centre is authorized by the "Ministero dell'Ambiente, del Territorio e del Mare" (Ministry of Environment) to handle sea turtles (otherwise prohibited according to the D.P.R. 357/97).

The Recovery Center is the regional representative for the conservation of sea turtles and collaborates with agencies and Italian and foreign institutions to promote the protection of these important flagship species.



The "Gulf Observatory of Naples" of the Stazione Zoologica Anton Dohrn for the study of the marine ecosystems of the Gulf of Naples represents the symbol of cultural revival aimed at environmental education for the recovery, proper management and safeguard of the marine environment. The primary objective of the Observatory is to contribute to the achievement of the Good Environmental State of National Interest Bonification Sites and the entire Gulf of Naples in compliance with European legislation known as the Marine Strategy adopted by the Italian State.





**Program Schedule - Wednesday, October 11, 2017**

<b>METROLOGY FOR THE SEA - TUTORIALS</b>	
<b>15:00 - 17:00</b>	<b>REGISTRATION</b> - <i>University of Naples "Parthenope", Via Ammiraglio Ferdinando Acton, 38</i>
<b>15.00 - 16:00</b>	<p><b>SESSION 1</b></p> <p><b>SATELLITE OCEANOGRAPHY</b></p> <p>Maurizio Migliaccio, <i>University of Naples "Parthenope"</i></p> <p><i>University of Naples "Parthenope" – Aula Magna</i></p>
<b>16:00 - 17:00</b>	<p><b>SESSION 2</b></p> <p><b>MULTIBEAM SWATH BATHYMETRY, FROM METHOD TO APPLICATION</b></p> <p>Francesco Chiocci, <i>Sapienza University of Rome, Italy</i></p> <p><i>University of Naples "Parthenope" – Aula Magna</i></p>
<b>17:00 - 18:00</b>	<p><b>SESSION 3</b></p> <p><b>SURVEYING IN ITALY: NATIONAL STANDARDS</b></p> <p>Nicola Marco Pizzeghello, <i>Italian Hydrographic Institute, Italian Navy, Italy</i></p> <p><i>University of Naples "Parthenope" – Aula Magna</i></p>
<b>19:30 - 22:00</b>	<p><b>WELCOME PARTY</b></p> <p><i>University of Naples "Parthenope"</i>  <i>Via Ammiraglio Ferdinando Acton, 38</i></p>



## Program Schedule - Thursday, October 12, 2017

<b>8:30 - 17:30</b>	<b>REGISTRATION</b> - University of Naples "Parthenope"			
<b>9:00 - 9:30</b>	<b>Welcome Addresses</b> - University of Naples "Parthenope" – Aula Magna			
<b>9:30 - 10:30</b>	<b>Invited Speech</b> - Pierre-Marie Poulain University of Naples "Parthenope" – Aula Magna			
<b>10:30 - 11:00</b>	<b>COFFEE BREAK</b> - University of Naples "Parthenope"			
	University of Naples "Parthenope" Hall n. 1	University of Naples "Parthenope" Hall n. 5	University of Naples "Parthenope" Hall n. 2	University of Naples "Parthenope"
<b>11:00 - 12:40</b>	General Session PART I	Multidisciplinary Observation Systems PART I	Autonomous Moving Monitoring Systems in Oceanography	Poster Session
<b>12:40 - 14:00</b>	<b>LUNCH</b> - University of Naples "Parthenope"			
<b>14:00 - 15:40</b>	Biological Measurements at Sea and in the Sea	ROUND TABLE Multidisciplinary Observation Systems	Visit to Research Vessel VETTORIA FIRST GROUP	
<b>15:40 - 16:00</b>	<b>COFFEE BREAK</b> - University of Naples "Parthenope"			
<b>16:00 - 17:40</b>	Underwater Measurement for 3D Characterization of Subsea Objects	Multidisciplinary Observation Systems PART II	Visit to Research Vessel VETTORIA SECOND GROUP	Exhibitors
<b>20:30 - 23:00</b>	<b>GALA DINNER</b> "PIZZERIA REGINA MARGHERITA" Via Partenope, 19 - Naples			





## Program Schedule - Friday, October 13, 2017

<b>8:30 - 16:30</b>	<b>REGISTRATION</b> - <i>University of Naples "Parthenope"</i>			
<b>9:00 - 10:00</b>	<b>Invited Speech</b> - Michele Scardi <i>University of Naples "Parthenope" - Aula Magna</i>			
	<i>University of Naples "Parthenope"</i> Hall n. 1	<i>University of Naples "Parthenope"</i> Hall n. 5	<i>University of Naples "Parthenope"</i>	
<b>10:00 - 11:40</b>	General Session PART II	Acquisition, Processing and Interpretation of Marine Geology Data PART I	Poster Session Demo Session Exhibitors	
<b>11.40 - 13.15</b>	<b>COFFEE BREAK - POSTER SESSION</b> - <i>University of Naples "Parthenope"</i>			
<b>13:15 - 14:20</b>	<b>LUNCH</b> - <i>University of Naples "Parthenope"</i>			
<b>14:20 - 14:40</b>	<b>AWARD CEREMONY</b> - <i>University of Naples "Parthenope" - Hall n. 5</i>			
<b>14:40 - 16:20</b>	Metrological Traceability of Oceanic Parameters PART I	Acquisition, Processing and Interpretation of Marine Geology Data PART II		
<b>16.20 - 16.40</b>	<b>COFFEE BREAK</b> - <i>University of Naples "Parthenope"</i>			
<b>16:40 - 18:20</b>	Metrological Traceability of Oceanic Parameters PART II	Acquisition, Processing and Interpretation of Marine Multibeam Data		
<b>18:20 - 18:30</b>	<b>CLOSING CEREMONY</b> - <i>University of Naples "Parthenope"</i>			



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## Wednesday, October 11 - Tutorials

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**15:00 - 17:00**

**REGISTRATION**

**Place:** *University of Naples "Parthenope", Via Ammiraglio Ferdinando Acton, 38*

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**15:00 - 17:00**

**TUTORIALS**

**Chair:** *Francesca Budillon, IAMC CNR, Italy*

**Room:** *Aula Magna, University of Naples "Parthenope"*

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**SESSION 1 - 15:00 - 16:00**

**SATELLITE OCEANOGRAPHY**

*Maurizio Migliaccio, University of Naples "Parthenope", Italy*

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**SESSION 2 - 16:00 - 17:00**

**MULTIBEAM SWATH BATHYMETRY, FROM METHOD TO APPLICATION**

*Francesco Chiocci, Sapienza University of Rome, Italy*

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**SESSION 3 - 17:00 - 18:00**

**SURVEYING IN ITALY: NATIONAL STANDARDS**

*Nicola Marco Pizzeghello, Italian Hydrographic Institute, Italian Navy, Italy*

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**19:30 - 22:00**

**WELCOME PARTY**

**Place:** *University of Naples "Parthenope"  
Via Ammiraglio Ferdinando Acton, 38*

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## Thursday, October 12 - Technical Sessions

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**8:30 - 17:30**

**REGISTRATION**

**Place:** *University of Naples "Parthenope", Via Ammiraglio Ferdinando Acton, 38*

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**9:00 - 9:30**

**Welcome Addresses**

**Room:** *University of Naples "Parthenope", Aula Magna*

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**9:30 - 10:30**

**Plenary Opening Session**

**Chair:** *Giorgio Budillon, University of Naples "Parthenope", Italy*

**Room:** *University of Naples "Parthenope", Aula Magna*

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**The New Frontiers in In-Situ Ocean Observing Systems**

Pierre-Marie Poulain

*Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Italy*

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**10:30 - 11:00**

**Coffee Break**

**Place:** *University of Naples "Parthenope"*

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**11:00 - 12:20**

**General Track – PART I**

**Chairs:** Pasquale Daponte, *University of Sannio, Italy*

Matias Carandell Widmer, *Universitat Politècnica de Catalunya, Spain*

**Room:** *University of Naples "Parthenope", Hall n.1*

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**11:00 Sea level variability in the Gulf of Genoa**

Paola Picco, *Italian Hydrographic Institute, Italy*

**11:40 Comparison between image analysis techniques for boat shape measurements**

Sofia Catalucci, *University of Nottingham, UK*

Roberto Marsili, *University of Perugia, Italy*

Michele Moretti, *University of Perugia, Italy*

Gianluca Rossi, *University of Perugia, Italy*

**12:00 A High Accuracy Attitude System for a Tailless Underwater Glider**

Enrico Petritoli, *Università degli Studi Roma Tre, Italy*

Fabio Leccese, *Università degli Studi Roma Tre, Italy*

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**11:00 - 12:40**

**Session on Multidisciplinary observation systems - PART I**

**Chairs:** Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Paolo Favali, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

**Room:** *University of Naples "Parthenope", Hall n.5*

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**11:00 Sea Surface Temperature monitoring in Italian Seas: analysis of long-term trends and short-term dynamics**

M. Picone, *ISPRA, CN-COS, Italy*

A. Orasi, *ISPRA, CN-COS, Italy*

G. Nardone, *ISPRA, CN-COS, Italy*

**11:20 Seasonal changes in coastal fish assemblages by multiparametric video observatory monitoring**



E. Fanelli, *ENEA Marine Environment Research Center, Italy*  
V. Sbragaglia, *Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB), Germany*  
E. Azzurro, *ISPRA STS, Italy*  
S. Marini, *ISMAR -CNR, Italy*  
Joaquin del Rio Fernandez, *Universitat Politècnica de Catalunya (UPC), Spain*  
D. Toma, *Universitat Politècnica de Catalunya (UPC), Spain*  
J. Aguzzi, *ICM-CSIC, Spain*

#### **11:40 Inter-comparison of HF radar wave measurements in the Malta-Sicily Channel**

Arianna Orasi, *Italian National Institute for Environmental Protection and Research, Italy*  
Marco Picone, *Italian National Institute for Environmental Protection and Research, Italy*  
Aldo Drago, *University of Malta, Malta*  
Fulvio Capodici, *University of Palermo, Italy*  
Adam Gauci, *University of Malta, Malta*  
Gabriele Nardone, *Italian National Inst. for Environmental Protection and Research, Italy*  
Roberto Inghilesi, *Italian National Institute for Environmental Protection and Research, Italy*  
Joel Azzopardi, *University of Malta, Malta*  
Anthony Galea, *University of Malta, Malta*  
Giuseppe Ciraolo, *University of Palermo, Italy*

#### **12:00 The Italian Fixed-point Observatory Network for marine environmental monitoring –IFON. State of the art and upgrades during the Italian flagship project RITMARE (2012 – 2016)**

M. Ravaioli, *ISMAR CNR, Italy*  
C. Bergami, *IBAF CNR, Italy*  
F. Riminucci, *Consorzio Proambiente Sc.r.l., CNR, Italy*  
S. Aracri, *Consorzio Proambiente Sc.r.l., CNR, Italy*  
S. Aliani, *ISMAR CNR, Italy*  
M. Bastianini, *ISMAR CNR, Italy*  
A. Bergamasco, *IAMC, Italy*  
C. Bommarito, *ENEA, Italy*  
M. Borghini, *ISMAR CNR, Italy*  
R. Bozzano, *ISSIA CNR, Italy*  
F. Brunetti, *ISMAR CNR, Italy*  
C. Cantoni, *ISMAR CNR, Italy*  
E. Caterini, *ISMAR CNR, Italy*  
V. Cardin, *Istituto Nazionale OGS, Italy*  
C. Cesarini, *CLU srl, Italy*  
R.R. Colucci, *ISMAR CNR, Italy*  
E. Crisafi, *IAMC, Italy*  
A. Crise, *Istituto Nazionale OGS, Italy*  
R. D'Adamo, *ISMAR CNR, Italy*  
C. Fanara, *Istituto Nazionale OGS, Italy*  
A. Giorgetti, *Istituto Nazionale OGS, Italy*  
F. Grilli, *ISMAR CNR, Italy*



L. Langone, *ISMAR CNR, Italy*  
M. Lipizer, *Istituto Nazionale OGS, Italy*  
M. Marini, *ISMAR CNR, Italy*  
S. Menegon, *ISMAR CNR, Italy*  
T. Minuzzo, *ISMAR CNR, Italy*  
M. Miserocchi, *ISMAR CNR, Italy*  
E. Partescano, *Istituto Nazionale OGS, Italy*  
E. Paschini, *ISMAR CNR, Italy*  
F. Pavesi, *IREA CNR, Italy*  
P. Penna, *ISMAR CNR, Italy*  
S. Pensieri, *ISSIA CNR, Italy*  
A. Pugnetti, *ISMAR CNR, Italy*  
F. Raichich, *ISMAR CNR, Italy*  
A.G. di Sarra, *ENEA, Laboratorio di Osservazioni ed Analisi della Terra e del Clima, Italy*  
A. Sarretta, *ISMAR CNR, Italy*  
K. Schroeder, *ISMAR CNR, Italy*  
T. Scirocco, *ISMAR CNR, Italy*  
A. Specchiulli, *ISMAR CNR, Italy*  
G. Stanghellini, *ISMAR CNR, Italy*  
A. Vetrano, *ISMAR CNR, Italy*

**12:20 Underwater acoustic calibration standards for frequencies below 1 kHz: current status of EMPIR “UNAC-LOW” project**

S. Buogo, *CNR-INSEAN, Italy*  
S. Mauro, *CNR-INSEAN, Italy*  
J.F. Borsani, *Istituto Superiore per la Protezione e la Ricerca Ambientale, Italy*  
S. Curcuruto, *Istituto Superiore per la Protezione e la Ricerca Ambientale, Italy*  
A. Biber, *TÜBİTAK-MAM, Underwater Acoustics Laboratory, Kocaeli, Turkey*  
A.C. Çorakçı, *TÜBİTAK-MAM, Underwater Acoustics Laboratory, Kocaeli, Turkey*  
A. Golick, *TÜBİTAK-MAM, Underwater Acoustics Laboratory, Kocaeli, Turkey*  
S. Robinson, *National Physical Laboratory, United Kingdom*  
G. Hayman, *National Physical Laboratory, United Kingdom*  
S. Barrera-Figueroa, *Dansk Fundamental Metrologi A/S, Denmark*  
M. Linné, *Totalförsvarets forskningsinstitut, Sweden*  
P. Sigray, *Totalförsvarets forskningsinstitut, Sweden*  
P. Davidsson, *Totalförsvarets forskningsinstitut, Sweden*



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**11:00 - 12:40**

**Session on Autonomous Moving Monitoring Systems in Oceanography**

**Chairs:** Pierre-Marie Poulain, *OGS, Italy*

Enrico Zambianchi, *University of Naples "Parthenope", Italy*

**Room:** *University of Naples "Parthenope", Hall 2*

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**11:00 An Autonomous Imaging System for Argo Floats**

Simone Marini, *Institute of Marine Sciences, National Research Council of Italy, Italy*

Lorenzo Corgnati, *Institute of Marine Sciences, National Research Council of Italy, Italy*

Carlo Mantovani, *Institute of Marine Sciences, National Research Council of Italy, Italy*

Mauro Bastianini, *Institute of Marine Sciences, National Research Council of Italy, Italy*

Ennio Ottaviani, *On Advanced Industrial Research s.r.l., Italy*

Emanuela Fanelli, *3Marine Environment Research Centre, Italy*

Jacopo Aguzzi, *Instituto de Ciencias del Mar, Spain*

Annalisa Griffa, *Institute of Marine Sciences, National Research Council of Italy, Italy*

Pierre Marie Poulain, *National Institute of Oceanography and Applied Geophysics, Italy*

**11:16 Underwater gliders to monitor coastal and open sea processes**

E. Mauri, *OGS, Italy*

Z. Kokkini, *OGS, Italy*

R. Gerin, *OGS, Italy*

Pierre Marie Poulain, *OGS, Italy*

**11:32 Algerian Basin Circulation Unmanned Survey – ABACUS: Glider missions to monitor Mediterranean water characteristics and relevant mesoscale features during falls 2014-2016**

Yuri Cotroneo, *Università degli Studi di Napoli "Parthenope", Italy*

Giuseppe Aulicino, *Università degli Studi di Napoli "Parthenope", Italy*

Simon Ruiz, *Instituto Mediterráneo de Estudios Avanzados, Spain*

Ananda Pascual, *Instituto Mediterráneo de Estudios Avanzados, Spain*

Antonio Sanchez Roman, *Instituto Mediterráneo de Estudios Avanzados, Spain*

Giannetta Fusco, *Università degli Studi di Napoli "Parthenope", Napoli, Italy*

Marc Torner, *Balearic Islands Coastal Observing and Forecasting System, Spain*

Emma Heslop, *Balearic Islands Coastal Observing and Forecasting System, Spain*

Giorgio Budillon, *Università degli Studi di Napoli "Parthenope", Italy*

Joaquin Tintoré, *Balearic Islands Coastal Observing and Forecasting System, Spain*

**11:48 Monitoring Temperature, Salinity and Oxygen in Marginal Seas with Argo Floats**

Pierre Marie Poulain, *OGS, Italy*

Giulio Notarstefano, *OGS, Italy*

Massimo Pacciaorni, *OGS, Italy*

**12:04 Detect the drogue presence of SVP drifters from the wind slippage**

Milena Menna, *OGS, Italy*



Pierre-Marie Poulain, *OGS, Italy*  
Antonio Bussani, *OGS, Italy*  
Riccardo Gerin, *OGS, Italy*

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**12:20 ISME trends: Autonomous Surface and Underwater Vehicles for Geoseismic Survey**

Gianluca Antonelli, *ISME - University of Cassino and Southern Lazio, Italy*  
Filippo Arrichiello, *ISME - University of Cassino and Southern Lazio, Italy*  
Andrea Caiti, *ISME - University of Pisa, Italy*  
Giuseppe Caslino, *ISME - University of Genova, Italy*  
Giovanni Indiveri, *ISME - University of Salento, Italy*  
Lorenzo Pollini, *ISME - University of Pisa, Italy*  
Enrico Simetti, *ISME - University of Genova, Italy*

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**12:40 - 14:00**

**LUNCH**

**Place:** *University of Naples "Parthenope"*

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**14:00 - 16:00**

**Session on Biological Measurements at Sea and in the Sea**

**Chairs:** Raffaella Casotti, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Gérald Grégori, *Aix Marseille Université, France*

**Room:** *University of Naples "Parthenope", Hall 2*

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**14:00 Loggerhead Turtles as Oceanographic Sampling Platforms**

Sandra Hochscheid, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Marco Girardello, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Fulvio Maffucci, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Monica Blasi, *Associazione Filicudi Wildlife, Italy*

**14:20 A new automated flow cytometer for high frequency in situ characterisation of heterotrophic microorganisms and their dynamics in aquatic ecosystems**

Tina Silovic, *Aix Marseille Université, France*

Gérald Grégori, *Aix Marseille Université, France*

Mathilde Dugenne, *Aix Marseille Université, France*

Melilotus Thyssen, *Aix Marseille Université, France*

François Calendreau, *Aix Marseille Université, France*

Thibaut Cossart, *Aix Marseille Université, France*

Harrie Kools, *Cytobuoy, Netherlands*

George Dubelaar, *Cytobuoy, Netherlands*

Michel Denis, *Aix Marseille Université, France*





**14:40 Spatial distribution of phytoplankton communities in the English Channel, at sub-mesoscale, by applying innovative automated approaches**

Arnaud Louchart, *Université du Littoral-Côte d'Opale, Wimereux, France*

Fabrice Lizon, *Université de Lille, Wimereux, France*

Alain Lefebvre, *Laboratoire Environnement Ressources, IFREMER LER/BL, France*

Fanny Bouchaud, *Université du Littoral-Côte d'Opale, Wimereux, France*

Guillaume Wacquet, *Université du Littoral-Côte d'Opale, Wimereux, France*

Claire Dedécker, *Université du Littoral-Côte d'Opale, Wimereux, France*

Jessica Delarbre, *Université du Littoral-Côte d'Opale, Wimereux, France*

Hugues Wattiez, *Université du Littoral-Côte d'Opale, Wimereux, France*

Luis Felipe Artigas, *Université du Littoral-Côte d'Opale, Wimereux, France*

**15:00 Phytoplankton dynamics by autonomous high-frequency flow cytometry from a floating buoy in the Gulf of Naples**

Mark A Van Dijk, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Augusto Passarelli, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Raffaella Casotti, *Stazione Zoologica Anton Dohrn of Naples, Italy*

**15:20 Real-Time microbial concentrations by automated on-line flow cytometry for marine coastal monitoring**

Raffaella Casotti, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Cecilia Balestra, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Mark Van Dijk, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Augusto Passarelli, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Jürg Sigrist, *Department of Environmental Microbiology, Switzerland*

Frederik Hammes, *Department of Environmental Microbiology, Switzerland*

**15:40 Bringing single-cell-analysis to the sea with CytoSense technology**

George Dubelaar, *CytoBuoy b.v.*

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**14:00 - 15:40**

**ROUND TABLE - Multidisciplinary observation systems**

**Chairs:** Giorgio Budillon, *University of Naples "Parthenope", Italy*

Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Paolo Favali, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

**Room:** *University of Naples "Parthenope", Hall 5*

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**14:00 - 15:40**

**Technical Visit to Research Vessel VETTORIA - Group 1**

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**15:40 - 16:00**

**Coffee Break**

**Place:** *University of Naples "Parthenope"*

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**16:00 - 17:40**

**Session on Underwater Measurement for 3D Characterization of Subsea Objects**

**Chair:** Enrico Primo Tomasini, *Università Politecnica delle Marche, Italy*

**Room:** *University of Naples "Parthenope", Hall n.1*

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**16:00 Evaluation and comparison of non-contact measurement techniques for the observation and shape reconstruction of sessile benthic organisms**

Rachele Napolitano, *Università Politecnica delle Marche, Italy*

Massimiliano Guarneri, *ENEA, Italy*

Maria Cristina Gambi, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Enrico Primo Tomasini, *Università Politecnica delle Marche, Italy*

**16:20 Improved Operational Efficiency using Dynamic Underwater Laser Mapping**

Sean Elmar, *2G Robotics Inc, Canada*

**16:40 Procedures and Technologies for 3D Reconstruction with Divers of Underwater Archaeological Sites and Marine Protected Areas**

Luca Panebianco, *Università Politecnica delle Marche, Italy*

Silvia Zingaretti, *Università Politecnica delle Marche, Italy*

Nicolò Ciuccoli, *Università Politecnica delle Marche, Italy*

Corentin Altepe, *Università Politecnica delle Marche, Italy*

S. Murat Egi, *Galatasaray University, Turkey*

Fiorenza Micheli, *DAN EUROpe Reseach Department, Italy*

David Scardozzi, *Università Politecnica delle Marche, Italy*

**17:00 Development of a laser scanner for analysis of vast submerged archaeological areas**

Barbara Davidde Petriaggi, *Istituto Superiore per la Conservazione ed il Restauro, Italy*

Gabriele Gomez de Ayala, *Italy*



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**16:00 - 17:40**

**Session on Multidisciplinary observation systems - PART II**

**Chairs:** Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*  
Paolo Favali, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

**Room:** *University of Naples "Parthenope", Hall n.5*

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**16:00 Obsea, a marine sensors testing site for metrology**

Matias Carandell Widmer, *Universitat Politècnica de Catalunya, Spain*  
Albert Garcia-Benad, *Universitat Politècnica de Catalunya, Spain*  
Joaquin del Rio Fernandez, *Universitat Politècnica de Catalunya, Spain*

**16:20 Project Humpback Anglerfish**

Luca Greco, *INGV – Centro Nazionale Terremoti, Italy*  
Giovanni Vitale, *INGV – Centro Nazionale Terremoti, Italy*  
Antonino D'Alessandro, *INGV– Centro Nazionale Terremoti, Italy*  
Salvatore Scudero, *INGV– Centro Nazionale Terremoti, Italy*  
Francesco Croce, *INGV– Centro Nazionale Terremoti, Italy*

**16:40 Recent developments in measuring small amplitude and slow seafloor vertical displacements using Bottom Pressure Recorders**

Francesco Chierici, *Istituto di Radioastronomia - INAF, INGV, Italy*  
Sergio Guardato, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
Gian Paolo Donnarumma, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
Claudio Martino, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
L. Beranzoli, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*  
G. Iannaccone, *Istituto Nazionale di Geofisica e Vulcanologia, Italy*

**17:00 European Multidisciplinary and Water-Column Observatory - European Research Infrastructure Consortium (EMSO ERIC): Challenges and opportunities for Strategic**

Paolo Favali, *Istituto Nazionale Geofisica e Vulcanologia, Italy*

**17:20 Status and results from cabled hydrophone arrays deployed in deep sea off East Sicily (EMSO ERIC node)**

Paolo Favali, *Istituto Nazionale Geofisica e Vulcanologia, Italy*

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**16:00 - 17:40**

**Technical Visit to Research Vessel Vettorica - Group 2**

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**20:30 - 23:00**

**GALA DINNER**

**"PIZZERIA REGINA MARGHERITA"**

*Via Partenope, 19 - Naples*

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## Friday, October 13 - Technical Sessions

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**09:00 - 16:10**

**REGISTRATION**

**Place:** *University of Naples "Parthenope", Via Ammiraglio Ferdinando Acton, 38*

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**09:00 - 10:00**

**Plenary Opening Session**

**Chair:** *Maria Rosaria Senatore, University of Sannio, Local CoNISMa Responsible, Italy*

**Room:** *University of Naples "Parthenope" - Aula Magna*

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**Measuring marine ecosystems: challenges from the Marine Strategy EU Directive**

Prof. Michele Scardi

*Tor Vergata University of Rome, Italy*

*Vice President of CoNISMa*

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**10:00 - 11:00**

**General Track - PART II**

**Chair:** *Salvatore Gaglione, University of Naples "Parthenope", Italy*

**Room:** *University of Naples "Parthenope", Hall n.1*

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**10:00 Vessel attitude estimation by camera sensors**

*Antonio Angrisano, Giustino Fortunato University, Italy*

*Silvio Del Pizzo, Parthenope University of Naples, Italy*

*Salvatore Gaglione, Parthenope University of Naples, Italy*

*Salvatore Troisi, Parthenope University of Naples, Italy*

*Mario Vultaggio, Giustino Fortunato University, Italy*

**10:20 The role of sea surface temperature on extreme meteorological events over Liguria**

*F. Cassola, University of Genova, Italy*

*F. Ferrari, University of Genova, INFN, CINFAI Consortium, Italy*

*A. Mazzino, University of Genova, INFN, CINFAI Consortium, Italy*

*M. M. Miglietta, CNR-ISAC, Italy*



**10:40 Enhanced pseudorange weighting scheme using local redundancy**

Antonio Angrisano, *Giustino Fortunato University, Italy*

Silvio Del Pizzo, *Parthenope University of Naples, Italy*

Salvatore Gaglione, *Parthenope University of Naples, Italy*

Salvatore Troisi, *Parthenope University of Naples, Italy*

Mario Vultaggio, *Giustino Fortunato University, Italy*

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**10:00 - 11:40**

**Session on Acquisition, Processing and Interpretation of Marine Geology Data – PART I**

**Chairs:** Claudio Pellegrini, *National Research Council, Italy*

Elena Romano, *Isprambiente, Italy*

**Room:** *University of Naples "Parthenope", Hall n. 5*

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**10:00 Gathering different marine geology data (seismics, acoustics, sedimentological) to investigate active fluid seepage (AFS) in the southern region of the central Mediterranean Sea**

Daniele Spatola, *University of Malta, Malta*

Aaron Micallef, *University of Malta, Malta*

Attilio Sulli, *University of Palermo, Italy*

Gualtiero Basilone, *Institute for Coastal Marine Environment, CNR, Italy*

**10:20 Morpho-sedimentary setting and evolution of Marettimo Valley (Egadi Islands, Sicily) during middle-late Quaternary: interaction between sea level changes and oceanographic circulation**

Mauro Agate, *University of Palermo, Italy*

Stella Tamburrino, *Institute for Coastal Marine Environment, CNR, Italy*

Attilio Sulli, *University of Palermo, Italy*

Francesco Placenti, *Institute for Coastal Marine Environment, CNR, Italy*

Mario Sprovieri, *Institute for Coastal Marine Environment, CNR, Italy*

Claudio Lo Iacono, *National Oceanographic Centre, UK*

Salvatore Passaro, *Institute for Coastal Marine Environment, CNR, Italy*

**10:40 Using marine controlled-source electromagnetics to map the occurrence of offshore groundwater: Canterbury Basin, New Zealand**

Bradley Allen Weymer, *GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany*

Marion Jegen-Kulcsar, *GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany*

Katrin Schwalenberg, *Bundesanstalt für Geowissenschaften und Rohstoffe, Germany*

Sebastian Hölz, *GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany*

Zahra Faghih, *GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany*

Shuangmin Duan, *GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany*

Aaron Micallef, *University of Malta, Malta*

Joshu Mountjoy, *National Institute of Water and Atmospheric Research Ltd, New Zealand*



**11:00 Measuring growth structure of reef frameworks in Mediterranean deep-water coral-topped mounds**

Alessandra Savini, *University of Milano-Bicocca, Italy*  
Marco Taviani, *ISMAR, CNR, Italy*  
Fabio Marchese, *University of Milano-Bicocca, Italy*  
Agostina Vertino, *University of Milano-Bicocca, Italy*  
Cesare Corselli, *University of Milano-Bicocca, Italy*  
Marie-Claire Fabri, *IFREMER, France*  
Andrè Freiwald, *Forschungsinstitut Senckenberg, Germany*  
Jozee Sarrazin, *IFREMER, France*

**11:20 Signal denoising using the Stationary Wavelet Decomposition**

Eleonora Stefanutti, *Università degli Studi Roma Tre, Italy*  
Fabio Bruni, *Università degli Studi Roma Tre, Italy*

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**11:40 - 13:15 POSTER SESSION**

**Chairs:** Fabio Leccese, *Università degli Studi Roma Tre, Italy*  
Giannetta Fusco, *University of Naples "Parthenope", Italy*  
**Place:** *University of Naples "Parthenope"*

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**PS1 A High Accuracy Navigation System for a Tailless Underwater Glider**

Enrico Petritoli, *Università degli Studi Roma Tre, Italy*  
Fabio Leccese, *Università degli Studi Roma Tre, Italy*

**PS2 Instrumentation and Geotechnical Measurements on Submarine Contaminated Sediments**

Francesco Adamo, *Polytechnic University of Bari, Italy*  
Gregorio Andria, *Polytechnic University of Bari, Italy*  
Federica Cotecchia, *Polytechnic University of Bari, Italy*  
Attilio Di Nisio, *Polytechnic University of Bari, Italy*  
Anna Maria Lucia Lanzolla, *Polytechnic University of Bari, Italy*  
Daniela Miccoli, *Polytechnic University of Bari, Italy*  
Francesca Sollecito, *Polytechnic University of Bari, Italy*  
Maurizio Spadavecchia, *Polytechnic University of Bari, Italy*  
Francesco Todaro, *Polytechnic University of Bari, Italy*  
Claudia Vitone, *Polytechnic University of Bari, Italy*

**PS3 Exploring and monitoring deep-sea using underwater video system**

Gianfranco D'Onghia, *Università degli Studi di Bari Aldo Moro, Italy*  
Francesca Capezzuto, *Università degli Studi di Bari Aldo Moro, Italy*  
Roberto Carlucci, *Università degli Studi di Bari Aldo Moro, Italy*



Angela Carluccio, *Università degli Studi di Bari Aldo Moro, Italy*  
Porzia Maiorano, *Università degli Studi di Bari Aldo Moro, Italy*  
Michele Panza, *Università degli Studi di Bari Aldo Moro, Italy*  
Pasquale Ricci, *Università degli Studi di Bari Aldo Moro, Italy*  
Letizia Sion, *Università degli Studi di Bari Aldo Moro, Italy*  
Angelo Tursi, *Università degli Studi di Bari Aldo Moro, Italy*

**PS4 The northern Adriatic sea: a long term ecological site and an ecological observatory – structure and perspectives**

Mauro Bastianini, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Francesco Acri, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Sonia Albertazzi, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Caterina Bergami, *Istituto di Scienze Marine, Istituto di Biologia Agro-ambientale e Forestale, Italy*  
Fabrizio Bernardi Aubry, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Elisa Camatti, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Lucilla Capotondi, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Bruno Cataletto, *Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Italy*  
Alessandro Coluccelli, *Università Politecnica delle Marche, Italy*  
Paola Del Negro, *Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Italy*  
Patrizia Giordano, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Federica Grilli, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Marina Lipizer, *Istituto Nazionale di Oceanografia e di Geofisica Sperimentale, Italy*  
Mauro Marini, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Annalisa Minelli, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Alessandro Oggioni, *Istituto per il Rilevamento Elettromagnetico dell'Ambiente, Italy*  
Marco Pansera, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Pierluigi Penna, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Mariangela Ravaioli, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Francesco Riminucci, *Istituto di Scienze Marine, Consorzio Proambiente, Italy*  
Alessandro Sarretta, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Giuseppe Stanghellini, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Cecilia Totti, *Università Politecnica delle Marche, Italy*  
Giorgio Socal, *Istituto di Scienze Marine, CNR-ISMAR, Italy*  
Alessandra Pugnetti, *Istituto di Scienze Marine, CNR-ISMAR, Italy*

**PS5 Coastal monitoring of chemical-physical parameters with fixed platforms: Gulf of Naples and Bagnoli Bay**

Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*  
Raffaella Casotti, *Stazione Zoologica Anton Dohrn of Naples, Italy*  
Augusto Passarelli, *Stazione Zoologica Anton Dohrn of Naples, Italy*





- PS6 Precision, accuracy and sources of errors in multibeam data acquisition and processing for a correct interpretation of the backscatter data (both from seafloor and water column)**  
Sara Innangi, *Istituto per l'Ambiente Marino Costiero, IAMC-CNR, Napoli, Italy*  
Renato Tonielli, *Istituto per l'Ambiente Marino Costiero, IAMC-CNR, Napoli, Italy*
- PS7 Morphometric measures to assess the maturity of the submerged drainage basins. The case of the Taranto Canyon upper reach**  
A. Meo, *University of Sannio, CoNISMa, Benevento, Italy*  
F.L. Chiocci, *University Sapienza, CoNISMa, Rome, Italy*  
M.R. Senatore, *University of Sannio, CoNISMa, Benevento, Italy*
- PS8 Morphological and morfometric analysis of bed forms in the Bonifacio channel (Mediterranean occidental)**  
Antonietta Meleddu, *University of Cagliari, Italy*  
Paolo Emanuele Orrù, *University of Cagliari, Italy*  
Giacono Deiana, *University of Cagliari, Italy*
- PS9 Discovery and survey of complex pockmarks, hydrate pingoes, and fluid flow pipes at Nyegga, offshore mid-Norway**  
Martin Hovland, *Tech Team Solutions, Norway*
- PS10 Uncertainty of Alkalinity Measurement Values**  
Barbara Velasco Aneses, *Universidade de Lisboa, Portugal*  
Cristina Maria Oliveira, *Universidade de Lisboa, Portugal*  
Ricardo Jorge Silva, *Universidade de Lisboa, Portugal*  
Maria Filomena Camoes, *Universidade de Lisboa, Portugal*
- PS11 Grain Size Data Analysis of Marine Sediments, From Sampling to Measuring and Classifying. A Critical Review**  
Elena Romano, *Italian Institute for Environmental Protection and Research, Italy*  
Maria Celia Magno, *Italian Institute for Environmental Protection and Research, Italy*  
Luisa Bergamin, *Italian Institute for Environmental Protection and Research, Italy*
- PS12 Reliable High Resolution Physical Properties Correlation in sediments as a Powerful Tool for Geological Exploitation and Natural Hazar Issues**  
Marina Iorio, *IAMC CNR, Italy*  
Antimo Angelino, *IAMC CNR, Italy*  
Francesca Budillon, *IAMC CNR, Italy*  
Donatella D. Insinga, *IAMC CNR, Italy*  
Agostino Meo, *University of Sannio, Italy*  
Maria Rosaria Senatore, *University of Sannio, Italy*



**PS13 A Hierarchical Monitoring Program for the Characterization of Terrestrial Discharge into Coastal Water**

Claudia Ferrara, *University of Naples Parthenope, Italy*  
Massimiliano Lega, *University of Naples Parthenope, Italy*  
Giannetta Fusco, *University of Naples Parthenope, Italy*  
Paul Bishop, *University of Rhode Island, US*  
Theodore Endreny, *College of Environmental Science and Forestry, US*

**PS14 Multi-parametric Sensor Network for Water Quality Monitoring**

Ján Šaliga, *Technical University of Kosice, Slovakia*  
Imrich Andráš, *Technical University of Kosice, Slovakia*  
Linus Michaeli, *Technical University of Kosice, Slovakia*  
Dušan Kocur, *Technical University of Kosice, Slovakia*  
Pavol Galajda, *Technical University of Kosice, Slovakia*  
Miloš Drutarovský, *Technical University of Kosice, Slovakia*  
Ludmila Macekova, *Technical University of Kosice, Slovakia*

**PS15 Monitoring system for the sea: analysis of meteo, wave and current data**

Elvira Armenio, *Polytechnic University of Bari, Italy*  
Francesca De Serio, *Polytechnic University of Bari, Italy*  
Michele Mossa, *Polytechnic University of Bari, Italy*  
Diana De Padova, *Polytechnic University of Bari, Italy*

**PS16 High resolution with small budget: the “GeoDive” method for detailed 3D reconstruction of submerged morphologies and related measurements**

Giovanni Gaglianone, *Sapienza University of Rome, Italy*  
Jacopo Crognale, *Sapienza University of Rome, Italy*  
Carlo Esposito, *Sapienza University of Rome, Italy*

**PS17 Dielectric constant determination using bistatic ground-penetrating radar: a case study at the Colombaia marine archeological area, Trapani, Italy**

Vincenzo Di Fiore, *Institute for Coastal Marine Environment, CNR, Italy*  
Elena Coppola, *Università di Napoli Federico II, Italy*  
Giuseppe Cavuoto, *Institute for Coastal Marine Environment, CNR, Italy*  
Nicola Pelosi, *Institute for Coastal Marine Environment, CNR, Italy*  
Michele Punzo, *Institute for Coastal Marine Environment, CNR, Italy*  
Daniela Tarallo, *Institute for Coastal Marine Environment, CNR, Italy*  
Giorgio Tranchida, *Institute for Coastal Marine Environment, CNR, Italy*



**PS18 Predictability of sea wave anomalous (microtsunamis modeling) by submarine landslides applied to Cirò Marina coast along the Calabro Ionian margin**

Vincenzo Di Fiore, *Institute for Coastal Marine Environment, URT open Marina Lab, CNR, Italy*

Lucio Amato, *Tecno In SpA, URT open Marina Lab, CNR, Italy*

Giuseppe Cavuoto, *Institute for Coastal Marine Environment, CNR, Italy*

Ennio Marsella, *Institute for Coastal Marine Environment, URT open Marina Lab, CNR, Italy*

Michele Punzo, *Institute for Coastal Marine Environment, CNR, Italy*

Daniela Tarallo, *Institute for Coastal Marine Environment, CNR, Italy*

**PS19 Application of X-Band Wave Radar for coastal dynamic analysis: case test of Bagnara Calabria (south Tyrrhenian Sea, Italy)**

Michele Punzo, *Institute for Coastal Marine Environment, CNR, Italy*

Giuseppe Cavuoto, *Institute for Coastal Marine Environment, CNR, Italy*

Vincenzo Di Fiore, *Institute for Coastal Marine Environment, CNR, Italy*

Daniela Tarallo, *Institute for Coastal Marine Environment, CNR, Italy*

Giovanni Ludeno, *Institute for Electromagnetic Sensing of the Environment, CNR, Italy*

Rosanna De Rosa, *University of Calabria, Italy*

Giuseppe Cianflone, *University of Calabria, Italy*

Rocco Dominici, *University of Calabria, Italy*

Michele Iavarone, *Institute for Coastal Marine Environment, CNR, Italy*

Fabrizio Lirer, *Institute for Coastal Marine Environment, CNR, Italy*

Nicola Pelosi, *Institute for Coastal Marine Environment, CNR, Italy*

Laura Giordano, *Institute for Coastal Marine Environment, CNR, Italy*

Antonio Natale, *Institute for Electromagnetic Sensing of the Environment, CNR, Italy*

Ennio Marsella, *Institute for Coastal Marine Environment, CNR, Italy*

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**11:40 - 13:15**

**DEMO SESSION**

**Place: University of Naples "Parthenope"**

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**DEMO1 Real-time view of oceanographic data from continuous monitoring systems**

Fabio Conversano, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Augusto Passarelli, *Stazione Zoologica Anton Dohrn of Naples, Italy*

Cosimo Vestito, *Stazione Zoologica Anton Dohrn of Naples, Italy*

**DEMO2 Drones for Metrology for the Sea**

Pasquale Daponte, *University of Sannio, Italy*

Francesco Picariello, *University of Sannio, Italy*

Maria Riccio, *University of Sannio, Italy*



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**13.15 - 14:20**

**LUNCH**

**Place:** *University of Naples "Parthenope"*

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**14.20 - 14:40**

**AWARD CEREMONY**

**Place:** *University of Naples "Parthenope", Hall n. 5*

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**14:40 - 16:20**

**Session on Metrological Traceability of Oceanic Parameters - PART I**

**Chairs:** *Michela Segà, Istituto Nazionale di Ricerca Metrologica (INRiM), Italy*

*Francesca Rolle, Istituto Nazionale di Ricerca Metrologica (INRiM), Italy*

**Room:** *University of Naples "Parthenope", Hall 1*

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**14:40 JPI Oceans and the European Marine Sensor Calibration Action - Keynote Lecture**

*George Petihakis, Institute of Oceanography, Hellenic Centre for Marine Research, Greece*

*Anastasios M. Lekkas, Norwegian University of Science and Technology, Norway*

**15:00 Carbon Dioxide Determination in Atmosphere and Seawater: Approaches for the Comparability of Measurement Results**

*Francesca Rolle, Istituto Nazionale di Ricerca Metrologica – INRiM, Italy*

*Michela Segà, Istituto Nazionale di Ricerca Metrologica – INRiM, Italy*

**15:20 Ocean acidification: an emerging metrological challenge**

*Daniela Stoica, Laboratoire National de Métrologie et d'Essais, France*

*Florence Salvétat, Institut Français de Recherche pour l'exploitation de la Mer, France*

*Paola Fisticaro, Laboratoire National de Métrologie et d'Essais, France*

**15:40 Uncertainty evaluation of CTD measurements: a metrological approach to water-column coastal parameters in the Gulf of La Spezia area**

*G. Raiteri, ENEA - Marine Environment Research Centre, Italy*

*A. Bordone, ENEA - Marine Environment Research Centre, Italy*

*T. Ciuffardi, ENEA - Marine Environment Research Centre, Italy*

*F. Pennechi, INRiM - Istituto Nazionale di Ricerca Metrologica, Italy*

**16:00 Calibration of compass and tilt sensors of currentmeters and currents profilers**

*M. Le Menn, Service Hydrographique et Océanographique de la Marine, France*

*A. Lusven, Service Hydrographique et Océanographique de la Marine, France*

*E. Bongiovanni, Service Hydrographique et Océanographique de la Marine, France*

*P. Le Du, Service Hydrographique et Océanographique de la Marine, France*

*D. Rouxel, Service Hydrographique et Océanographique de la Marine, France*

*L. Pacaud, Service Hydrographique et Océanographique de la Marine, France*



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**14:40 – 16:20**

**Session on Acquisition, Processing and Interpretation of Marine Geology Data - PART II**

**Chairs:** Alessandra Savini, *University of Milan – Bicocca, Italy*

Daniele Spatola, *University of Malta, Italy*

**Room:** *University of Naples "Parthenope", Hall 5*

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**14.40 Grain Size Analysis: A Comparison Between Laser Granulometer and Sedigraph**

Maria Celia Magno, *Italian Institute for Environmental Protection and Research, Italy*

Francesco Venti, *Italian Institute for Environmental Protection and Research, Italy*

Giovanni Gaglianone, *Sapienza University of Rome, Italy*

Giancarlo Pierfranceschi, *Italian Institute for Environmental Protection and Research, Italy*

Elena Romano, *Italian Institute for Environmental Protection and Research, Italy*

**15:00 Seismotectonics in the North-Western Sicily Continental Margin: implications for Geohazard assessment**

Attilio Sulli, *University of Palermo, Italy*

Elisabetta Zizzo, *University of Palermo, Italy*

Maurizio Gasparo Morticelli, *University of Palermo, Italy*

**15:20 Integrated geophysical techniques to image short- to very short-term ground deformation associated with unrest at coastal calderas: a case study from the Pozzuoli Bay, Campi Flegrei, South Italy**

Marco Sacchi, *Institute for Coastal and Marine Environment, CNR, Italy*

Fabio Matano, *Institute for Coastal and Marine Environment, CNR, Italy*

Salvatore Passaro, *Institute for Coastal and Marine Environment, CNR, Italy*

**15:40 Comparison of Gravity and Vibro Corer for Acquisition of Environmental Data in Highly Impacted Areas. The Case of Augusta Harbor (Eastern Sicily, Italy)**

Elena Romano, *Italian Institute for Environmental Protection and Research, Italy*

Maria Celia Magno, *Italian Institute for Environmental Protection and Research, Italy*

Luisa Bergamin, *Italian Institute for Environmental Protection and Research, Italy*

Antonella Ausili, *Italian Institute for Environmental Protection and Research, Italy*

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**16:20 - 16:40**

**Coffee Break**

**Place:** *University of Naples "Parthenope"*

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**16:40 – 18:20**

**Session on Metrological Traceability of Oceanic Parameters - PART II**

**Chairs:** Michela Segà, *Istituto Nazionale di Ricerca Metrologica (INRiM), Italy*

Francesca Rolle, *Istituto Nazionale di Ricerca Metrologica (INRiM), Italy*

**Room:** *University of Naples "Parthenope", Hall 1*

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**16:40 BIPM, EURAMET and MeteoMet Initiatives - Keynote Lecture**

Andrea Merlone, *Istituto Nazionale di Ricerca Metrologica, Italy*

**17:00 Verification of the metrological Reliability of Standard Seawater Calibration**

Steffen Seitz, *Physikalisch-Technische Bundesanstalt, Germany*

**17:20 Metrological Approach to Seawater pH**

Maria Filomena Camões, *Universidade de Lisboa, Portugal*

Barbara V. Anes, *Universidade de Lisboa, Portugal*

Cristina M. Oliveira, *Universidade de Lisboa, Portugal*

Ricardo B. Silva, *Universidade de Lisboa, Portugal*

**17:40 Traceability of pHT values of equimolar TRIS buffered artificial seawater solutions in brackish waters**

Frank Bastkowski, *Physikalisch-Technische Bundesanstalt, Germany*

Beatrice Sander, *Physikalisch-Technische Bundesanstalt, Germany*

Steffen Seitz, *Physikalisch-Technische Bundesanstalt, Germany*

Jens Daniel Müller, *Leibniz Institute for Baltic Sea Research Warnemünde, Germany*

**18:00 Traceable Sea Temperature measurements performed by Optical fibers**

C. García Izquierdo, *Centro Español de Metrología, Spain*

A. Garcia-Benadí, *Research group SARTI, UPC, Spain*

P. Corredera, *Instituto de Óptica, Spain*

D. del Campo, *Centro Español de Metrología, Spain*

S. Hernandez, *Centro Español de Metrología, Spain*

J. del Río Fernandez, *Research group SARTI, UPC, Spain*

M. Nogueres-Cervera, *Research group SARTI, UPC, Spain*

C. Pulido de Torres, *Instituto de Estructura de la Materia, Spain*



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**16:40 - 18:20**

**Session on Acquisition, Processing and Interpretation of Multibeam Data**

**Chairs:** Daniele Casalbore, *Sapienza University of Rome, Italy*

Giacomo Deiana, *University of Cagliari, Italy*

Sara Innangi, *IAMC Naples, CNR, Italy*

Agostino Meo, *University of Sannio, Italy*

**Room:** *University of Naples "Parthenope", Hall 2*

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**16:40 Using geomorphometric techniques to assess spatial distribution and volume of coralligenous bioconstructions (Mediterranean Sea)**

Fabio Marchese, *University of Milano - Bicocca, Italy*

Valentina Alice Bracchi, *University of Milano - Bicocca, Italy*

Daniela Basso, *University of Milano - Bicocca, Italy*

Cesare Corselli, *University of Milano - Bicocca, Italy*

Alessandra Savini, *University of Milano - Bicocca, Italy*

**17:00 On the use of morphometric indicators to improve and simplify the interpretation of multibeam swath bathymetric data: case studies from volcanic and non-volcanic settings**

Salvatore Passaro, *Institute for Coastal and Marine Environment, CNR, Italy*

Guido Ventura, *Institute for Coastal and Marine Environment, CNR, Italy*

**17:20 Repeated bathymetric surveys as a fundamental tool to measure rapid seafloor variations in geologically-active areas: examples from Southern Italian coastlines**

Daniele Casalbore, *Sapienza University of Rome, Italy*

**17:40 The seafloor geomorphology of Boka Kotorska Bay**

Giovanni Bortoluzzi, *Istituto Scienze Marine, CNR, Italy*

Federico Giglio, *Istituto Scienze Marine, CNR, Italy*

Marco Ligi, *Istituto Scienze Marine, CNR, Italy*

Fabrizio Del Bianco, *Istituto Scienze Marine, CNR; Proambiente Scrl, Italy*

Valentina Ferrante, *Istituto Scienze Marine, CNR; Proambiente Scrl, Italy*

Luca Gasperini, *Istituto Scienze Marine, CNR, Italy*

Mariangela Ravaioli, *Istituto Scienze Marine, CNR, Italy*

**18:00 A tool for a fast, semi-automatic cleaning of multibeam swath bathymetric records from spikes**

Salvatore Passaro, *Institute for Coastal and Marine Environment, CNR, Italy*



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**18:20 - 18:30**

**CLOSING CEREMONY**

**Room:** *University of Naples "Parthenope", Aula Magna*

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