



The Second Vietnam Symposium  
on Advances in Offshore Engineering

# SUSTAINABLE ENERGY AND MARINE PLANNING

UNDER THE AUSPICES OF THE ISSMGE (TC-308, TC-209) AND VSSMGE

OCTOBER 24  
2022  
HO CHI MINH CITY  
VIETNAM



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VSOE2021 – The Second Vietnam Symposium on Advances in Offshore Engineering  
 Sustainable Energy and Marine Planning  
 24 October 2022, Ho Chi Minh City, Vietnam

<https://vsoe2021.sciencesconf.org/>

<p><i>Organisers</i></p> 	<p><i>Patronages</i></p> <p>The Ministry of Natural Resources and Environment (MONRE)              The Vietnam National University Ho Chi Minh City (VNUHCM)</p>	<p><i>Under the Auspices of:</i></p> 
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## VENUE

<p><b>Morning Session (Oct 24<sup>th</sup>)</b>  <a href="https://oisp.hcmut.edu.vn/en/">https://oisp.hcmut.edu.vn/en/</a></p>  <p>268 Ly Thuong Kiet Street, Ward 14, District 10, Ho Chi Minh City, Vietnam.</p>	<p><b>Lunch and Afternoon Session (Oct 24<sup>th</sup>)</b>  <a href="https://saigon.newworldhotels.com/en/">https://saigon.newworldhotels.com/en/</a></p>  <p>76 Le Lai Street, District 1, Ho Chi Minh City, Vietnam</p>
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## CONTENTS

<b>VENUE</b> .....	2
<b>INTRODUCTION</b> .....	4
<b>PROGRAM</b> .....	5
<b>SPONSORS</b> .....	6
<b>KEYNOTE &amp; INVITED SPEAKERS</b> .....	7
<b>PRESENTATIONS</b> .....	11
Accelerating transition to net zero through ocean-based solutions: lessons learned and good practice.....	12
Planning, policy and integration for sustainable development of offshore wind energy in Vietnam 2022 - 2050 .....	13
Innovative research to support offshore renewable energy .....	14
Data-driven ground models: the road to fully-integrated site characterization and design .	15
Vietnam OSW project development: key policy and framework issues .....	16
From nearshore to offshore – opportunities and challenges .....	18
Innovation within offshore site investigation .....	19
Offshore wind power: the potential renewable energy & remarkable aspects.....	20
Offshore wind energy challenges and solutions: a few lessons from nearshore wind power projects in Vietnam .....	21
Installation risks and opportunities for future WTG foundations .....	22
Potential development of floating offshore wind turbine in Vietnam offshore .....	23
AI-based framework to predict wave-induced settlement of offshore wind turbines.....	24
Role of geotechnics in risk management of offshore windfarm projects .....	25
Investigation of the long-term cyclic behaviour of monopile foundation by impact and vibratory installation .....	26
Optimisation of capacity predictions for driven Piles performance in carbonate silts for offshore structures in the Arabian Gulf.....	27
Experimental investigation of wave scattering around a large vertical circular cylinder.....	28
Case studies on mitigating pile foundation refusals .....	29
Tra Vinh No.3 windfarm: CBOP package - lessons learned.....	30
Highlights from R&D on innovative monopile installation and decommissioning.....	31

## INTRODUCTION

Following the success of the first Vietnam Symposium on Advances in Offshore Engineering (VSOE2018), the second Symposium, [VSOE2021](#), which was delayed due to the COVID-19, will be held in Ho Chi Minh City, Vietnam on October 24, 2022. The second VSOE event is organised by the Association of Vietnamese Scientists and Experts ([AVSE Global](#)) in collaboration with Ho Chi Minh City University of Technology ([HCMUT](#)) and the Vietnam Administration of Seas and Islands ([VASI](#)). The event is held in parallel with the Joint International Conference on Environment, Earth Science and Sustainability ([ICES](#)).

With a focus on the theme of "Sustainable Energy and Marine Planning," VSOE2021 aims to enhance the sustainable use of our marine resources, ensure the health of the ecosystem, and effectively manage marine activities, including energy production and infrastructure.

VSOE2021 continues to provide a platform for all participants to exchange knowledge and recent experiences in offshore engineering, technology innovations, and marine spatial planning. Our goal is to achieve economic, reliable, and sustainable solutions for offshore energy development and ecosystem-based management of the marine environment. VSOE2021 intends to bring together researchers, practitioners, policymakers, and entrepreneurs to discuss and promote technological and policy changes towards renewable energy. Additionally, it aims to generate business opportunities in offshore energy, both domestically in Vietnam and globally.

We have received a tremendous amount of support from a diverse group of participants worldwide. During the first phase, we received more than 170 abstracts, and in the second phase, 100 full papers were submitted. Following a rigorous review process, with each paper being evaluated by at least two relevant experts, we have accepted 60 papers. These papers have been published online by the international publisher Springer as a volume in the Lecture Notes in Civil Engineering series, indexed by SCOPUS.

We would like to acknowledge the wonderful support of the scientific committee and the invited experts, who generously dedicated their valuable time and effort to review the papers. We are also grateful for the support from our sponsors: FECON Corporation (Vietnam), NUCE (Vietnam), Sarathy Geotech (SGES) (India) and CTE WIND (Vietnam).

You are cordially invited to attend VSOE at [HCMUT premises](#) (morning session), and the [New World Saigon Hotel](#) (afternoon session) on October 24, 2022.

We believe that the symposium will provide attendees with valuable and up-to-date knowledge from experts on topics including offshore engineering, technological innovations, and offshore wind.

For registration and further details, please visit our website: <https://vsoe2021.sciencesconf.org/>

We wish you good health, success and prosperity.

***Dr Hong DOAN (EDF, France) & Prof. Van Thang LE (HCMUT, Vietnam)  
& Dr Khoa D.V. HUYNH (NGI, Norway)***

*On behalf of the VSOE Organising and Scientific Committees*

*Website: <https://vsoe2021.sciencesconf.org/>*

*E-mail: [vsoe@avseglobal.org](mailto:vsoe@avseglobal.org)*

## PROGRAM

<b>8h00 onwards</b>	REGISTRATION (24-Oct-2022 @HCM Uni. of Technology)
<b>8h30</b>	Welcome & Opening Address: VSOE/AVSE + HCM Uni. of Technology + VASI + Trent Uni. + IIES Director
<b>8h30</b>	Keynote: Representatives from MONRE and from MOIT (TBC)
<b>8h50</b>	Keynote : Ambassador Hilde Solbakken, The Norwegian Ambassador to Vietnam <i>Accelerating transition to net zero through ocean-based solutions: lessons learned and good practice</i>
<b>9h05</b>	Keynote : Prof. Ong Choon Nam, Saw Swee Hock School of Public Health, National University of Singapore <i>Multidisciplinary Research for a Sustainable Environment</i>
<b>9h50</b>	BREAK / EXHIBITION / POSTER SESSION (@HCM Uni. of Technology)
<b>10h00</b>	Keynote: Prof. Margaret Graham, The University of Edinburgh
<b>10h45</b>	Keynote: Ha Duong Minh, Vietnam Initiative for Energy Transition (VIET) <i>Planning, policy and integration for sustainable development of offshore wind energy in Vietnam 2022 - 2050</i>
<b>11h15</b>	Photo sessions, Exhibitions, Poster and Coffee Break (@HCM Uni. of Technology)
<b>11h30</b>	TRANSPORT TO NEW WORLLD SAIGON HOTEL & LUNCH
<b>13h00</b>	PLENARY SESSION & PANEL DISCUSSION (New World Saigon Hotel - Club Boardroom)
<b>13h00</b>	Keynote : Prof. Phil Watson, The University of Western Australia <i>Innovative research to support offshore renewable energy</i>
<b>13h20</b>	Keynote: Maarten Vanneste, Norwegian Geotechnical Institute <i>Data-driven ground models: the road to fully-integrated site characterization and design</i>
<b>13h45</b>	Panel Discussion: Vietnam Offshore Energy  Moderators: Hang Dao, Clean Energy Investment Accelerator Vietnam & Ha-Duong Minh, VIET Denzel Eades, Managing Director, Pioneer International Consulting, Singapore Dung Vu Viet, Director, Power Plant Operation and Management Center, PECC2 Riccardo Felici, Country Manager, OWC Vietnam David Donaghy, Technical Manager - Geotechnics, Ocean Infinity Dien Tran Quoc, Deputy General Director, PECC3 Hung Nguyen Viet, CEO, CTV Wind
<b>15h15</b>	BREAK

<b>15h30</b>	<b>TECHNICAL PRESENTATIONS (New World Saigon Hotel - Club Boardroom)</b>
<b>15h30</b>	Daniele Bertalot, Geowynd, UK <i>Installation risks and opportunities for future WTG foundations</i>
<b>15h40</b>	Pham Thanh Dam, Duy Tan University <i>Potential Development of Floating Offshore Wind Turbine in Vietnam offshore</i>
<b>15h50</b>	Amir Moghaddam, School of Engineering, RMIT University <i>An AI-based framework for predicting liquefaction-induced deformation of Offshore Wind Turbines</i>
<b>16h00</b>	Indrasenan Thusyanthan, Managing Director Gavin & Doherty Geosolutions, Ireland <i>Role of geotechnics in risk management of Offshore Windfarm Projects</i>
<b>16h10</b>	Le Viet Hung, Technische Universität Berlin, Germany <i>Investigation of the long-term cyclic behaviour of monopile foundation by impact and vibratory installation</i>
<b>16h20</b>	Muhammad Bilal Mumtaz, Fugro Survey Middle East (UAE) <i>Optimisation of Predictions for Driven Piles Performance in Carbonate Silts for Offshore Structures</i>
<b>16h30</b>	Mai Cao Tri, Hanoi University of Civil Engineering <i>Experimental Investigation of Wave Scattering Around a Large Vertical Circular Cylinder</i>
<b>16h40</b>	Sumanth Haribhat Chandrashekhar, Sarathy Geotech and Engineering services pvt Ltd., India <i>Case studies on Mitigating Pile Foundation Refusals</i>
<b>16h50</b>	Pham Duc Huyen, FECON, Vietnam <i>Tra Vinh no.3 Windfarm: CBOP Package - Lessons Learned</i>
<b>17h00</b>	Ahmed Elkadi, Research Program Manager: Energy Transition, Deltares, Netherlands <i>Highlights from R&amp;D on innovative monopile installation and decommissioning</i>
<b>17h15</b>	Closing Ceremony: VSOE/AVSE + HCM Uni. of Technology + VASI Representatives
<b>18h45</b>	<b>GALA DINNER (Floating Restaurant Indochina Junk - Cruise along Saigon River)</b>

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## KEYNOTE & INVITED SPEAKERS

### Her Excellency Ms Hilde Solbakken

Ambassador of Norway to Vietnam



#### Professional experience

8 Sept 2022-present: Ambassador of Norway to the Socialist Republic of Vietnam

Sept 2020-Aug 2022: Ambassador of Norway to Myanmar

Aug 2018-Aug 2020: Head of Project, Our Ocean Conference in Oslo, Oct 2019, Ministry of Foreign Affairs, Oslo

Aug 2014-Jul 2018: Minister Counsellor/Deputy Head of Mission, Jakarta

Aug 2010-Jul 2014: Minister Counsellor/Deputy Head of Mission, Nairobi

Dec 2007-Jul 2010: Senior Advisor, Section for Peace and Reconciliation Ministry of Foreign Affairs, Oslo

Nov 2009-Feb 2010: Minister Counsellor, Norway's Permanent Delegation to the United Nations, New York (temporary substitution)

Aug-2005-Dec 2007: Senior Advisor, International Department Office of the Prime Minister, Oslo

Aug 2002-Jul 2005: First Secretary, Washington DC

Aug 1999-Jul 2002: First Secretary, Amman

Aug 1997-Jul 1999: Trainee, Ministry of Foreign Affairs, Oslo

#### Education

Oct 1995-Sept 1996 London School of Economics and Political Science, MSc(Econ) Development Studies

Oct 1992-June 1995 London School of Economics and Political Science, BSc(Econ) International Relations

### Atila Incecik

Professor of Offshore Engineering Associate Principal and Executive Dean of the Faculty of Engineering, University of Strathclyde, United Kingdom



Prof. Atila Incecik is Associate Principal, Executive Dean of Engineering and Professor of Offshore Engineering at the University of Strathclyde, Glasgow.

Professor Incecik has been responsible for the development of design and analysis tools and model testing of marine and offshore engineering systems during his research activities both in industry and academia. His current research includes development of dynamic load and response prediction tools for ships, offshore platforms and marine renewable energy devices.

Professor Incecik is Research Manager of Industrial Doctoral Centre for Offshore Renewable Energy (IDCORE) and an advisory professor at Shanghai Jiao Tong University, a visiting professor at Harbin Institute of Technology and Chair Professor at Zhejiang University. Professor Incecik is Editor-in-Chief of Ocean Engineering Journal. In May, 2019 Professor Incecik was awarded an Honorary Doctorate by Chalmers University of Technology in recognition of his research on green shipping and environmental sustainability..

## Maarten Vanneste

Principal Geoscientist Offshore Energy at Norwegian Geotechnical Institute, Norway



Maarten Vanneste graduated in Physics (1995) at the University of Ghent (Belgium), and received a PhD in Marine Geology and Geophysics at the same university (2000). He then joined the Marine Geology and Geophysics research unit at the University of Tromsø, Norway, as a Post-doc Researcher. Since 2006, he is a Principal Geoscientist in the Offshore Energy business area at the Norwegian Geotechnical Institute (NGI, Oslo). His research interests include, amongst others, offshore geohazard assessments, integrated site characterization, geophysical mapping techniques (e.g., shear and surface wave seismics), quantitative seismic interpretation, gas hydrates and fluid flow. He also works intensively on developing site-specific ground models, using a data-driven approach for the integration of geophysical, geological and geotechnical data and information. He is Secretary of the ISO Technical Panel 19901-10 on Marine Geophysical Investigations, and Chairman of the bi-annual conference series Applied Shallow Marine Geophysics, initiated in 2014, under the umbrella of the EAGE Near-Surface Geoscience Division. He has (co-)authored over 70 papers in peer-reviewed journals and conference proceedings, and is peer-reviewer for many technical journals covering various fields of Geosciences and well as international R&D projects.

## Mark Randolph

Professor of Civil Engineering in the Centre for Offshore Foundation Systems, University of Western Australia, Australia



Mark Randolph holds the Fugro Chair in Geotechnics in the Centre for Offshore Foundation Systems at the University of Western Australia. His two main research interests are piled foundations and offshore geotechnics, co-authoring books in each area: *Piling Engineering*, now in its third edition, and *Offshore Geotechnical Engineering*. His research has embraced centrifuge model testing, numerical analysis and plasticity solutions, with a primary on developing simplified models of analysis that are suitable for application. These have included various pieces of software for analysis and design of piles and pile groups.

Professor Randolph interacts closely with industry, both in research and through his role as Technical Advisor within Fugro AG. He is a Fellow of several learned academies, including the Royal Society and the Australian Academy of Science, and in 2013 was elected Scientist of the Year in Western Australia. In 2015 he received an honorary doctorate from ETH Zurich.



## Ha-Duong Minh

Senior scientist at Centre National de la Recherche Scientifique, France



Dr. Ha-Duong Minh is senior scientist at Centre National de la Recherche Scientifique, France. As international expert on energy, climate change, society, economics and uncertainty, he was co-awarded the Nobel Prize for Peace in 2007 as lead author of Assessment Report 4 and 5 of the IPCC. He founded the Vietnam Initiative for the Energy Transition (VIET) quasi-independent think tank in August 2018.

## Sung-Ryul Kim

Professor, Department of Civil and Environmental Engineering, Seoul National University, Korea



Professor Sung-Ryul Kim holds B.S. (1996), M.S. (1998) and Ph.D. (2003) in civil engineering from Seoul National University. He began his career with the faculty of Department of Civil Engineering at Dong-A University in 2005. He later joined the faculty of Department of Civil and Environmental Engineering at Seoul National University in 2017.

His researches focused on the foundation design including offshore suction bucket foundations, foundations in deep soft deposits, and aseismic design of foundations. He has studied the short and long-term stability of the suction bucket foundations by performing various numerical simulations and model tests. He has also worked on the design of deep foundations under the negative skin friction and the dynamic soil-pile-structure interactions by performing pile loading tests, numerical simulations and shaking table model tests. He has published numerous journal articles related to the foundation designs.

Professor Sung-Ryul Kim is currently the Chair of the Technical Committee for Foundation Design in Korean Geotechnical Society and the Technical Committee for Aseismic Design of Geotechnical Structures in the Earthquake Engineering Society of Korea. He served as the Editor in Chief of the Journal of Korean Geotechnical Society from 2017 to 2020. He is currently a Senior Editor of the Journal of Korean Society of Civil Engineers(KSCE). He has received professional awards including the 2007 Young Research Award from the Korean Geotechnical Society, Excellent Paper Award from the Korean Federation of Science and Technology Societies and Presidential Award from KSCE.

## Quoc Tuan Tran

Professor, CEA-LITEN, National Institute for Solar Energy (INES), France



Prof. Quoc-Tuan TRAN received his PhD degree in Electrical Engineering and his “Habilitation à Diriger des Recherches” degree (Dr. Habil) from the Grenoble Institute of Technology (Grenoble-INP), France, in 1993 and 2000, respectively. He is actually Professor at the INSTN (Paris Saclay University) and International Expert at the CEA (Atomic Energy and Alternative Energies Commission), Scientific Manager for Smart Grids at the CEA LITEN/INES (National Institute for Solar Energy) and Teacher at the INSTN (Paris Saclay University), the National Polytechnic Institute of Grenoble, Grenoble-Alpes University and the Polytechnic

Institute of Paris. His research interests are in the fields of smart-grid, microgrid, power system, renewable energy, and energy management and control. He holds 8 patents, is (co-)author of seven books, and author of more than 200 publications in journals and conference proceedings. He has supervised more than 50 PhD students. He has realized and piloted more than 50 projects. He is senior member IEEE.

## Bernard Casey

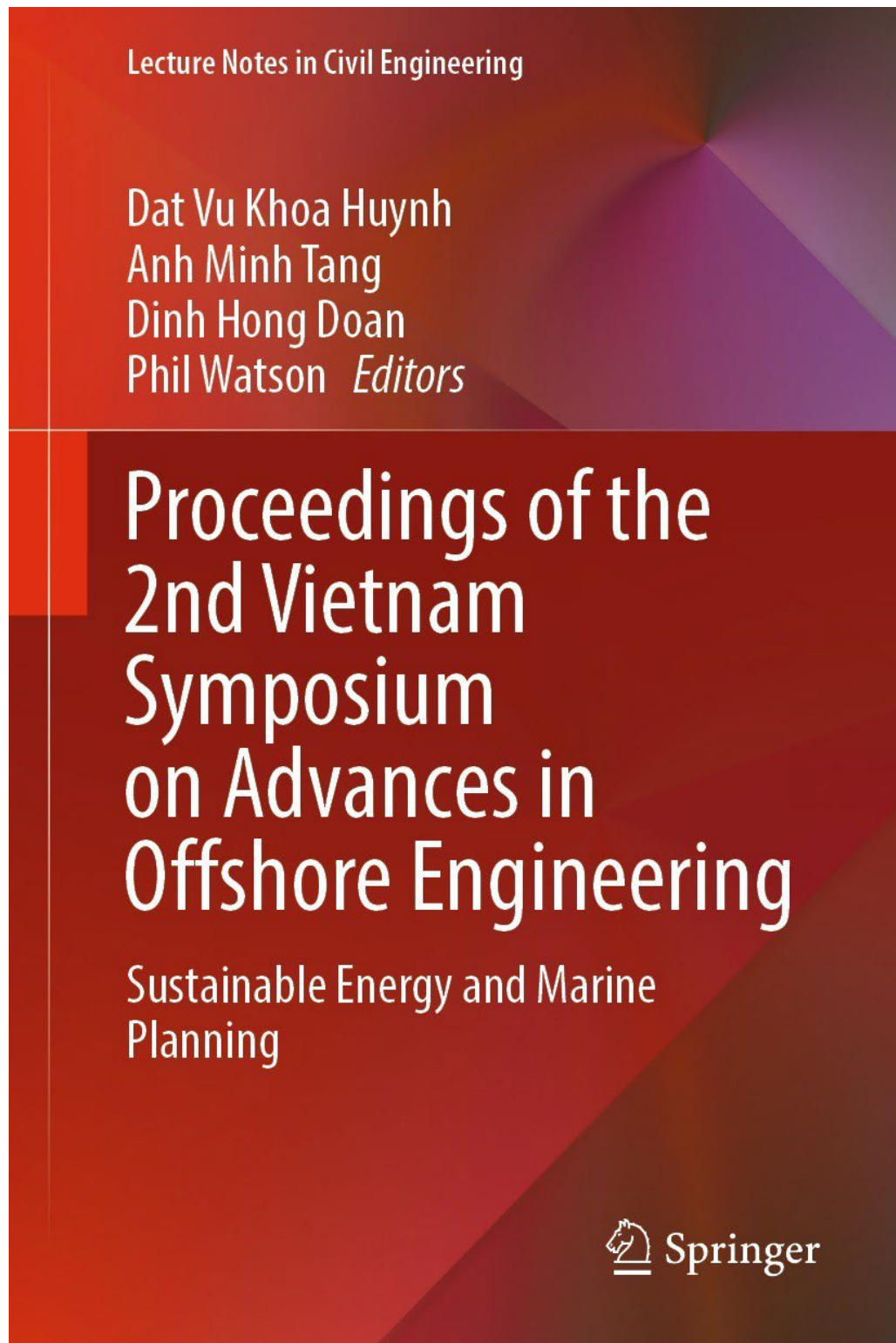
Development Director at Mainstream Renewable Power, Ho Chi Minh City, Vietnam



Bernard is Project Director for the flagship 1400MW offshore wind farm being developed by Mainstream Renewable Power in joint venture with the Phu Cuong group in Soc Trang Province, Vietnam. He graduated in civil engineering from University College Dublin, Ireland and has a master’s degree in soil mechanics from Imperial College London. Since graduation, he has more than 30 years experience in the power industry, including onshore and offshore wind, some of which was spent with ESB International in both consulting engineer and EPC Contractor roles. Bernard has been with Mainstream Renewable Power for 12 years and prior to the current role in Vietnam was Head of Offshore Engineering in the Mainstream

London office. As Head of Offshore Engineering he responsible for technical direction of Mainstream’s 5.6GW offshore wind portfolio in UK and Germany.

## PRESENTATIONS



<https://link.springer.com/book/10.1007/978-981-16-7735-9>