

International Symposium on Marine Engineering Geology

Qingdao, China, 21-24 October 2016

Sponsored by



Marine Engineering Geology Commission (C34), International Association for Engineering Geology and the Environment (IAEG)



Ocean Work Commission, Engineering Geology Committee, Geological Society of China

Hosted by



Ocean University of China



Shandong Provincial Key Laboratory of Marine Environment and Geological Engineering



Laboratory for Marine Geology, Qingdao National Laboratory for Marine Science and Technology

Supported by

National Natural Science Foundation of China

The First Institute of Oceanography, SOA

Guangzhou Marine Geological Survey

China National Offshore Oil Corporation Research Institute

Institute of Rock and Soil Mechanics, CAS

Qingdao Research Institute of Marine Geology

Shengli Oil Production Plant, Shengli Oilfield Sub-Company

Zhejiang University

Tsinghua University

Tongji University

Dalian University of Technology

Nanjing Tech University

Tianjin University



Invitation

Dear colleagues,

With the flourishing exploitation and development of the ocean oil and gas engineering, port engineering, submarine communication engineering as well as the coastal reclamation engineering, quite a number of engineering geological problems have been encountered in the process of planning, construction and service in coastal and submarine regions. In order to make sure the rational development of marine engineering geology, the International Symposium on Marine Engineering Geology (ISMEG 2016) will be held in Qingdao, China on 21-24 October, 2016. The theme of this symposium is "Marine Engineering Geology and Geo-environmental safety". ISMEG 2016 aims to gather academic scientists, leading engineers, industrial researchers and students to exchange their ideas, experiences and share their research results about marine engineering geology.

Welcome to Qingdao in 2016!

Prof. Yonggang Jia

Director of Shandong Provincial Key Laboratory of Marine Environment and Geological Engineering
Chairman of Marine Engineering Geology Commission, IAEG

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Topics

The tentative topics of symposium as follows

1 Engineering characteristics of marine soil

Conveners: Qing Yang (gyang@dlut.edu.cn) Yuxia Hu (yuxia.hu@uwa.edu.au)

The engineering characteristics of marine soil are distinct from that of terrestrial soil due to its unique composition, fabric, and environment of sedimentation. The shore line deposits are sands on beaches and finer soil particles in lagoons and on tidal flats. The deep sea floor is covered mainly by brown clays and calcareous and siliceous oozes. Terrigenous deposits are derived from land; whereas, pelagic sediments settle from the water alone and contain the shells and skeletal remains of marine organisms and plants.

- Geotechnical properties of marine soil
- Micro-structures of marine soil
- Constitutive relationship of marine soil and numerical modeling
- Calcareous sand/coral sand and challenging soil

2 Regional engineering geology and offshore geohazards

Conveners: Guoxing Chen (gxchen@njtech.edu.cn) Qicheng Sun (qcsun@tsinghua.edu.cn)
Roger Urgeles (urges@icm.csic.es)

Offshore geohazards are found in most parts of the ocean and are always related to geological conditions and geological processes, either recent or past. Important offshore geohazards include slope instability, submarine mass movements (e.g. submarine landslide), pore pressure phenomena (e.g. seabed liquefaction) and seismicity.

- Investigation and evaluation of engineering geological conditions in typical sea
- Submarine landslide, turbidity current and its complication of tsunami
- Submarine earthquake and earthquake tsunami
- Seabed liquefaction
- Other offshore geohazards

3 Coastal engineering geology

Conveners: Yu Huang (yhuang@tongji.edu.cn) Ping Yin (pingyin@fio.org.cn)
Jin Sun (J.Sun@ed.ac.uk)

With the rapid development of coastal resource exploitation and utilization worldwide, coastal engineering geology has become a key component in human activities. The session aims to provide a forum for engineering geologists who play a pivotal role in investigating, managing,



using, exploiting, designing and protecting the coastal domains so that they can share their overall views, creative ideas and advanced knowledge.

- Coastal erosion and protection
- Engineering geological problems in land reclamation
- Coasts at threat: causes and consequences of coastal settlement
- Geodisaster prevention and mitigation in coastal regions

4 Marine engineering geological survey technology and data analysis

Conveners: Jinhui Li (lisa.li@uwa.edu.au) Maarten Vanneste (Maarten.Vanneste@ngi.no)

Ting Zhang (t.zhang@ageo.com.au) Tobias Mörz (tmoerz@uni-bremen.de)

The technology and model of the seabed stratigraphy including quantification of engineering parameters for relevant layers is essential for engineering design of offshore structures. Desk study, geophysical investigation, and geotechnical investigation are the three stages involved in a complete site characterization. The theory behind the various techniques of geophysical and geotechnical measurements and interpretation of data is complex, requiring further development in the technology and the data analysis.

- Marine geophysical survey
- In-situ and laboratory testing
- Long-term field observation
- statistical characterisation of geotechnical data

5 Submarine soil-structure interaction

Conveners: Lizhong Wang (wanglz@zju.edu.cn) Dong Wang (dong.wang@uwa.edu.au)

Haixiao Liu (liuhx@tju.edu.cn)

Submarine soil-structure interaction refers to the behaviors of offshore foundations and pipelines in shallow or deep waters. This is one of the most active areas in offshore engineering, providing geological and geotechnical solution to the developments of oil and gas extraction and wind farms. The stability and displacements of a variety of structural elements during installation and daily operation stages are covered in this session.

- Installation and operational safety of spudcan footings for jack-up rigs
- Penetrations and pull-out capacities of anchors used in shallow and deep waters
- Displacements and consolidations of subsea foundations
- Pipe-soil interaction



6 Marine engineering geology in offshore new energy development

Conveners: Shaoli Yang (Shaoli.Yang@ngi.no) Mingyuan Wang (445237875@qq.com)

Marine engineering geology plays an important role in offshore new energy development. Offshore wind power or offshore wind energy refers to the construction of wind farms in bodies of water to generate electricity from wind. A significant growth area in the renewable energy is wind power at sea. Offshore wind is a source of stable, inexhaustible and clean energy. Besides, the enormous amounts of methane hydrate under the ocean and beneath arctic permafrost represent an estimated 53% of all fossil fuel (coal, oil, natural gas) reserves on earth, about 10,000 gigatons. Gas hydrates are potential energy resource.

- Offshore geological site investigation related to new energy development
- Foundation design for offshore windfarm
- Offshore soil parameters related to new energy development
- Engineering geological challenges related to new energy development
- Case studies in offshore new energy development

Call for Abstracts

I'm pleased to announce that the abstract submission for the ISMEG 2016 is now open. The deadline for submitting abstracts is 31st May, 2016.

We invite all interested authors to submit abstracts related to the theme of this conference, which may include but is not limited to the six topics. Abstracts and paper review are essential to maintain the overall standards of the conference, and to make sure relevant discussions of high quality. All abstracts submitted to the conference will be independently assessed by members of the Scientific Committee, which will grade the abstracts on relevance, originality, completeness and clarity.

Oral and poster presentations will be held during the symposium. Authors will be notified of the acceptance of their submission for either oral or poster presentation by 30 June, 2016. What's more, authors invited to present a paper should submit your full paper after the conference (time to be determined). The excellent papers will be collected and published as a special issue of the **Bulletin of Engineering Geology and the Environment**.



The template and instructions can be downloaded from the congress website:
<http://ismeg2016.net.cn>. If you have any question or need any help, please contact us by email: ismeg2016@sina.com.

Conference Program

Date	Time	Event
Oct. 21	All Day	Registration
	18:00-19:00	Dinner
	19:30-21:30	Keynote Lecture on the Scientific Paper Writing
Oct. 22	08:00-08:30	Opening Ceremony
	08:30-09:30	Plenary Speech
	09:30-09:50	Group Photo, Coffee Break, Trade Show
	09:50-10:50	Plenary Speech
	10:50-12:00	Session Speech
	12:00-14:00	Lunch, Noon Break
	14:00-15:45	Session Speech
	15:45-16:15	Coffee Break, Trade Show
	16:15-18:00	Session Speech
	18:00-20:00	Welcome Dinner
20:00-21:00	IAEG-Marine Engineering Geology Commission Workshop	
Oct. 23	08:00-09:45	Session Speech
	09:45-10:00	Coffee Break, Trade Show
	10:00-12:00	Session Speech
	12:00-14:00	Lunch, Noon Break
	14:00-16:15	Session Speech
	16:15-16:30	Coffee Break, Trade Show
	16:30-18:00	Plenary Speech
	18:00-19:30	Dinner
19:30-20:30	IAEG- International Research Program Workshop	
Oct. 24	All Day	Alternative Field Excursion

Speaking time of presentations

Plenary: 30 min; Keynote: 20 min; Orals: 15 min including questions and answers



Important Dates

- Abstract due: 31 May 2016
- Acceptance of abstract: 30 June, 2016
- Early birds registration due: 31 July 2016

Registration fees

The registration fee includes conference materials (not available to accompanying persons), lunches, coffee breaks, and attending all technical sessions, excluding the accommodation and post-symposium tours. Details are available on the symposium website (<http://ismeg2016.net.cn/>).

Registration fees (Prices in US dollars)	Early registration (by 31 July, 2016)	Regular registration
IAEG member	\$595	\$645
No IAEG member	\$645	\$695
Students	\$395	
Accompanying person	\$295	

Payment Methods

- For credit cards issued outside China, please pay the registration fee by Paypal.

Paypal account: ismeg2016@sina.com.

When you pay the fees, please leave your name, country, email and registration fee (such as Geogre, USA, ismeg2016@sina.com, registration fee) in the Remarks section. When we receive your fees, we will send an email to inform you.

- 中国境内的学者可使用支付宝、网上银行、电汇等方式缴纳注册费。

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当注册费缴费成功时，我们会及时发送邮件通知您。



Symposium Venue and Accommodation

A sufficient number of hotel rooms will have been reserved in the symposium venue in **Huanghai Hotel** in Qingdao. Huanghai Hotel (Qingdao) is located on 75 Yan'an Road, HuiQuan square, Qingdao, adjacent to the Seaside scenic spots, such as Little Qingdao, Qingdao's firstbathing beach and Bathing place of Badaguan. Details will be available on the symposium website.

Address: 75 Yan'an Road, Qingdao Tel: 0532-82870215

Fax: 0532-82879795

E-mail: huanghaihotel_qd@163.com

Website: <http://www.huanghaihotel.com/>



Transportation

- From **Liu ting International Airport** to Huanghai Hotel
 - ✓ Taxi Travel time: ~ 50 mins Cost: ~RMB 70 Yuan
- From **Qingdaobei Railway Station** to Huanghai Hotel
 - ✓ Taxi Travel time: ~30 mins Cost: ~RMB 40 Yuan
- From **Qingdao Railway Station** to Huanghai Hotel
 - ✓ Bus No. 304/316/321/223/501/ Travel time: ~30 mins Cost: ~RMB 1 Yuan
 - ✓ Taxi Travel time: ~15 mins Cost: ~RMB 12 Yuan



Post-Symposium Tours

➤ Qingdao Coastal geological environment

Qingdao borders Yellow Sea, with pleasant weather and beautiful landscape, is one of the coastal tourist cities of eastern China. Built along the winding coastline, Qingdao enjoys superb beach resource.



With gentle slope and mild waves, the No.1 Bathing Beach, near our symposium venue Huanghai Hotel, is a best choice to spend the summer time. Visitors can sunbathe here and swim

near the coast, relaxing by playing volleyball or running on the sand and even dining on the beach. Besides, Shilaoren Beach and Golden Beach are also nice choices to spend the time. Other Famous Attractions: Mt. Laoshan, Qingdao Naval Museum, Little Qingdao Islet.

➤ Shengli Oilfield

Shengli Oilfield is the first onshore oilfield that ever makes the offshore oil exploitation in China. Ever since Shengli No. 1 platform was launched in November 1978, up to now, Shengli Oilfield has owned nine offshore drilling platforms, 96



oil production platforms of various kinds. All these equipments enable Shengli Oilfield to move from the land to the ocean, achieving an annual output of 3 million tons of offshore oil.



Confirmed Speakers

➤ Plenary Speakers



Prof. Roger Urgeles

Departament de Geologia Marina,
Institut de Ciències del Mar, Barcelona, Spain
homepage: <http://barcelona-ocean.com/training/professor/urgeles-roger>



Prof. Maarten Vanneste

Senior Geologist/Geophysicist,
Offshore Geotechnics Division, Norwegian Geotechnical Institute
omepage: <http://www.ngi.no/en/About-NGI/Employees/Maarten-Vanneste/>



Prof. Don J. Degroot

Geotechnical engineer, College of Engineering, Department of Civil and
Environmental Engineering, University of Massachusetts Amherst
Homepage: <https://cee.umass.edu/faculty/don-degroot>



Prof. Tobias Mörz

Marine Ingenieurgeologie, Center for Marine Environmental Sciences, University
of Bremen
Homepage: http://www.marum.de/en/Tobias_Moerz.html



Prof. C.Hsein Juang

Glenn Department of Civil Engineering, Clemson University
Co-Editor in Chief, Engineering Geology
Homepage: <http://www.clemson.edu/ces/departments/ce/people/faculty/juang.html>



Prof. Manchao He

Academician, Director of State Key Laboratory for GeoMechanics and Deep
Underground Engineering, China
homepage: <http://www.sklgdu.com/article.asp?channel=8&classid=8>





Prof. Dong-Sheng Jeng

Griffith School of Engineering, Griffith University
homepage: <https://experts.griffith.edu.au/academic/d.jeng>



Prof. James T. Liu

National Sun Yst-sen University, Taiwan
homepage: https://www.researchgate.net/profile/James_Liu5

➤ **Keynote Speakers**

Alex N. Bandini-Maeder	Norwegian Geotechnical Institute, Perth Australia
Dong Wang	Ocean University of China
Fuping Gao	Chinese Academy of Sciences
Guoxing Chen	Nanjing Tech University
Haixiao Liu	Tianjin University
Jin Sun	University of Edinburgh
Qing Yang	Dalian University of Technology
Shaoli Yang	Norwegian Geotechnical Institute
Shengxiong Yang	Guangzhou Marine Geological Survey
Ting Zhang	Woodside Petroleum Ltd.
Ya Li	China National Offshore Oil Corporation
Yu Huang	Tongji University
Yufeng Gao	Hohai University
Yuxia Hu	University of Western Australia
Zhongqi Yue	University of Hong Kong
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Contacts

Dr. Xiaolei Liu
College of Environmental Science and Engineering, Ocean University of China
238 Songling Road, Qingdao 266100, P.R. China
Tel: (86) 532-66782572 Fax: (86) 532-66782102
E-mail: ismeg2016@sina.com
Website: <http://ismeg2016.net.cn/>

Welcome to Qingdao in 2016 !

