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June 16–21, Honolulu, Hawaii, USA

The Twenty-ninth (2019) International
**Ocean and Polar
Engineering Conference**
(Offshore and Polar Engineering Conference)

Including *additional ISOPE symposia:*

**ISOPE OMS/OMGH-2019
14th Ocean Mining &
Gas Hydrates
Symposium**

ISOPE-2019

Honolulu, Hawaii, USA, June 16-21

(DRAFT as of March 2, 2019)

Preliminary Program

Refereed papers from 50+ countries in 151 technical general
3 Plenary and 7 keynote and multiple Focus sessions

Full Program with General Information, Advance Registration and Venue
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Opening session, Banquet
at ISOPE-2018

ISOPE - 2019

Honolulu, Hawaii, June 16-21
Ocean Arctic Energy
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ISOPE-2019 Honolulu

The 29th Annual ISOPE-2019 Conference, Shanghai, China,
June 16-21, 2019

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The 30th Annual International Ocean and Polar Engineering
Conference, Shanghai, China, June 14-19, 2020

**14th ISOPE Ocean Mining and Gas Hydrates Symposium
(OMS/ OMGH-2019), Honolulu, Hawaii, USA, June 16-21,
2019**

TECHNICAL PROGRAM

Paper List and Chair List as of November 30, 2018

ISOPE OMS/OMGH-2019 14th Ocean Mining & Gas Hydrates Symposium

Together at
ISOPE-2019 Honolulu, Hawaii, USA
The Twenty-ninth (2019) International
Ocean and Polar Engineering Conference
Honolulu, Hawaii, USA, June 16–21, 2019



This 29th annual conference features **151** technical and opening general sessions, **9** plenary presentation and keynote presentations from top experts from industry, academia and government.

All ISOPE publications are indexed by Engineering Index , EI Compendex, Google Scholar, Scopus, Scientific and Technical Proceedings (ISTP/ISI), Web of Science and others.

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2019 Jin S Chung Award Lecture

Tuesday 13:10

3 Plenary and 7 keynote Presentations

Monday, Tuesday, Wednesday, Thursday, Friday

SATURDAY, June 15

Board of Directors: Annual Meeting I

16:00

Ilima Board room, 6F

SUNDAY, June 16

Board of Directors: Annual Meeting II

09:00

Ilima Board room, 6F

Welcome Reception

17:00

Great Lawn, outdoor

MONDAY, June 17

Monday Session Chair Briefing

07:30

Coral Lounge, 6F

Conference Opening Ceremony

08:30

Coral 3, 6

Opening Plenary Presentations

ISOPE-2019 Honolulu Conference

SESSION LIST BY TOPICS

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**14th OCEAN MINING AND GAS HYDRATES
SYMPOSIUM (Vol. 1)**

108. OMGH I - Gas Hydrates 1 (V. 1)

Wednesday June 19 14:20 Room 7

Chair:

Simulation and Analyze of Evaporation of Stationary Methane Droplet in Its Vapor during Cooling Down Process

Jiajia Deng, Jian Xu, Youwu Hu, Jinshu Lu, Zhejiang Ocean Univ, China

Experimental Investigation of Methane Hydrate Reformation with Under-inhibition of MEG

Yutaek Seo, Hyunho Kim, Seoul National Univ; Jakyung Kim, KAIST, Korea

An Experimental Study on Flow Assurance in Methane Hydrate Production System

Satoshi Hirobayashi, Tokai Univ; Fumio Kiyono, Hiromitsu Morita, AIST; Yoshiyuki Shimizu, Tokai Univ, Japan

A Study on Optimization Measures for Offshore Oil&Gas Field Development under Low Oil Price Situation

Hualei Yi, Zejun Yang, Lu Wu, Qiang Zhang, CNOOC Research Inst, China

Dynamic Mechanical Properties of Tetrahydrofuran Hydrate-bearing Silty Sediments

Xuhui Zhang, Shuyun Wang, Fangfang Sun, Xiaobing Lu, Inst of Mechanics, CAS, China

The Suitable Strength Criterion to Determine the Collapse of Hydrate Reservoirs with Different Saturation

Yuan Chen, Ting Sun, China Univ of Petroleum (Beijing), China; Yida Zhang, Univ of Colorado-Boulder, USA; Ying zhao, China Univ of Petroleum (Beijing), China

117. OMGH II: Gas Hydrates 2 (V. 1)

Thursday June 20 08:00 Room 6

Chair:

**Development of Analysis and Transfer System of Seafloor
Natural Gas Hydrate Pressure Core**

Jiawang Chen, Qiaoling Gao, Peihao Zhang, Hai Zhuy, Ziqiang Ren, Xiaoling Le, Zhejiang Univ, China

**Trajectory Optimization for Gas Hydrate Well in Deepwater:
Wellbore Stability and Sand Control**

Yue Gu, Deli Gao, Jina Yang, China Univ of Petroleum (Beijing), China

**Application Verify of Natural Gas Hydrate Micro-
experimental Study**

Ye Chen, Yonghai Gao, Guizhen Xin, Dongzhi Gao, Litao Chen, Baojiang Sun, China Univ of Petroleum (East China), China

**An Acoustic Approach to Identify the Shallow Gas and
Evaluate the Drilling Risk in Deep Water Based on Simulation
Experiments Study**

Huanhuan Wang, Jin Yang, Lei Li, Jiajun Xu, Lingyu Meng, Jiayao Hong, Qiuxuan Zhao, China Univ. of Petroleum (Beijing), China

**The Effect of Permeability on the Spatial Distribution of
Hydrate Saturation and Gas Production Performance During
Hydrate Dissociation by Depressurization**

Didi Wu, Shuxia Li, China Univ of Petroleum (East China), China

**127. OMGH III: OCEAN MINING 1: Exploration &
Environment (V. 1)**

Thursday June 20 10:30 Room 6

Chair:

**Preservation Reference Area and Benthic Impact Experiment -
Historical Backgrounds**

Tomohiko Fukushima, JAMSTEC, Japan

**Preliminary Results of Environmental Monitoring of Seafloor
Massive Sulphide Excavation and Lifting Tests in the Okinawa
Trough**

Noboyuki Okamoto, Takaaki Matsui, Shogo Kato, Japan Oil, Gas & Metals National Corp, Japan

**Small-scale Distribution Patterns of Hydrogenetic
Ferromanganese Crusts in the NW Pacific Seamounts; A**

Reconnaissance Survey using ROVs and a Manned Submersible

Akira Usui, Koichi Univ; Katsuhiko Suzuki, JAMSTEC, Japan

Experimental Study to Assess the pH Effect on Metal Release from Fe-Mn Nodules and Pelagic Clays

Kyoko Yamaoka, Geological Survey of Japan, AIST; Quan Wang, Hodaka Kawahata, Univ of Tokyo; Atsushi Suzuki, Geological Survey of Japan, AIST, Japan

Preliminary Shipboard Observations of Nodule Fauna in a Polymetallic Nodule Area of the Western Part of the Clarion-Clipperton Fracture Zone

Akira Tsune, Chisato Murakami, Deep Ocean Resources Development, Japan

Continuous Observation of Turbulent Flow Near the Hydrothermal Venting Area in the Okinawa Trough, Japan

Yasuo Furushima, JAMSTEC; Hironori Higashi, National Inst for Environmental Studies; Tatsuo Fukuhara, KANSO Co; Shunsuke Kondo, JAMSTEC; Takeya Matsuda, Kokusai Kogyo Co; Naoki Furuichi, Japan Fisheries Research and Education Agency; Hiroyuki Yamamoto, Tomohiko Fukushima, JAMSTEC, Japan

Precise U-Th Concentration and $^{234}\text{U}/^{238}\text{U}$ Analysis of Seawater from the Okinawa Trough Using MC-ICPMS [Oral Presentation]

Lisheng Wang, Zhibang Ma, Inst of Geology and Environment, CAS; Zhilei Sun, Inst of Earth Science, CAS; Xuefeng Wang, Jule Xiao, Inst of Geology and Environment, CAS, China

137. OMGH IV: OCEAN MINING 2: Environment & Mining System (V. 1)

Thursday June 20 14:00 Room 6

Chair:

3D Coupled Static and Transient Behaviors of 6,000-m-long Pipe-Buffer Gimballed at Surface Ship at Sea: At-sea Operation and Simulation

Jin S Chung, ISOPE, USA

Prospects for Development of Deep-water Machinery for Exploration and Exploitation of Polymetallic Sulphides in Russian Exploration Area (the Mid-Atlantic Ridge)

Igor V Egorov, Anatolii Kondratenko, FSBI VNIIOkeangeologia; Artur Grigortsuk, HYCO, Russia

230Th/U Chronology of a Carbonate Chimney from Area of Activity Fluid Venting in Okinawa Trough [Oral Presentation]

Zhibang Ma, Lisheng Wang, Inst of Geology and Environment, CAS; Zhilei Sun, Zhilei Sun, Inst of Earth Science, CAS; Xuefeng Wang, Jule Xiao, Inst of Geology and Environment, CAS, China

System Preparations for Deep Water Locomotion Trials of Deep Sea Mining Crawler

C Janarthanan, V Chandran, V Sundaramoorthi, B O Vishwanath, S Rajesh, P Muthuvei, N R Ramesh, G A Ramadass, National Inst of Ocean Technology, India

Assessment of Potential Axial Resonance Due to VIV for Ultra-deep Risers

Richard Harrison, Frank Lim, 2H Offshore Engineering, UK

147. OMGH V: OCEAN MINING 3: Mining System (V. 1)

Thursday June 20 16:20 Room 6

Chair:

Experimental Investigation of Dynamic Response of Flexible Riser and Suspended System During Sea Trials

Aravind Gnanaraj Anbu, Rajesh Siva, Amudha Krishnan, Chandran Vasu, Sundaramoorthi Veluchamy, Viswanathana B O, Jayanthi K, Muthuvei Panayan, Ramech NR, National Inst of Ocean Technology, India

Investigation on Characteristics of Forces and Motions of Spherical Particles in Deep Sea Hydraulic Collecting

Guocheng Zhaok Longfei Xiao, Ziyu Yue, Weijie Zhao, Shanghai Jiao Tong Univ, China

Scaling Experiment of Skip Lifting System for Deep-sea Mining

Jianyu Xiao, Ning Yang, Hong Sup, Yuxiang Chen, Hong Xiong, Jun Liu, Chunliang Yu, Inst of Deep-sea Science & Eng, CAS, China

Study of Experimental Data of Riser-Umbilical Dynamics Deployed for Deep Sea Mining Trials

Gopkumar Kuttikrishnan, Gnanaraj Anbu, Janarthanan Chinnapaiyan, National Inst of Ocean Technology; Murali Kantharaj, Vijaykumar R, Deepak Kumar, IIT Madras; Ramadass Giddugu, National Inst of Ocean Technology, India

A Free Standing Vertical Transportation System for Mining Seafloor Massive Sulphides [Oral Presentation]

Frank Lim, 2H Offshore Engineering, UK



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The 30th (2020) Annual International
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Shanghai, China, June 14–19, 2020

First

Call For Papers

Abstract Deadline **October 20, 2019**
Manuscript (for review) Deadline **January 15, 2020**

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Arctic Scient & Tech	Advanced Ship Tech	Subsea & Umbilicals
Arctic Materials	Safety, Risk, Reliability	Cryogenic Materials
Arctic Passage	Underwater Systems	Environment... Cracking
Structural Health SHM	Nonlinear Waves	Tubular & Linepipe
Renewable Energy,	Coastal Engineering	Composites
Environ & Modelling	Control, Simulation	VIV and Design
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