



The 20th Anniversary of Asia Navigation Conference

Toyama, Japan (Style: Zoom meeting)

5th-6th November 2022

Navigation and Port Research for the Next Generation in Asia

Conference Program and Schedule

Welcome to Asia Navigation Conference 2022

On behalf of ANC2022 Execution Committee, it is our pleasure to welcome you all with our whole heart to Asia Navigation Conference 2022 (ANC2022), which will be held by remote meeting on November 5-6, 2022.

ANC is designated as the annual international conference to provide opportunities for communication and cooperation for sharing the experience and knowledge on Navigation and Port Research and putting forward the research field on Marine Science and Technology among Japan Institute of Navigation, Korean Institute of Navigation and Port Research and China Institute of navigation.

ANC2022 aim at navigation and port research for the next generation in Asia such as autonomous navigation, and we are looking forward to meeting many researchers in online ANC2022.

Masashi KAWAI, Ph.D.

Chair, Asia Navigation Conference 2022 Execution Committee

Conference information

Date

From 5th to 6th of November 2022

Venue

National Institute of Technology, Toyama College in Toyama, Japan
(1-2 Ebie-neriya, Imizu city, Toyama, 933-0293, JAPAN)

Style

Zoom meeting

Keynote Speeches (1020-1230 on 5th November)

We will hold keynote speeches at 1020-1230 on 5th November.

Presentation Time

Presentation time is total 20 min.

Presentation: 15min., Discussion: 5min.

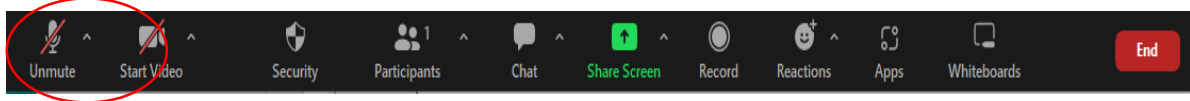
*1st bell: 12min. 2nd bell: 15min. 3rd bell: 16min.

Notice to participants

- Please prepare the access ID distributed by the secretariat.

Check the URL of the session you want to attend from the program.

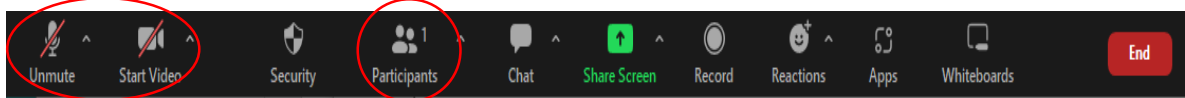
When you enter Zoom, please mute your microphone and turn off the video during the presentation.



- After the presentation, it will be time for Q&A led by the host.

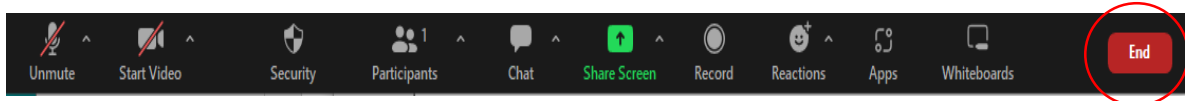
If you have any questions, please press the "raise your hand" button below. Please press the "participant " icon below and choose 'Raise your hand' option if you have any questions.

Please unmute your microphone when asking questions.



• If you want to attend another session, click the "Exit" button on the bottom right to exit the current session, then check the link from the program and join the session.

Please do not enter or leave the session during your presentation.

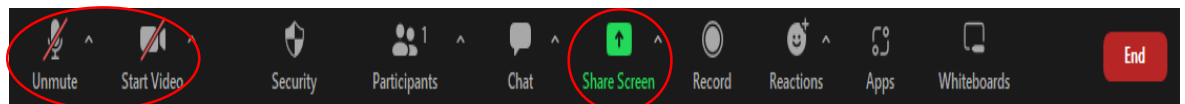


Notice to presenters

We summarized a procedure before making a presentation in a session after admission that presenter was expressed at "Notice to participants".

- Please follow the instructions of the host.
- Please change your name "Paper No.+name" (e.g. Kokai TARO→A3-2Kokai TARO)
- If it is presentation time, the presenter starts a video, and unmute of the microphone during presentation, and please validate a presentation materials by "Share Screen".

We recommend that a speaker use a headset for prevention of howling.



Others

- Please do not take photography, the recording of the presentation materials shared at the time of presentation from the viewpoint of copyright protection.
- The executive committee may take screen photography for the report.
- Please correct the display name to the full name (affiliation) of the alphabet after having logged in

Agenda Overview

5th November		
0900 - 0950	Preparation for Zoom connection	https://us06web.zoom.us/j/87577507933?pwd=TjJJbThTNnNTWFF5UkE0c2hoUDhmUT09 Meeting ID: 875 7750 7933 Passcode: 782503
0950 - 1015	Opening ceremony	
1015 - 1020	Group photo	
1020 - 1230	Keynote speeches	Page 5
1230 - 1400	Lunch time	
1330 - 1400	The first delegate meeting	
1400 – 1520	Paper sessions	Page 6
1540 - 1700	Paper sessions	Page 7

6th November		
0930 - 1000	Preparation for Zoom connection	Each Zoom of paper sessions
1020 - 1120	Paper sessions	Page 8
1140 – 1300	Paper sessions	Page 9
1220 - 1400	Lunch time	
1400 - 1520	Paper sessions	Page 10
1530 - 1600	Award nomination committee	
1600 - 1620	The second delegate Meeting	
1630 - 1700	Award and Closing Ceremony	https://us06web.zoom.us/j/81346092734?pwd=bE1BME1kbTc3anNnbkpScVkvAE5Ldz09 Meeting ID: 813 4609 2734 Passcode: 519064

<https://us06web.zoom.us/j/87577507933?pwd=TjJJbThTNnNTWFF5UkE0c2hoUDhmUT09>

Meeting ID: 875 7750 7933, Passcode: 782503

Keynote speeches

Chair: Masashi KAWAI (Chair, Asia Navigation Conference 2022 Execution Committee)

1020 - 1050

The Nippon Foundation MEGURI 2040 Fully Autonomous Ship Program

Mr. Naoto NAKAGAWA(Ocean Affairs Department, The Nippon Foundation)

1050 - 1120

A Challenge to Development of Technology on Autonomous Navigation

Capt. Taketoshi morioka(Operation Technology Group, Japan Marine Science Inc.)

1120 – 1150

Autonomous Vessel Technology as a Means to Reach MOL's Goals

Mr. Takeru SUZUKI(Smart Shipping Division, Mitsui O.S.K. Lines)

1150 - 1220

Developing the Autonomous Control for Navigation

Dr. Koh MURATA(Mitsui E&S Shipbuilding Co., Ltd.)

1220 - 1230

Discussion

Sessions Table Part 1 (5th November)

1400 -1520

https://us06web.zoom.us/j/83111016912?pwd=ZVp-reVNuc1o5NUh1NW1taWhQTVNDUT09	https://us06web.zoom.us/j/89520021344?pwd=Y2puN3cwcmprTUtwS1JVT09jdJlMz09	https://us06web.zoom.us/j/85286123957?pwd=V-k9lMFhdWdBSzhGVHVxSTZIT1dMQT09
Meeting ID: 831 1101 6912 Passcode: 608732	Meeting ID: 895 2002 1344 Passcode: 079898	Meeting ID: 852 8612 3957 Passcode: 729576
Marine Safety and Security	Maritime Education and Training	Other Related Topics
Chair: Ik-Soon CHO(KINPR) Co-chair: LIU Zhengjiang(CIN)	Chair: Yoshiaki KUNIEDA(JIN) Co-chair:SHI Chaojian(CIN)	Chair: Byeong-Deok YEA Co-chair:Gen FUKUDA(JIN)
1400 - 1420		
A1-1 JIN	B1-1 KINPR	C1-1 CIN
Study on Educational Methods to Enhance Non-technical Skills required for the Officers in charge of a Navigational Watch	A Study on the Perception of Vessel Collision Risk of Trainees	An intelligent and Auto-Response System toward Fixed point Marine Wind/Wave forecast
Manabu SAITO and Takahiro TAKEMOTO	So-ra KIM, Myoung-ki LEE, Sang-Won PARK, Young-Soo PARK	Jian Jun, Sun Zheng, Xu Ke, Wang Heng
1420 - 1440		
A1-2 KINPR	B1-2 JIN	C1-2 KINPR
Application of ARIMA to Forecast Spatio-Temporal Ship Density	Collecting and Analyzing Successful Experiences in Difficult Collision Avoidance	Pressure Variation Model of an Underwater Vehicle through Multiple Motions using CFD simulation
Ho-Kun JEON, Gi Seop LEE, Hong Yeon CHO, Yong Gil PARK, Chol Yong LEE	Masaki FUCHI, I Gde Manik Sukanegara ADHITA, Tsukasa KONISHI, Kouhei HIRONO, Mathew ROOKS	Thi Loan MAI, Thi Thanh Diep NGUYEN, Aeri CHO, Sojin KWON, Namug HEO, Sanghyun KIM, Ji-Hye KIM, Hyeon Kyu YOON
1440 - 1500		
A1-3 CIN	B1-3 JIN	C1-3 JIN
Thoughts on the future development and application of smart navigation marks	The history of the training ship "Kaiwo Maru" and her achievements in promoting maritime affairs after her retirement	A Study on Long Period Waves in Coastal Waters of Toyama and Niigata
SHUI Xinguang	Kouji SEIDA, Hajime Chiba, Takuma Kishi, Nagi Konishi, Takahiro Ofuji, Atsushi OHSAKA	Masashi KAWAI and Hideki KADOMURA
1500 - 1520		
A1-4 CIN	B1-4 CIN	C1-4 CIN
Dynamic obstacle avoidance algorithm of ships in Bridge Area based on potential energy field:A Case study of Shanghai-Suzhou-Nantong Yangtze River Railway Bridge	Prediction of Chinese seafarers quantity based on improved GM (1,1) model	Discussion on analytical method of three parameters of Weibull distribution of environmental parameters
LIU Yihua, WANG Ting, LIU Nian	YUAN Jingguo	CHEN Hailong, LI Linbin, XU Hui

Sessions Table Part 2 (5th November)

1540 -1700

https://us06web.zoom.us/j/86062147454?pwd=bENyR2FQMDhBMnc4b1BXQlJmamJnQT09	https://us06web.zoom.us/j/89997315369?pwd=N0lZSGJuNHdqZlITNFFuWFQ0ZmU1dz09	https://us06web.zoom.us/j/89873178950?pwd=Y1BWMUhocVdLMHQxczJkenNsK2YwQT09
Meeting ID: 860 6214 7454 Passcode: 937066	Meeting ID: 899 9731 5369 Passcode: 364776	Meeting ID: 898 7317 8950 Passcode: 373137
Marine Safety and Security	Maritime Intelligent Transportation System	Maritime Education and Training & Other Related Topics
Chair: Takahiro TAKEMOTO(JIN) Co-chair: Yun-Ja YOO(KINPR)	Chair: LIN Bin(CIN) Co-chair: Tatsuto YAMADA(JIN)	Chair: ZHANG Pengfei(CIN) Co-chair: Hajime CHIBA(JIN)
1540 - 1600		
A2-1 JIN	B2-1 CIN	C2-1 JIN
Learning Officer Performance Variability from Dangerous Ship Encounter Situations in Ship Simulator	Research on Smart Port Theory and Countermeasures Based on Internet of Things Technology	A Study on Maritime Education and Training -Self-Evaluation, Mutual Evaluation and Multistep Evaluation-
I Gde Manik Sukanegara ADHITA, Masaki FUCHI, Tsukasa KONISHI, Shoji FUJIMOTO	HU Xiaoyuan, SHEN Daoming	Yoshiaki KUNIEDA, Akihiro NUNOME, Yoshihiro Majima and Hideyuki KASHIMA
1600 - 1620		
A2-2 CIN	B2-2 KINPR	C2-2 CIN
Analysis and research on engine room fire based on accident cases	Develop an experimental for remote survey for emergency machineries	Analysis and Research on navigation Support online learning System
ZHANG Xingbiao, ZHANG Hongpeng, LI Wei	Hyunwoo LEE, Jeong-Bin YIM	XU Jiazheng, LIU Fengyuan
1620 - 1640		
A2-3 JIN	B2-3 CIN	C2-3 CIN
Collision Analyze and Map Plotting of Korea – Japan navigating vessels	A preliminary study on intelligent support system for High-quality development of Xiamen port	A Corpus-based Analysis of Linguistic Features of IALA Publications
Kwangjin KIM, Masaki FUCHI and Tsukasa KONISHI	GUO Zhifu, ZHANG Yuanhua	LI Qiang, REN Zhehui
1640 - 1700		
A2-4 CIN	B2-4 KINPR	C2-4 CIN
Discussion on the relocation and construction of liupu harbor beacon	A Study on the Vagueness in sailing rule of COLREGs of Maritime Autonomous Surface Ships	Study on the Path to Achieve Carbon Neutrality of China's Shipping under the Background of "Double Carbon" and Compliance
REN Qingfei, LI Mu	Deuk-Jin Park, Sang-A Park, Jong-Kwan Kim, Sung-Ho Park	LIAO Bingbing

Sessions Table Part 3 (6th November)

1000 -1120

https://us06web.zoom.us/j/83327657894?pwd=TytvZWxGanpDd3RFb0VMb0tkLzZoQT09	https://us06web.zoom.us/j/81214249829?pwd=ZGNSQmtjSHEyWXRZYUxGRFpBL0d4QT09	https://us06web.zoom.us/j/82294730643?pwd=Uk96TXB0a0J2bU1BSVc2aWlwZDhyZz09
Meeting ID: 833 2765 7894 Passcode: 244145	Meeting ID: 812 1424 9829 Passcode: 898978	Meeting ID: 822 9473 0643 Passcode: 651533
Marine Safety and Security	Maritime Intelligent Transportation System	Vessel Traffic Management
Chair: MOU Junmin(CIN) Co-chair: Takahiro TAKEMOTO(JIN)	Chair: XIAO Yingjie(CIN) Co-chair: Masashi KAWAI(JIN)	Chair: Deuk-Jin PARK(KINPR) Co-chair: Gen FUKUDA(JIN)
1000 - 1020		
A3-1 JIN	B3-1 KINPR	C3-1 CIN
Revealing success factors of safe ship operations of experienced captains to assess functional requirements of Maritime Autonomous Surface Ships using FRAM	Research on VDR data analysis for realization of data-based autonomous remote control	Discussion on the changes of ship VHF reporting system at VTS area
Shota IINO, Hideki NOMOTO, Takayuki HIROSE, Yasutaka MICHUURA, Koji MURAI, Akihiko HORI, Junji FUKUTO	Hong-jin Kim, Soo-min Park, Deuk-Jin Park, Jeong-Bin Yim	DONG Zhaoxi, TANG Mengyu
1020- 1040		
A3-2 KINPR	B3-2 CIN	C3-2 JIN
Ship Detection from Sentinel-1 Imagery through Thresholding and Clustering Method	Simulation analysis of leakage, diffusion and explosion of ships carrying dangerous goods while waiting for lock and mooring	A Study on Identification of Ship Type by B-Scope Radar Image using AI
Ho-Kun JEON, Hong Yeon CHO	ZHANG Jiayi, QI Le, LIU Jingxian	Yasuyuki HIDAHA, Hideaki NAKAMURA, Tatsuto YAMADA, Naoki MUTA, Ryotarou OHNO and Shinji MIZUI
1040 – 1100		
A3-3 CIN	B3-3 KINPR	C3-3 JIN
Brief talk thoughts on the determination of navigation mark technology in offshore wind power plant	Basic Research on the Establishment of a Standardization Roadmap of Maritime Autonomous Surface Ship (MASS)	Research on collision avoidance route planning based on A-star algorithm
WANG Zhengpeng	Joo-young Jeon, Jeong-Bin Yim	Wenbin BAI and Hitoi TAMARU
1100 - 1120		
A3-4 CIN		C3-4 CIN
Robust AI algorithm: a key technology to optimize ship intelligent collision avoidance system		A Bayesian Network-Based Approach to Port State Control Ship Detention Risk Assessment
LI Lin, SUN Dawei, MENG Xiangming		YU Dingheng, WU Bing, CHEN Pei

Sessions Table Part 4 (6th November)

1140 -1300

https://us06web.zoom.us/j/89612651067?pwd=Mm1kMXM4TGJPYU1oSGpQSXE5c2pVUT09	https://us06web.zoom.us/j/81594870311?pwd=a282SGJkbE8yRXd0dFdnNjhOM1YyQT09	https://us06web.zoom.us/j/89782878708?pwd=RGIXcGZXWTBjemloYnc3cWFkNkpVZz09
Meeting ID: 896 1265 1067 Passcode: 321663	Meeting ID: 815 9487 0311 Passcode: 188924	Meeting ID: 897 8287 8708 Passcode: 260997
Marine Safety and Security	Modern Marine Engineering Management	Other Related Topics
Chair: Jeong-Bin YIM(KINPR) Co-chair: Hitoi TAMARU(JIN)	Chair: Kenji SASA(JIN) Co-chair: SHAO Zheping(CIN)	Chair: Dae-Won KIM(KINPR) Co-chair: LIU Zhengjiang(CIN)
1140 - 1200		
A4-1 JIN	B4-1 CIN	C4-1 KINPR
Analysis of Situation Awareness of Remote Ship Operator Using Simulator	Numerical simulation of the effect of target distance variables on vertical scour of submerged water jets	A framework for improving the Marine Spatial Data System in the Republic of Korea
Sonoko KAWASHIMA, Hiroko ITOH, Yasumi KAWAMURA and Hiroki OTSUKA	CHEN Hao, TENG Xianbin, ZHU Faxin, ZHANG Zhibin, ZHANG Xiao	Jin-Kyung Kim, Sang-Il Lee
1200- 1220		
A4-2 KINPR	B4-2 CIN	C4-2 CIN
Introduction of Korea autonomous surface ship project and ship network security equipment development	Reflections on the application of electronic fence in navigation aid	A Tracking Study on “Empower Women in the Maritime Community” from International Perspective
Yunja YOO, Kyoung-Kuk YOON, David KWAK, Myongcheol LIM, Sangwon PARK	LIN Wei, CHEN Ankun, ZHANG Yiming	XU Yiran
1220 – 1240		
A4-3 CIN	B4-3 CIN	C4-3 CIN
Study on rescue of liquid hazardous chemicals ship	Analysis and research on data transmission interference of telemetry monitoring equipment of navigation beacon under electromagnetic noise source environment	Interpreting the Mute Shipping Languages: the Decorations on Ancient Vessels in China and the U.K.
MIN Zhen	LIU Fengyuan, XU Jiazheng, GU Tiliang	LI Fang, REN Tianxiangxiu, SHANG Xin
1240 - 1300		
A4-4 CIN	B4-4 CIN	C4-4 CIN
Application analysis of integrated beacon light	Study on quantitative risk assessment and inspection of offshore pressure vessels	Design and performance analysis of a discontinuous spiral baffle heat exchanger
GUO Hao	Ran Zhou, Xiaolei Zhang, Xiangfeng Li, Xinyu Liu, Qingguo Song	PAN Jin, KANG Shuangqi

Sessions Table Part 5 (6th November)

1400 -1520

https://us06web.zoom.us/j/85031029887?pwd=aXZPaFZTVnZwcGl0RHRqdWNpOUR0dz09	https://us06web.zoom.us/j/83912337000?pwd=all3NFNTUVpUUHJZRVJZNlFaRzJWUT09
Meeting ID: 850 3102 9887 Passcode: 538931	Meeting ID: 839 1233 7000 Passcode: 232551
Marine Safety and Security	Modern Marine Engineering Management
Chair: SHAN Kai(CIN) Co-chair: Sonoko KAWASHIMA(JIN)	Chair: Kiichiro MUKOSE(JIN) Co-chair: HAO Zheping(CIN)
1400 - 1420	
A5-1 CIN	B5-1 CIN
A Navigational Risk Assessment Method for Offshore Wind Farms	Resistance performance of a ship in brash ice channel using CFD and DEM coupling model
ZHANG Zhimin	XIE Chang, LU Mingfeng, ZHOU Li, ZHOU Xu
1420- 1440	
A5-2 CIN	B5-2 CIN
Research on safety risk management of restricted ships navigating in the yangtze river	Identification of Noise Points in Buoy Telemetry Position Data Based on PSO-DBSCAN Algorithm
Hu Yuanlun, Li Haijiao	Shao Jinxing, Zhang Xinliang, Xu Liangkun
1440 – 1500	
A5-3 KINPR	B5-3 CIN
Generation of Convergent Ship Traffic Dataset using Sentinel-1 Imagery and AIS	Strain monitoring and analysis of thin plate structure of large cruise on Rising-Landing process
Ho-Kun JEON, Hong Yeon CHO	ZHANG Zuoyong, LIU Ziming, SUN Jianzhi, SUN Yiqiang, WANG Xin
1500 - 1520	
	B5-4 CIN
	An Actively Positioning System with an Accurate Localization Technique for Sunken Container via a Three-layer Network Structure
	MEI Xiaojun, HAN Dezhi, CHEN Yanzhen, WU Huafeng, XIAN Jiangfeng

<MEMO>

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