WORLDWIDE FERRY SAFETY ASSOCIATION

BMKG

ITS BERGERAK

Institut Teknologi Sepuluh Nopember

MARTECH
FAKULTAS TEKNOLOGI KELAUTAN



INTERNATIONAL CONFERENCE AND WORKSHOP ON MARITIME SAFETY AND WEATHER TECHNOLOGY

SURABAYA, 9-10 AUGUST 2023

Sponsorship

MAIN SPONSORS

LR Foundation

THE TK FOUNDATION

eodyn

OceanSync

SUPPORTED BY

MINISTRY OF TRANSPORTATION

KNKT

BKI

IKPPNI

ITS MEDIA

DHARMA LAUTAN UTAMA

CLS PT CLS ARGOS INDONESIA

serco

OneOcean

SOFAR

Welcome

Dear colleagues,

What we are doing here is important – for ourselves, for all seafarers, and for the world. Climate change weather events have affected almost every part of the world. Although reducing emissions will roll back greenhouse gases and slow down climate change – for the immediate time frame we have to be able to anticipate and protect ourselves against hazardous weather. This requires data and its analysis which is in short supply on that part of the globe that is most extensive and calls the shots of most weather events --the ocean. On the ocean's seas, weather stations are needed to inform global weather models at the same time they would help mariners make informed decisions. The point of this conference is to fill that information vacuum so that Information can be used to alert mariners in the short termin the next hour to few hours while they are at sea – and to feed the global weather models for the greater good.

We welcome you the people in this conference, speakers and the maritime community, whoare on the front line. We welcome especially the thinkers, inventors, and innovators who are developing methods to help us anticipate sudden hazardous marine weather and save lives.

- Dr. Roberta Weisbrod







Weather events are more severe, more frequent, and intensify more rapidly.

And weather patterns have shifted in time and space making for more unpredictability.

For tracking weather, satellites provide broad weather trends.

but their lack of accuracy and resolution can only be corrected by weather measurements at the sea surface.

There is however a paucity of weather stations at sea.

Worldwide there are 1300 weather buoys and less than 4000 vessels in the Voluntary Observing Ship program.

This Workshop/Conference discusses sudden hazardous weather trends globally and in Indonesia.

impacts, and new technologies that can help mariners, some at very low cost.

Presenter Biographies



Prof. Ir. Dwikorita Karnawati, M.Sc. Ph. D. is an Indonesian academic and technocrat who has served as Head of the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG), since November 2017, after serving as Chancellor of Gadjah Mada University (UGM). She is a Professor of Environmental Geology and Disaster Mitigation at UGM. Obtaining his Ph.D in Earth Science from Leeds University, England in 1996, she continued his research on Hydrometeorological Disaster Prediction in the Post Doctoral Program at Tokyo University of Agriculture and Technology, Japan.

Roberta Weisbrod, Ph.D., is the Executive Director and a Founder of the Worldwide Ferry Safety Association. She has worked for governments and businesses on maritime transport's environmental, safety and economic development aspects and is the author of numerous papers.





Dr EngTrika Pitana currently the dean of Facutly of Marine Technology ITS Surabaya. He possesses bachelor's degree in marine engineering from ITS Surabaya, Magister of Maritime Science from world maritime university and doctoral degree from Kobe University. His research work covers vast areas of maritime safety but mainly statutory aspects and the ship surveilance system through AIS network. His publication also including research in fire safety onboard vessel.

Dr Soerjanto Tjahjono, entered the Institute of Technology Bandung (ITB), studied in Mechanical and Aeronautical Engineering and graduated in 1986. He joined Garuda Indonesia Airline as a system analyst and computer programmer for about 1.5 year. In 1988, he had been transferred to Garuda Maintenance Facility (GMF) commissioned an airframe and power-plant technician (practices as aircraft engineer) for 1.5 year. In beginning 1990, he joined the engineering department as junior structure engineer. Since August 2015, he is in charge to lead the KNKT (National transportation safety committee).





Dr. Nelly Florida Riama has worked for marine meteorology and oceanography for more than half of her career (over 20 years). She led the team that successfully established the Indonesia Coastal Inundation Forecasting System, an important step in delivering better services to coastal communities. Another initiative she works on is the Fishermen Field School, aimed at increasing literacy and use of marine weather information by extension workers, fishermen, and fisherwomen. She is active in international forums, the vice chair of the JCOMM Expert Team on Disaster Risk Reduction (2017-2019), and current role as the chair of the Data Buoy Cooperation Panel (DBCP).

Eko Prasetyo is the Director of the BMKG's Marine Meteorology Center. He is in charge of providing marine weather information in Indonesia, serving the needs of maritime transport, fishermen, the oil and gas industries, and others. His innovative approach includes the development of Ina-WIS (Indonesia Weather Information for Shipping), an integrated system that combines AIS data, marine weather observations, and forecasts, linking them with potential weather-related risks. His work ensures safer and more efficient maritime operations throughout the Indonesian Seas.





Beni Cahyono Phd, is head of marine engineering department ITS Surabaya since 2019 up to present. He possesses bachelor's degree in marine engineering, magister degree in maritime technology, both were from ITS Surabaya. His doctoral degree in automotive engineering awarded by UMP Malaysia. His main research focuses on the internal combustion engine and machinery dynamics. He also actively involved in numerous research in bio energy utilisation for marine machinery in traditional fishing operation.

Presenter Biographies



Dr. Furqon Alfahmi is the Head of the Marine Weather Predictions Team, at the Marine Meteorological Center, BMKG. His team provides high sea warnings for the Indonesian area, weather bulletins for shipping, and other products to support shipping safety. CAWO (Couple Atmospheric Wave Ocean) model was used to predict ocean and weather parameters until 168 hours. This model is about 3 km for the Indonesia area with a time resolution of about 1 hour. Argo floats, Drifters, and Marine Automatics Weather Systems are used forecasters for calibrating and also verify the real conditions.

Capt. Dwiyono Soeyono is a highly esteemed individual within Indonesian corps of merchant marine officer (IKPPNI). Since 2022, he was appointed as the chairman of IKPNNI. he is an esteemed marine consultant and specialist in the oil and gas industry. he possesses class-1 master certificate and had an extensive ocean going experience. As well as shore based ship management and crewing company.





Mr. Arisudono Soerono CEO of BKI (Indonesia classification society) he completed his master's degree at the London Business School (1998-2000) with a Master of Business Administration degree and and a bachelor's degree in chemical engineering from the Bandung Institute of Technology (1988-1994). He has attended training in Risk Management in Banking, INSEAD, Fontainebleau, France (2016) and Emerging Leaders Executive Leadership Program at John F. Kennedy School of Government Harvard University, Cambridge, USA (2014). He began his career as a Management Associate at Citibank (1994-1995), then shifted focus by becoming a consultant at Accenture (1995-1998).

Dr Agoes Santoso, a lecturer at Marine Engineering department, faculty of marine technology ITS Surabaya. He possesses bachelor's degree ITS Surabaya, Master of Science from newcastle university UK, and doctoral degree from marine engineering ITS. He has been actively invovled in numerous research mainly in naval defence system, fishing performance system, and other naval engineering design.





Dr Muhammad Zikra is a lecturer at ocean engineering department. He possesses bachelor degree in ocean engineering from ITS Surabaya. He awarded master degree from UNESCO-IHE institute for water education and completed his doctoral degree from Kyushu University Japan. His research focusing on marine shore structure desing, geospatial information system and long range survey. As well as sea wave mechanics modeling

Mr. Sam Adiprabowo serves as a marine weather forecaster and oceanographer in Meteorology Climatology and Geophysical Agency of Indonesia responsible for daily marine weather forecast and met-ocean data analysis. He earned Master's Degree from the University of Rhode in Ocean Engineering and Naval Architecture and investigated the stability of offshore wind floating platforms during extreme conditions.





Ms. Dava Amrina serve as senior ocean forecaster in the Indonesian Agency for Meteorology Climatology and Geophysics since 2013. Alongside her professional work, she was pursuing a Master's degree in Earth Science for Oceanography Major at Bandung Institute of Technology (ITB). Her research interest is primarily around ocean trajectory models with specifics for search and rescue applications.

Mr. Randi Firdaus working at Meteorological Observation at the Center for Marine Meteorology, BMKG, with 4 years of dedicated service. His tasks are responsible for coordinating, managing, maintaining, and processing data from marine observation equipment, including Vessel Automatic Weather Stations (VAWS), which have been and will be installed on various vessels to collect marine data from remote areas. He holds a Master's degree in Marine Technology from Bogor Agricultural University, Indonesia.



Presenter Biographies



Yann Guichoux is the founder of eOdyn, a French startup which is developing a transformative technology to measure surface currents on a global scale thanks to machine learning and AIS data. Before creating eOdyn, Yann worked for more than 15 years in the fields of operational oceanography and maritime safety. The company is currently working with shipping companies like Brittany Ferries and CMA-CGM and for organizations such as European Space Agency (ESA), French Space Agency (CNES), French Navy (SHOM) , IFREMER, Copernicus Marine Service (CMEMS).

Sebastiaan Ambtman, CEO and Founder of OceanSync Inc., is a tech entrepreneur and former eBay employee. With a Master Commercial Sailing Vessel Diploma, he's an experienced ocean sailor, keen on improving ocean weather forecasting and safety at sea through sharing of shipborne weather observations and innovative technologies.





Dr. Gregory Johnson is a Technical Program Manager at Serco, Inc. His group focuses on electronic navigation and autonomous systems. Recently he has been working on projects in R-Mode, AIS, VDES, and autonomous vessels including developing and testing AIS Ship weather system. Dr. Johnson has over 25 years of experience in electrical engineering and R&D, and has published over 100 technical papers.

Nevin DiParlo manages sensor sales and business development at Sofar Ocean. Prior to joining Sofar Ocean in 2021, Nevin spent 5-years working with ocean technology companies that focused on building software and sensing solutions for autonomous underwater vehicles. Nevin holds a B.S. in Mechanical Engineering from the University of Vermont and is an avid ocean enthusiast, often spending his free time surfing and kiteboarding up and down the US East Coast.





Capt Nurur Rahman is an ex-Master Mariner with experience in bulk, ferry, and container vessels. He also possesses skills in international casualty investigation, Project management on Safety and Security. After 35+ years of work in the maritime domain in the regularity and practical application areas, he actively participated in government maritime administration, IMO meetings, and senior positions in various regional forums. As a member of the IMO audit team, he has developed analytical and mature report-writing skills.

Capt. Chandrasekhar Butti is Sr Manager at One Ocean LR, Vessel Operations Team, Pune, India. Master Mariner with a bachelor's degree in mechanical engineering has been involved in all aspects of ship operations during his two decades at sea. He receives various awards, including the most prestigious 'HSSE CEO ship of the year' for 'British Kestrel' for ' Safety Performance and Initiatives.





Alfian Marzuki – General Manager of Operations at PT. CLS ARGOS INDONESIA Participating in BMKG MMS1 project as Indonesia Project Manager; primarily responsible for deployment, operation, and maintenance of instruments throughout Indonesia. Prior to that, he has 15 years of working experience in the offshore survey industry performing various tasks such as offshore positioning, marine site characterization and oceanography for oil and gas as well submarine power and telecommunication sector.

Bayu Edo Pratama is marine meteorologist at BMKG. He was graduated from BMKG Academy and become a part time lecturer at the State College of Meteorology Climatology And Geophysics. He possesses master degree on atmospheric science from Bandung Institute of Technology (ITB). Currently he pursuing his PhD degree at Université de Bretagne Occidentale, France.



Agenda – The Conference

9 August 2023, BG Munaf ITS

Keynote speaker:

Director General of BMKG - Trend on weather condition
Director General of Sea Transportation - Indonesia Policy on Maritime Safety



Panel Discusion - 1: Maritime weather is getting worse, and it matters



Panel Discussion - 2: Precautionary plan on hydro meteorological disaster (what are we doing about marine bad weather) /the need for InSite weather information.

Time	Agenda	PIC/Speaker/ Moderator
08:30	Conference Registration	
09:00	Opening Ceremony	
	Opening speech Dean of Marine Technology Faculty	Dr. Trika Pitana
	Director of Marine meteorology center of BMKG -	Eko Prasetyo, S.T, M.T.
	WFSA Welcome Speech	Dr. Roberta Weisbrod
09:30	**Keynote Speech:**	
	Trend on weather condition	Prof Ir Dwikorita Karnawati MSc PhD (Director General of Agency for Meteorology, climatology and geophysic)
	Policy on maritime safety	Director General of Sea Transportation, MoT
10:00	***Coffee Break***	
10:15	**Panel Discussion-1: Maritime weather is getting worse and it matters**	**Moderator : BMKG - Senior Forecaster Mr. Sam Adhiprabowo**
	What happening with marine weather? And Weather instrumentation performance survey and calibration	Dr Furqon Alfahmi (BMKG - Head of sub division for analysis and prediction marine meteorology)
	Overview on weather related marine accident	Dr Ir Soerjanto Tjahjono – Chairman of KNKT
	Ship performance analysis on heavy weather	Dr Beny Cahyono ST, MT Phd - Head of Department of Marine Engineering – ITS
	Ship Design adaptation due to weather change	Mr. Arisudono Soerono - Biro Klasifikasi Indonesia
12:00	***Lunch Break***	

Agenda – The Conference

Panel Discussion - 3: Weather instrumentation advancement (what the new methods/tools to predict weather)

No	Time	Agenda	PIC/Speaker/ Moderator
	13:30	**Panel Discussion-2: precautionary plan on hydro meteorological disaster (what are we doing about marine bad weather)/the need for insitu weather information**	**Moderator : Ms. Dava Amrina Senior Ocean Forcaster for marine meteorology Information services, BMKG**
		Handling vessel in severe weather	Capt. Dwiyono Soeyono - Chairman of IKPPNI
		Weather modelling for marine structure design	Dr. Eng. M. Zikra, S.T., M.Sc - Departement of Ocean engineering ITS
		Weather impact analysis	Eko Prasetyo ST, MM - Director of marine meteorology center of BMKG
		The need for insitu weather information - Buoys	DBCP Data Buoy Cooperation Panel (Dr. Nelly Florida)
	15:00	***Coffee Break***	
	15:30	**Panel Discussion-3: Weather instrumentation advancement (what the new methods/tools to predict weather)**	**Moderator: WFSA Dr. Roberta Weisbrod**
		Proposed project on small vessel weather instrumentation	Dr Ir Agoes Santoso M.Eng - Dept. of Marine Engineering – ITS
		Mobile maritime weather network	Dr Gregory Johnson Serco Inc
		Commercial Presentation: Weather technology advancement	Sebastiaan Ambtman - Oceansycn Yann Guichoux - Eodyn Alfian Marzuki - CLS Indonesia Capt. Buttu Chandrasekhar - OneOcean Duncan Mctavish - Sofar Ocean
	17:00	Closing	WFSA - ITS
	17:30	Dinner - all participant	

VENUE OF CONFERENCE AND DINNER

The International Conference and Weather Technology will be held at BG Munaf Conference Hall Faculty of Marine Technology, ITS Surabaya Gedung W, Lantai 2, Campus Sukolilo, ITS Surabaya. (Follow the maps : https://goo.gl/maps/DMbJ2UDziwfY3mAU8 or Scan QR Code on the right side).

Agenda – Technical Workshop

10 August 2023, Meteorology Maritime Station Tanjung Perak Port, Surabaya

No	Time	Agenda	Speaker
1	08:30	Technical Workshop Registration	
2	09:00	Opening session	
3		Welcome speech	Director of Marine Meteorology Center, BMKG and WFSA
4		Harbour Master office - weather precaution procedure	Head of harbour master Tanjung Perak Surabaya
5		Voice from the sea	Master of a vessel
6		AIS AWS installation demo	Serco - ITS
7		Expanding network on weather data source	BMKG
8		Closing remarks	
	12:00	***Lunch***	

The Workshop On Weather Instrumentation Technology will be held at the Meeting room of Maritime Meteorology Station BMKG, Tanjung Perak Surabaya. (Follow the maps : https://goo.gl/maps/kLcSujQAfoKaQodX8 or Scan QR Code on the left side).





About Surabaya

Surabaya is Indonesia's second-largest city and the capital of the province of East Java. It is located on the northern shore of eastern Java at the mouth of the Kalimas River and along the edge of the Madura Strait. As the main seaport and commercial center in the eastern region of Indonesia, Surabaya has become one of the largest cities in Southeast Asia. Today, Surabaya's population is around three million, and the surrounding rural area houses at least 7 million.

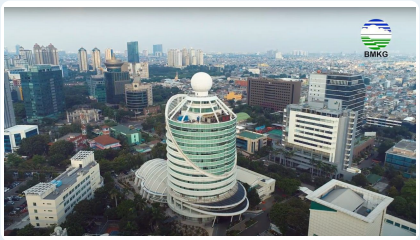


About ITS

Institut Teknologi Sepuluh Nopember (ITS) is a world-class Legal Entity State University (PTNBH) that contributes to national independence and becomes a reference in education, research, community service as well as the development of innovations, especially those that support industry and maritime affairs. Institut Teknologi Sepuluh Nopember is attached to the history of the Republic of Indonesia's struggle for independence. The new motto of ITS Advancing Humanity is to foster a new enthusiasm in creating innovation through technology and knowledge for society. The motto was chosen to be a new motivation in continuing an active role for human civilization according to ITS values.

About BMKG

BMKG (Meteorology, Climatology, and Geophysics Agency), is a government agency in Indonesia responsible for providing meteorological, climatological, and geophysical information and services to support various sectors, including maritime transportation safety. One of BMKG's products through Centre Of Marine Meteorology is providing information about weather conditions in Indonesia Seas.



About WFSA

The mission of the Worldwide Ferry Safety Association (WFSA) is to reduce ferry fatalities and to use of safe ferries globally. WFSA is a not-for-profit organization activated in 2012 and headquartered in Brooklyn NY. In furtherance of its mission, WFSA sponsors an international student design competition for safe affordable ferries. Seeking to solve real problems associated with ferry safety WFSA engages in research to protect mariners from sudden hazardous weather, supported by the Lloyd's Register Foundation. The Worldwide Ferry Safety Association was honored to receive the Royal Institution of Naval Architects – Lloyds Register Award for Maritime Safety in November 2022.

INTERFERRY

PLATINUM SPONSORS carus DNV

PRESIDENT'S SPONSOR SPIRIT of TASMANIA

INTERFERRY 2023

The Leading Edge – Elevating the Customer Experience and Sustainability

HOBART, TASMANIA • NOVEMBER 4-8, 2023 • JOIN US!











EARLY BIRD REGISTRATION ENDS SEPT. 15

The 47th Annual Interferry Conference will be held at the Hobart Convention and Exhibition Centre (HCEC). Located within the conference hotel – the Hotel Grand Chancellor Hobart – the HCEC is the largest purpose-built conference and events facility in Tasmania and promises to be a fantastic venue. Our event will offer many networking opportunities, and sponsors and exhibitors will enjoy a flexible and open exhibition area in which to display their products and services.

Check the conference website and our social media accounts for updates about registration; accommodations; speakers and sessions; networking and social events; and sponsorship.

InterferryConference.com Interferry @InterferryOrg

"On behalf of Spirit of Tasmania, I look forward to welcoming you to Hobart, Tasmania in November 2023 for the 47th Annual Interferry Conference."
Bernard Dwyer – CEO/MD, Spirit of Tasmania

INTERNATIONAL MARITIME RESCUE FEDERATION



The International Maritime Rescue Federation (IMRF) brings together and represents 127 of the world's maritime search and rescue (SAR) organisations, including voluntary and governmental organisations, as well as industry suppliers and commercial companies, to improve maritime SAR capabilities worldwide.

IMRF Members around the world support each other and share knowledge, experience, expertise and innovations through our programme of webinars, conferences, meetings, events, forums and other activities.

If you are interested in becoming a member and joining our community, please contact the team at info@imrf.org.uk for more details or visit our website at www.international-maritime-rescue.org

JOIN OUR SAR COMMUNITY

Special Thanks

Our Sponsors

Anonymous Family Foundation

Lloyd's Register Foundation
For their research grants to the Indonesia – US team working on Improving maritime weather predictions to prevent maritime accidents

TK Foundation
For supporting student travel to the conference

Our partners and colleagues

Imam Anthony Muslim, Joel Herdian Seciawanto, and Reza Bagus Ramadhan as ITS students, for their resourcefulness, ingenuity and persistence

Brian Tetreault and Dr. Gregory Johnson
The developers of WX-AIS

WFSA Board

Captain James DeSimone, maritime consultant
Tom Fox, Tom Fox Associates
Mary Ann Pastrana, Archipelago Ferries, the Philippines
Len Roueche, WFSA
Captain Nurur Rahman, maritime consultant
John Waterhouse, Elliott Bay Design Group
Roberta Weisbrod, Executive Director, WFSA.

From The Team

Aleik Nurwahyudy KNKT and ITS Surabaya, Bayu Edo Pratama BMKG and UBrest, Dr. Catherine Lawson, University @Albany AVAIL, Dr. Roberta Weisbrod, WFSA, working with Dr. Ahmad Baidowi and his student ITS Surabaya