



International Conference on Maritime Technology

ICMT 2007, Taipei

5 – 9 November 2007



Programm

Organized by

Marine Engineering Society On Republic of China

Suite 605, No. 108, Section 2,

Chang An East Road, Taipei 10491, Taiwan

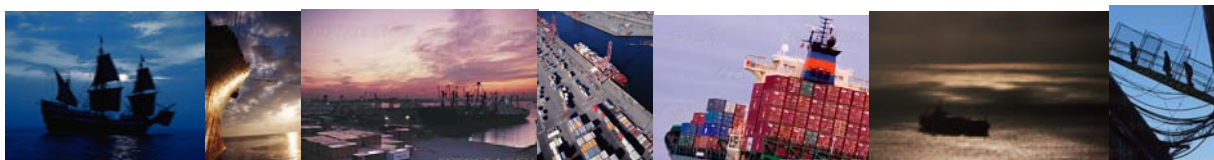
Co-Organized by

National Taiwan Ocean University, Marine Engineering Department

Sponsored by

Ministry of Education, Republic of China

National Science Council, Republic of China



Content

Themes.....	4
The Organisers	5
The Sponsors.....	5
International Steering Committee	6
Advisory Committee	6
Program Committee.....	6
Organizing Committee.....	7
Session Chairs.....	7
Keynote Speech.....	9
Technical Sessions.....	10
Symposium	15
Presentation Guidance	16
Registration.....	17
Transportation	17
Tour	18
Chien Tan Overseas Youth Activity Center	19
JanTian Map.....	19

Preface

The International Conference on Maritime Technology (ICMT) 2007 in Taipei begins today. On behalf of Marine Engineering Society in the Republic of China, I give my congratulations for the convening of this session of the Conference, my hearty welcome to the authors and participants of the symposium, and my sincere thanks to the experts, academic organizations and departments at home and aboard who have cared for, supported, and helped the preparation of the meeting.

Experts and scholars from over 14 countries and districts have gathered in this hall to share us with their research results and engineering experiences. This is an excellent opportunity to carry forward friendship and strengthen cooperation as well as promote application and development of maritime technologies.

The main theme of the Conference is “*Efficiency, Safety and Clean Sea*”. The rapid development and widespread application of science and technology give impetus to economical prosperity, large-scale systems and pollution prevention for the ocean. With continuous development of high technology and large-scale systems, product assurance technologies also gained new dimensions. The assurance of high reliability and safety has become a major concern in the development of large-scale system. It is now an important element of marine product design.

I appreciate all the supports from our friends in the maritime industries. Their assistance and generous financial donation have made this Conference possible. In particular, I would like to thank Dr. F. Y. Ma, the chairman of the Conference, his strong enthusiasm and hard work let the Conference held smoothly and successfully.

I sincerely hope that you will have a good time during your stay in Taipei.



C. S. Chiu
Chairman,
*Marine Engineering Society in the
Republic of China*

International Conference on Maritime Technology ICMT 2007, Taipei



The sea and waterways are the most widely used mode for transporting goods worldwide. A wide variety of vessels move around the world every day. The efficiency, safety and optimization of marine transportation are key issues.

The Conference

Focus: Efficiency, Safety, and Clean Ocean

Themes

- Maritime Equipment
- Instrument and Automatic Control
- Marine Diesel Engine
- Propulsion System
- Port State Control
- International Maritime Convention
- Maritime Education
- Other Maritime Issues

The Organisers

Mr. Chi-Shun Chiu (Chairman) (Marine Engineering Society on ROC)

Prof. Kuo Tien Lee (President, National Taiwan Ocean University)

Prof. Ming Chung Fang (Dean, National Cheng Kung University)

The Sponsors

國立台灣海洋大學

中華海員總工會

中華民國輪船商業同業公會全國聯合會

中鋼運通股份有限公司

中國驗船中心

中華海事檢定社股份有限公司

士林紙業股份有限公司

台灣國際造船股份有限公司

日圖實業股份有險公司

信友實業股份有限公司

裕民航運股份有限公司

永記造漆工業股份有限公司

裕傑機電股份有限公司

旭匯企業有限公司

傑舜船舶安全管理顧問(股)公司

勇利新友船務代理有限公司

航運界工務人員聯誼會

瓦錫蘭股份有限公司

聯達行股份有限公司

The Visitors



International Steering Committee

- China:** Prof. Jieren Li
- Japan:** Prof. Osama Nishida
- Korea:** Prof. Don-Chool Lee
- Poland:** Prof. Janusz Mindykowski
- R.O.C.:** Prof. Cherng-Yuan Lin
- Russia:** Prof. Alexander Minaev
- Vietnam:** Dr. Hoang Le Vuong

Advisory Committee

- Mr. Chi-Shun Chiu (Chairman) (Marine Engineering Society on ROC)
- Dr. Fong Yuan Ma (vice Chairman)(Marine Engineering Society on ROC)

Program Committee

- Chairman:** Prof. Wei-Hui Wang
- Paper submission:** Prof. Wei-Hui Wang
- Technical Session:** Dr. Jian Hua
- Invited Session:** Prof. Jang-Ping Wang
- Optional tour:** Ms. Joyce Chen
- Members:** Ms. Ronnie Chen

Organizing Committee

Chairman:	Dr. Fong Yuan Ma
Treasure:	Ms. Eva Tang
Conference site:	Dr. Daw Shang Hwang
Publications:	Dr. Wen Kao Tien
Banquet:	Ms. Grace Lee
Webmaster:	Mr. Tai-Ming Tsai
Members:	Ms. Carie Kao
News:	Ms. Ying Ying Wu

Secretariat

Secretary General	Mr. Fu Liang Fang
Secretary	Ms. Daphne. Su
	Ms. Eva Tang
	Ms. Li Ju Cheng
	Ms. Meg Chiang

Session Chairs

Session (I) :	Chairman : Prof. Janusz Mindykowski	Session (V) :	Chairman : Prof. Wei-Hui Wang
Co-Chairman : Dr. Daw-Shang Hwang		Co-Chairman : Ms. Ekaterina Minaeva	
Session (II) :	Chairman : Prof. Alexander N. Minaev	Session (VI) :	Chairman : Prof. Cherng-Yuan Lin
Co-Chairman : Dr. Fong-Yuan Ma		Co-Chairman : Prof. Ronald D Barro	
Session (III) :	Chairman : Dr. Hoang Le Vuong	Session (VII) :	Chairman : Prof. Don-Chool Lee
Co-Chairman : Dr. Sheng-Long Kao		Co-Chairman : Dr. Peilin Zhou	
Session (IV) :	Chairman : Dr. Kee-Kuo Chen	Session (VIII):	Chairman : Prof. Jeong Gil Nam
Co-Chairman : Dr. Sergey Lysenko		Co-Chairman : Dr. Jian Hua	

International Conference on Maritime Technology (ICMT 2007) Program Schedule

5th November (Monday)	
15:00 ~ 17:30	Registration
18:00 ~ 21:30	Welcoming Pleasure Party
6th November (Tuesday)	
08:00 ~ 09:00	Registration
09:00 ~ 09:40	Open Ceremony
09:40 ~ 10:00	Refection
10:00 ~ 11:00	Keynote speech (1)
11:00 ~ 12:00	Keynote speech (2)
12:00 ~ 13:30	Lunch
13:30 ~ 14:30	Keynote speech (3)
14:30 ~ 15:30	Keynote speech (4)
15:30 ~ 16:00	Refection
16:00 ~ 17:00	Keynote speech (5)
18:00 ~ 20:00	Banquet
7th November (Wednesday)	
08:30 ~ 10:00	Session (I)
10:00 ~ 10:30	Refection
10:30 ~ 12:00	Session (II)
12:00 ~ 13:30	Lunch
13:30 ~ 15:00	Session (III)
15:00 ~ 15:30	Refection
15:30 ~ 17:30	Session (IV)
8th November (Thursday)	
08:30 ~ 10:00	Session (V)
10:00 ~ 10:30	Refection
10:30 ~ 12:00	Session (VI)
12:00 ~ 13:30	Lunch
13:30 ~ 15:00	Session (VII)
15:00 ~ 15:30	Refection
15:30 ~ 17:30	Session (VIII)
18:00 ~ 20:00	SPA & Closing Party
9th November (Friday)	
08:30 ~ 17:30	Cultural Visit

Keynote Speech

6th November (Tuesday) 10:00~12:00

Chairman: Prof. Wen-Jer Chang

- 1. New Ratings and Performance Control Technologies for Smaller Low Speed Diesels**

Speaker: Mr. Lars Bryndum, MAN Diesel A/S, Demark

- 2. New Challenges in Construction of Equipment for Power Quality Measurement and Assessment on Ships**

Speaker: Professor Janusz Mindykowski, Gdynia Maritime University, Poland

6th November (Tuesday) 13:30~17:00

Chairman: Prof. Ming-Chung Fang

- 3. Emission Trends and the Challenges Faced by Diesel Engine Manufacturers**

Speaker: Mr. Alex Choe Hock Ling, MTU Asia, Singapore

- 4. Ship Owners Should Call for Financial Gains in Safety**

Speaker: Mr. Haakon Dalan, BASS AS, Oslo, Norway

- 5. Environmental Challenges and the Wärtsilä Two-Stroke Engines**

Speaker: Mr. Aeberli Kaspar, Wartsila Switzerland

Technical Sessions

7th November (Wednesday) 08:30~10:00

Session (I) Instrument and Automation Control

I-1 Stability Analysis and Controller Design for Nonlinear Dynamic Positioning Systems for Ships Via T-S Fuzzy Control Approach

Wen-Jer Chang, Cheung-Chieh Ku, Pei-Hwa Huang, Wei Chang

I-2 Stability for Cohen-Grossberg Neural Networks with Time-Varying Delays

Chang-Hua Lien, Ker-Wei Yu, Yen-Feng Lin, Yeong-Jay Chung, and Long-Yeu Chung

I-3 Analysis on Selectivity Protection for Power Network System of Ships

LUO Ningsen

I-4 Marine Automation Introduction

Dong Pin

I-5 Study of Power Quality Improvement in Ship Electric Network

XU Xiao-Yan

I-6 Development of Takagi-Sugeno (T-S) Fuzzy Controller with Self turning Adaptive Law on nonlinear systems

Shih-Ping Soon, Zheng_Li Chen

7th November (Wednesday) 10:30~12:00

Session (II) Propulsion System

II-1 Case Study of Damage Diagnosis and Identification for a Shipboard Propulsion Shafting System

Fong Yuan Ma, Wei Hui Wang

II-2 The Emergence and prospect of Modern Marine Electric Propulsion

Zhou Shan Yuan

II-3 Ship Propulsion and Sea Machine

YANG, CHUNG-CHIH

II-4 Torsional Vibration Analyses of a Tapered Shaft System

Jia-Jong Wu

7th November (Wednesday) 13:30~15:00

Session (III) Maritime Education & Maritime Equipment

III-1 The Problems of the Education of the Marine Specialists in the Russian Far East

Maria Lysenko, Alexander Smolnikov, Viktor Voronov, Alexander Minaev

III-2 The Experience of Training of the Foreign Students and Modular Organization of Educational Process at the State Marine Technical University of ST. Petersburg

A.V. Smolnikov, L.A. Patrasheva, A.F. Visitskiy, I.V. Chelpanov

III-3 The Gdynia Maritime University 85 year-experience impact on the development of Polish Maritime Education System

Janusz Mindykowski

III-4 Energy-Technological Processes in Elements of Marine Engineering

Andrey V. Lisenko, Valery K. Shatalov, Sergey V. Lisenko

III-5 Modelling on cooling water system of ship main engine

LI Jie-Ren

7th November (Wednesday) 15:30~17:30

Session (IV) Other Maritime Issues

IV-1 On the Service Quality Gaps of Business Customers- Evidence From a Taiwanese Carrier

Kee-Kuo Chen

IV-2 The Recognition of Grid Patten in Visioplasticity Using an Artificial Neural Network

Jang-Ping Wang , Hsien-Der Lee, Lu-Hua Lin

IV-3 A new method of collision avoidance for vessel traffic service

Sheng-Long Kao, Chien-Min Su, Chih-Yung Cheng, Ki-Yin Chang

IV-4 The Development Trend of Green Ship Building Technology

Hong He-ping

IV-5 Develop a leachability index to predicate the long-term leaching behavior of solidified waste

Huen-Shan Liu, Kung-Cheh Li

IV-6 Aerial Emission from Taiwanese Fishing Vessel

Jian Hua, Yihsuan Wu

8th November (Wednesday) 08:30~10:00

Session (V) Other Maritime Issues

V-1 A Parametric Study on Motions and Wave Loads for a High-Speed Trimaran Ship
Traveling in Beam Waves

T.Y Chen, M.C. Fang

V-2 Fatigue Phenomenon Analysis of SUS 630 Stainless Steel in Pitting Corrosion
Condition with SEM

Wei Hui Wang, Fong Yuan Ma

V-3 Corrosion of High Tensile Steel in Bulk Carrier Cargo Hold

J.W Chen, Jian Hua

V-4 Determination of Wave Heights for Designing Offshore Installations in Vietnam

Phan van Khoi, MSc. Nguyen Ngoc, Vinh, MSc. Bui Tuan Anh

8th November (Wednesday) 10:30~12:00

Session (VI) Marine Diesel Engine

VI-1 A Study on RHW Wi/Urea-SCR System for NOx Reduction of a Light-Duty Diesel
Engine

Jeong Gil Nam, Joo-Yol Choi, Jae-Sung Choi

VI-2 A Study on Diesel Engine NOx and Soot Emission Characteristics Using Different
Fuel Oils

Jeong Gil Nam, Dea Sun Kang, Ronald Barro

VI-3 Improvement of Low Temperature NOx Reduction Rate of SCR Systems

Youhong Xiao, Peilin Zhou, Wenping Zhang, Zhigang Liu

8th November (Wednesday) 13:30~15:00

Session (VII) Marine Diesel Engine

VII-1 Introduction of Himsen H32/40 Medium Speed Diesel Engine

H. S. Kim, H. I. Kim, J. S. Kim, J. T. Kim

VII-2 Next Steps in Exhaust Emissions Control for Wärtsilä Low-Speed Engines

Kaspar Aeberli, German Weisser

VII-3 A Study on the Torsional Vibration Characteristics of Super Large Two Stroke Low Speed Engines with Tuning Damper

Don Chool Lee, Kim Sang Hwan, Ronald D. Barro

VII-4 Effects of Excess Air on the Performance of Marine Diesel Engine

Wen-Kwo Tien, Rong-Hua Yeh

8th November (Wednesday) 15:30~17:30

Session (VIII) International Maritime Convention

VIII-1 Studying of Feasibility for the Ballast Water Exchange Method in Bulk Carrier

Carie Kao, Fong Yuan Ma

VIII-2 Studying of Treatment Technology for the Ballast Water System

Fong Yuan Ma, Carie Kao

VIII-3 Design Suggestions for Ballast Water and Sediment Management in New Ship

Fong Yuan Ma, Wei Hui Wang

VIII-4 The Problems of Utilization of the Submarines of the Shipyard “Zvezda”

Yuri P. Shulgan, Valentin A. Avramenko, Alexander I. Pivtsov, Ekaterina A. Minaeva

Symposium (I)

Maritime Education

8th November (Wednesday) 09:30 ~ 12:00

Chairman : Professor Cherng-Yuan Lin (Taiwan)

Member : Professor Janusz Mindykowski (Poland)

Professor Alexander N. Minaev (Russia)

Professor Don-Chool Lee (Korea)

Dr. Hoang Le Vuong (Vietnam)

Assist Professor Ronald Barro (Philippine)

Professor Bruce Bin Lin (Taiwan)

Symposium (II)

Port State Control

8th November (Wednesday) 13:30 ~ 17:30

Chairman : Capt. Hsu (secretary general of shipowner association)

Speaker : Mr. S. F. Wong, Chief Assist Register / Ship & Seafarer (Hong Kong)

Note: The official language will be used with Chinese on this symposium.

Presentation Guidance

Before presentation

1. “Power Point” by Microsoft is official presentation software, therefore, your presentation should be provided by “Power Point”.
2. Both Secretary’s computer and your own computer can be used by connecting PC projector.
3. In case of using the Secretary’s computer, your “Power Point” file should be prepared on the basis of **“Windows” XP version**. Then your presentation file should be uploaded to the Secretary’s computer before the session.
4. When your “Power Point” file is created on the other **“Windows” version**. Such as **Vista or ME version**, It is better to carry with your own computer. Then your computer should be connected to a PC projector before the session to conserve the presentation time.
5. Please type or write **“ Speaker’s Biographical Summary”** of the presenting author. Then please send it that to Secretary of ICMT’ 2007 Taipei, or transfer it to the Secretary at Registration.

At presentation

15 minutes is allowed for your presentation and **5** minutes is for discussion. Therefore, total **20** minutes is shared for one presentation.

Registration

Important notices:

1. The registration fee is US \$150. We are unable to accept credit cards. The registration fee will be collected when you arrive at the counter of the conference. We accept NT (New Taiwan Currency), US dollar and Euro. For your convenience, we will provide currency exchanges at the conference counter.
2. [The submission of contributed talk is closed. We do not accept new presentations.](#)
3. The conference fee includes a welcome party (buffet) in the evening of November 05, 2007, lunch and refreshments on November 06, 2007 to November 09, 2007 and banquet on November 06, 2007.
4. You will receive your registration number. If you have any inquiry, please contact us by email (mesc.icmt@msa.hinet.net) and we will reply at our earliest

Transportation

Taiwan Tao yuan (Chiang Kai Shek) International Airport

(T.T.I./C.K.S. Airport) ↔ Chien Tan Overseas Youth Activity Center:

a .By taxi:

Taxis queue outside the Arrival Halls of both Terminal I and Terminal II of T.T.I.(C.K.S.) Airport. Airport taxis charge according to the meter plus a 50% surcharge (highway tolls not included). Typical fare to Taipei downtown is around NT\$1,100. From the T.T.I.(C.K.S.) Airport, you may take a taxi directly to Chien Tan Overseas Youth Activity Center for around NT\$ 1,300~1,500.

b.By bus:

1. Adult single fares vary from NT\$ 110 to \$140.
2. The journey time is about 1 hour in moderate traffic.
3. Where to buy tickets/board the bus:

Ticket counters are located in the Arrival Passenger Reception Areas of both terminals.

Terminal I Bus Platform: On the southwest side of the Arrival Passenger Reception Area.

Terminal II Bus Platform: On the northeast side of the Arrival Passenger Reception Area on the first floor of the terminal.

Exchange rate

The current exchange rate is 1 US dollar to about 33 NT (New Taiwan currency), varying according to the market.

Tour

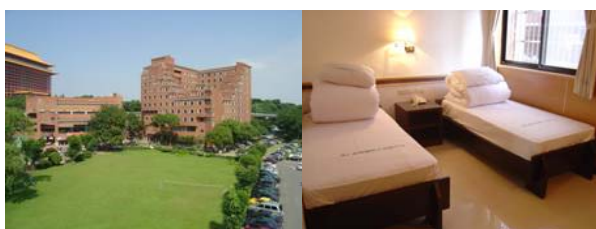
About Taiwan

Taiwan is a subtropical island on west edge of the Pacific Ocean. It is 386km long from tip to tip and 140 km wide at its broadest points. The busiest air routes cross here. Hills and mountain cover two-thirds of the island. The highest, Mt. Jade, of 3950m (12,996 feet) is the loftiest peak in Northeast Asia. With mild climate, it is suitable for sightseeing. However, it is usually hot and humid in the summer. The average low temperature in July is about 24 Celsius degrees (75.2 Fahrenheit degrees) and the high temperature is usually 33 Celsius degrees (91.4 Fahrenheit degrees). The humidity is very high, sometimes over 80% or 90% in July. Light clothes, sunglasses or straw hats, and umbrellas are suggested for traveling Taiwan in July.

- Taiwan Bus Corp. (Kuogong Line): to Taipei Railway Station and Taipei Sung Shan Airport. You may get off at either stop and then take a taxi to Chien Tan Overseas Youth Activity Center for approximately NT\$150~200.
- Evergreen: to ZhongXiao-FuXing [MRT](#) Station. If you only have light packages, this is a good way to save money. You can get off at ZhongXiao-FuXing MRT Station and take a taxi to Chien Tan Overseas Youth Activity Center for approximately NT\$ 200~250.
- Toward You Air Bus: to ZhongXiao-FuXing MRT Station, Hyatt Hotel & Far Eastern Hotel. Get off at one of the above stops and take a taxi from there to Chien Tan Overseas Youth Activity Center for around NT\$200~250.

Chien Tan Overseas Youth Activity Center

The current exchange rate is 1 US dollar to about 33 NT (New Taiwan currency), varying according to the market. Chien Tan Overseas Youth Activity Center provides you with a sweet and comfortable accommodation just like your home. Chien Tan Overseas Youth Activity Center is located on Jhongsan Northern Road and adjacent to MRT and Shihlin shopping area. Its convenient location allows you to access most of the sightseeing spots by Metro or buses. Welcome to Taiwan and we are delighted to guide you to discover the beauty of Taiwan.



Tel: 886-2-2885-2151 ext 9

Fax: 886-2-2783-3905

JanTian Map

