TEAM 2008 ISTANBUL
The 22nd Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures

Istanbul Technical University
Suleyman Demirel Cultural Center
Main Campus, Maslak, Istanbul-Turkey
6-9 October 2008

Edited by
A. Ergin

SPONSORS:
Welcome Message

Dear Colleagues,

On behalf of the International Organizing Committee, I am delighted to welcome you to the 22nd Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, TEAM 2008 Conference, which is to be held from October 6 through October 9 2008 in Istanbul, Turkey.

The main aim of the conference is to provide opportunities for researchers and engineers of ship and marine structures in Asian-Pacific region to exchange their ideas and share the results of their most recent research, and to promote discussions relevant to everyday problems in the fields of ship and marine structural design and production techniques.

Turkish shipbuilding industry has made a big progress in the last five years, as a result of developments in world shipbuilding sector, and made all the effort necessary in order to become one of the major shipbuilders in the world. Therefore, I believe that TEAM 2008 conference would provide a valuable and unique forum for Turkish shipbuilders to exchange their experience and discuss their everyday problems with the scientists and engineers participating from Asian-Pacific region such as Korea, Japan, Taiwan, China, Russia, USA and so on.

Besides keynote lecture on the state of shipbuilding industry and some thoughts on near term future by Professor A.Y. Odabaş, we have received many interesting papers contributed by eminent scientists as well as young motivated researchers.

Therefore, I would like to welcome you to enjoy the history and charm of Istanbul and all the benefits that the “22nd Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures” will provide.

Ahmet Ergin
Chairman – TEAM 2008
Istanbul TURKEY
Contents

Organization Page 4
Previous TEAM Conferences Page 6
General Information Page 7
Technical Sessions Page 13
Organization

International Organizing Committee

Prof. A. Ergin (Chairman), Istanbul Technical Univ., Turkey
Prof. M. Arai, Yokohama National Univ., Japan
Prof. T. Fukasawa, Kanazawa Inst. of Tech., Japan
Prof. K.N. Cho, Hong-Ik University, Korea
Prof. K.S. Kim, Inha University, Korea
Prof. Y.S. Choo, National University of Singapore, Singapore
Prof. M.V. Voyloshnikov, Far-Eastern State Technical Univ., Russia
Prof. A.N. Minaev, Far-Eastern State Technical Univ., Russia
Prof. W.H. Wang, National Taiwan Ocean University, ROC
Prof. C.F. Hung, National Taiwan University, ROC

International Technical Committee

Dr. M. Temizkaya (Chairman), Istanbul Technical Univ., Turkey
Prof. Y. Yasuzawa, Kyushu University, Japan
Dr. Y. Takeda, Research Institute IHI Co., Japan
Prof. C.D. Jang, Seoul National University, Korea
Prof. S.G. Lee, Korea Maritime University, Korea
Prof. J.L. Huang, United Ship Design and Dev. Center, ROC
Prof. J.M. Yang, National Cheng Kung University, ROC
Prof. Y.N. Kulchin, Far Eastern Branch of Russian Academy of Sciences, Russia
Prof. J.S.T. Cheung, Nanyang Tech. University, Singapore
Dr. K.M. Liew, Nanyang Technological University, Singapore
Prof. Y. Huang, Dalian Univ. of Tech., P.R. China

Local Organizing Committee

Prof. A.Y. Odabasi (Chairman), Istanbul Technical Univ., Turkey
Prof. A. Ergin, Istanbul Technical Univ., Turkey
Prof. S. Ergin, Istanbul Technical Univ., Turkey
Mr. E. Güç, Türk Loydu, Turkey
Mr. C. Kuter, Sedef Shipbuilding Inc., Turkey
Mr. O.A. Demirsoyulu, Admarin Designers & Shipbuilding, Turkey
Mr. B. Sener, Delta Marine, Turkey
Dr. E. Bayraktarkatal, Istanbul Technical University, Turkey
Dr. A. Tuzcuoglu, Celik Tekne Shipyard, Turkey
Dr. B. Ugurlu, Istanbul Technical University, Turkey
Mr. S.A. Koroglu, Istanbul Technical University, Turkey
Previous TEAM Conferences and Honorable Members

Pre-TEAM Prof. M.Man, Kinki Univ., Japan
Mr. J.S.Moon, Hyundai H.I., Korea

TEAM I (24-25, July, 1987) Mr. S.I.Hong,
Samsung, Chungmu, Korea

TEAM II (18-19, November, 1988) Dr. K.Hattori,
Sanoyasu, Kurashiki, Japan

TEAM III (11-12, August, 1989) Mr. S.K.Park,
Hyundai, Ulsan, Korea

TEAM IV (6-8, September, 1990) Mr. H.Nishimura,
Tsuneishi, Onomichi, Japan

TEAM V (30-31, August, 1991) Mr. D.K.Park,
Daewoo, Jangseungpo, Korea

TEAM VI (24-25, July, 1992) Prof. Y.Tomita,
Kinki Univ., Kure, Japan

TEAM VII (15-17, July, 1993) Prof. J.J.Kim,
Univ. Of Ulsan, Ulsan, Korea

TEAM VIII (19-22, December, 1994) Prof. C.S.Li,
National Taiwan Univ., Taipei, ROC

TEAM IX (24-27, July, 1995) Prof. T.Yao,
Hiroshima Pref. Inform. Museum, Japan

TEAM X (1-4, July, 1996) Prof. S.S.Kim,
Pusan National Univ., Pusan, Korea

TEAM XI (16-18, December, 1997) Prof. C.Y.Liu,
Nanyang Technological Univ., Singapore

TEAM XII (6-9, July, 1998) Prof. Y.Hattori,
Kanazawa Institute of Technology, Japan

TEAM XIII (18-21, October, 1999) Prof. W.H.Wang,
National Taiwan Ocean Univ., Keelung, ROC

TEAM XIV (18-21, September, 2000) Prof. G.P.Turmov,
Far East. State Tech. Univ., Vladivostok, Russia

TEAM XV (15-18, October, 2001) Prof. K.N.Cho,
Hong-Ik Univ., Jochiwon, Korea

TEAM XVI (21-23, May, 2002) Prof. Y. Tomita,
International Convention Center, Kobe, Japan
TEAM XVII (15-18, December, 2003) Prof. C.F.Hung,
National Cheng Kung Univ., Tainan, ROC
TEAM XVIII (11-14, October, 2004) Prof. G.P.Turmov,
Far East. State Tech. Univ., Vladivostok, Russia
TEAM XIX (4-7, December, 2005) Prof. Y.S.Choo,
National Univ. of Singapore, Singapore
TEAM XX (15-18, October, 2006) Prof. C.D.Jang,
Seoul National Univ., Seoul, Korea
TEAM XXI (10-13, September, 2007) Prof. M. Arai,
Yokohama National Univ., Yokohama, Japan

TEAM 2008 Secretariat
Faculty of Naval Architecture and Ocean Engineering
Istanbul Technical University
Maslak 34469, Istanbul – TURKEY

Fax: +90-212-285-6454
Website: http://team2008.itu.edu.tr
E-mail: team2008@itu.edu.tr
## General Information

### Conference Timetable (tentative)

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>October 6</td>
<td>October 7</td>
<td>October 8</td>
<td>October 9</td>
</tr>
<tr>
<td>09:00-10:40 am</td>
<td>Registration/Welcome Address/Keynote Lecture/</td>
<td>C-1/C-2</td>
<td>G-1/G-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Invited Lecture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:40-11:00 am</td>
<td>Coffee/Tea Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00am-12:20 pm</td>
<td></td>
<td>D-1/D-2</td>
<td>H-1/H-2</td>
<td></td>
</tr>
<tr>
<td>12:30-01:30 pm</td>
<td></td>
<td></td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>01:30-02:50 pm</td>
<td></td>
<td>A-1/A-2</td>
<td>E-1/E-2</td>
<td></td>
</tr>
<tr>
<td>02:50-03:20 pm</td>
<td></td>
<td></td>
<td>Coffee/Tea Break</td>
<td>Technical &amp; Cultural Tour (01:30-07:00pm)</td>
</tr>
<tr>
<td>03:20-04:40 pm</td>
<td>Registration (4:30 pm)</td>
<td>B-1/B-2</td>
<td>F-1/F-2</td>
<td></td>
</tr>
<tr>
<td>05:00 pm</td>
<td></td>
<td>Shuttle buses leave for hotels</td>
<td>Shuttle buses leave for hotels</td>
<td></td>
</tr>
<tr>
<td>Evening</td>
<td>Welcome Reception (5:30 pm)</td>
<td></td>
<td>Conference Dinner (8:00 pm)</td>
<td></td>
</tr>
</tbody>
</table>
REGISTRATION AND WELCOME RECEPTION

6 October 2008
16:30 Registration
17:30 Reception

Welcome Reception at Taşkısla Building - Istanbul Technical University Faculty of
Architecture, Taksim. The venue is in walking distance from the Conference Hotels. At
Taksim Square follow the directions given in the map to find Taşkısla Building.

BRIEF HISTORY OF TASKISLA

This immense building has been constructed all in structural masonry between 1848 and 1853
as a military medicine academy for the Ottoman Army under the rule of Sultan Abdülmecid.
However during construction, the plans drawn by W. James Smith were modified and the
building’s function was changed to the military barracks in 1849. This modification was part
of a construction plan that included several arsenals and military barracks that were to ensure
the safety of the imperial domain around the Dolmabahçe Palace. The building sustained
some damage in the earthquake of 10 July 1894, and was restored by architect Raimondo
D’Aronco. In 1909, the rebellious troops were based in the building, thus it has become the
scene of long fighting. Some results are visible in the façade, as few of the gun shells are still
embedded in the stone columns of the entrance. In 1944 the building was handed over to the
I.T.U. and restored by architects Paul Bonatz and Emin Onat. Teaching started in the building
in 1950, with the civil engineering and architecture faculties. In 1983 it has been classified as
a first degree historical monument. In 1996 the World Habitat Congress was organized partly
in the Faculty. Ever since, it is a natural part of the congress valley of Istanbul. The plan
scheme of Taskisla is classical: four equal sides marked with four corner edifices and a vast
courtyard. The west façade is crowned with a monumental entrance. (Prof.Dr. Afife Batur)
CONFERENCE VENUE

The conference will take place at Maslak Campus, Istanbul Technical University - half an hour distance from Taksim Square, the city centre.

Conference Venue - Suleyman Demirel Cultural Center (SDKM)
Istanbul Technical University, Main Campus

The full address is shown below:

Istanbul Teknik Universitesi
Ayazaga Kampusu
Suleyman Demirel Kultur Merkezi
Maslak 34469
Istanbul, Turkey

Istanbul Technical University – Main Campus (Maslak Campus)

The Conference Local Organization Committee has arranged shuttle bus transfer services - from the Conference Hotels to the Venue (ITU Maslak Campus - Suleyman Demirel Convention Center). Shuttle dates will be all conference session days as October 7, October 8, and October 9

Shuttle buses will be departing from Taksim to the Venue in the morning and from the Venue to Taksim in the evening.

**Shuttle times will be announced later**
The Suleyman Demirel Social and Cultural Center (Conference Venue) was newly opened in April 2000. This center occupies 9200 m² on the Ayazaga Campus and features a conference hall, a lobby, shops, clubs, offices, and canteen.

Conférence Dinner (Banquet)
8 October (Wednesday) 2008
8:00 pm
Feriye Restaurant (http://www.feriye.com)
A bus service will be provided from the conference hotels – Feriye Restaurant – hotels.

Cultural Tour
9 October (Thursday) 2008
01:30 pm – 07:00 pm
Accompanying Person’s Program

<table>
<thead>
<tr>
<th>Date</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 October (Monday)</td>
<td>Golf Tournament</td>
<td></td>
<td>Welcome Reception (05:30 pm)</td>
</tr>
<tr>
<td>7 October (Tuesday)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 October (Wednesday)</td>
<td>Ladies Program</td>
<td></td>
<td>Conference Dinner (08:00 pm)</td>
</tr>
<tr>
<td>9 October (Thursday)</td>
<td></td>
<td>Cultural Tour</td>
<td>(01:30-07:00 pm)</td>
</tr>
</tbody>
</table>

**HOW TO GET FROM AIRPORT TO HOTEL (TRANSPORTATION INFORMATION)**

It is important to know that there are two international airports in Istanbul: Istanbul Atatürk International Airport on the European side and Sabiha Gokcen International Airport on the Asian side of Istanbul.

Both are modern, new civil airports, serving domestic and international scheduled and charter flights 24 hours a day. For further details, please check the web sites of the airports and ask your travel agent or airline the name of your arrival airport in Istanbul. This information is crucial to get to your hotel as comfortable and quick as possible. All TEAM 2008 hotels are very centrally located around Taksim square, located in the European side of Istanbul. Therefore, to get from either airport to your hotel, you should keep in mind to use the Airport – Taksim track. There are 3 different ways to do it by using public transportation:

**A. HAVAS SHUTTLE BUS SERVICE**

Havas shuttle bus services are available every half hour between 06:00 a.m. and 01:00 a.m. from Atatürk airport to Taksim Square and vice versa. Ticket price: 6 Euro. Havas shuttle buses are also operating from/to Sabiha Gokcen Airport. For more information and detailed schedule of shuttle services please check HAVAS website.

**B. AIRPORT TAXI**

In Istanbul taxis are considerable cheap compared to other cities in most parts of the world. Atatürk Airport Taxi is a big company with a fleet of more than 400 cars, safe and reliable, serving 24 hours a day at International and Domestic Terminals. It costs about 30 Euro from airport to the hotels around Taksim Square. There is a surcharge of 50% between 00:00 a.m. and 06:00 a.m.

Taxis are also available outside the Sabiha Gokcen Airport, but due to distance from there to Taksim via the Intercontinental Bridge, the price might be higher. All taxis have taximeter. Payment should be made in Euro, US Dollar or Turkish Lira cash. You can use ATM’s or bank offices at the airport to get change. It is not customary to tip drivers.
C. LIGHT RAIL TRANSPORTATION SYSTEM (METRO)

Schedules of metro, which has been providing access between the stations of Aksaray and Atatürk Airport as follows:

Week days: from 06:00 a.m. till 00:00 a.m.
Saturdays: from 06:15 a.m. till 00:00 a.m.
Sundays: from 06:30 a.m. till 00:00 a.m.
Then, we recommend you to get a taxi from Aksaray metro station to your hotel

D. SPECIAL TRANSFER SERVICE FOR TEAM 2008 PARTICIPANTS

This is an optional service for the convenience of TEAM 2008 participants, specially arranged by the Gemini tourism. You will be met by a staff from GEMINI tourism with an TEAM 2008 signboard in the International Arrival Hall (after passport control & customs area) of Atatürk Airport. If you wish to use this service, please visit the Gemini Tourism’s web side www.geminitourism.com, fill in the Transfer Form and send it to Ms. Zeynep Uraslı (zeynep.uras@geminitourism.com).
## TECHNICAL SESSIONS

### 7 October 2008 (Tuesday)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>Registration</td>
</tr>
<tr>
<td>10:00 am</td>
<td>Opening Ceremony</td>
</tr>
<tr>
<td>10:30 am</td>
<td>Welcome Address</td>
</tr>
<tr>
<td></td>
<td>Prof. A. Ergin, Chairman of International Organizing Committee</td>
</tr>
<tr>
<td></td>
<td>Prof. A.Y. Odabaşı, Chairman of Local Organizing Committee</td>
</tr>
<tr>
<td></td>
<td>Dean, ITU Faculty of Naval Architecture and Ocean Engineering</td>
</tr>
<tr>
<td></td>
<td>Rector, ITU</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Keynote Lecture</td>
</tr>
<tr>
<td></td>
<td>The state of shipbuilding industry and some thoughts on near term future</td>
</tr>
<tr>
<td></td>
<td>Prof. A.Y. Odabaşı</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Invited Lecture</td>
</tr>
<tr>
<td></td>
<td>Hydroelasticity of Ships: Taking stock and moving forward</td>
</tr>
<tr>
<td></td>
<td>Prof. P. Temarel</td>
</tr>
<tr>
<td>12:30 pm</td>
<td>Lunch</td>
</tr>
</tbody>
</table>

### Session A-1 Noise and Vibration (Tuesday, 7 October 2008)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>01:30 pm</td>
<td>Vibration analysis of a 10 000-TEU container ship using three-dimensional whole ship FEA model</td>
</tr>
<tr>
<td></td>
<td>J. Noguchi</td>
</tr>
<tr>
<td>01:50 pm</td>
<td>Hydroelastic vibrations of a container ship and a VLCC in waves</td>
</tr>
<tr>
<td></td>
<td>Kazuhiro Iijima and Tetsuya Yao</td>
</tr>
<tr>
<td>02:10 pm</td>
<td>Response comparisons of a large floating structure by grillage and shell FE model</td>
</tr>
<tr>
<td></td>
<td>Junghyun Kim, Kazuhiro Iijima and Masahiko Fujikubo</td>
</tr>
</tbody>
</table>
The vibration response analysis for the post panamax container ship using whole ship model
Takashi Kawai, Hiroki Kusumoto, Hiroyuki Takahashi, Takanori Deguchi

Session A-2 Fatigue and Fracture (Tuesday, 7 October 2008)

A study on the prediction technique of remaining fatigue life using fatigue indicator
Seung Hwan Boo, Kyung Su Kim, Sung Chan Kim, Jang Hyun Lee, Young Gun Cho and Seul Ki Kim

A study on prediction of crack propagation life on welded joints of ship structures
Chang-Youl Park, Kyung-Su Kim, Ki-Sung Kim and Hyun-Tae Jeon

A study of fatigue strength assessment for 180K bulk carrier
Chun-Sik Shim, Jeong-Hyun Hwang, Kang-Kil Kim and Hoon-Dong Lee

Fatigue life comparison in tanker structures-CSR vs. Pre-CSR
Seong Ki Kim and Young Bae Kim

Coffee Break

Session B-1 Fatigue and Fracture (Tuesday, 7 October 2008)

A study on spectral fatigue assessment of FPSO operating in wave and swell sea-state; west offshore of Africa
Oe-Ju Hwang, Seock-Hee Jun and Joong-Kyoo Kang

Crack identification of stiffened plates by two-dimensional discrete wavelet transforms
J. M. Yang, C. N. Hwang and Yaubin Yang

Constitutive equation for cyclic plasticity phenomena under macroscopically elastic fatigue condition
Seiichiro Tsutsumi, Fionn Dunne, Koji Gotoh and Masahiro Toyosada

Probabilistic approach of strain energy density of materials
Kuen-Nan Lin and Tar-Zen Su
Session B-2 Welding and Line Heating (Tuesday, 7 October 2008)

03:20pm  Analysis and prediction of overlapping effect on plate forming by line heating
          Adan Vega, Sherif Rashed, Yoshihiko Tango, Morinobu Ishiyama and Hidekazu Murakawa

03:40pm  Measurement and analysis on weld initial deflection of stiffened plates
          Tak Kee Lee, Chae Whan Rim, Dae-Suk Han, Jae-Myung Lee and Byung Hyun Kim

04:00pm  Development of a temperature estimation technique for induction line heating process
          Naoki Osawa, Junji Sawamura, Morinobu Ishiyama, Yoshihiko Tango and Ryohei Sugimoto

04:20pm  Application of springback compensation algorithm for hull forming automation using multi-point forming in shipbuilding
          Jang Hyun Lee, Jong Seong Yoon, Se Yun Hwang and Hwang Beom Lee

8 October 2008 (Wednesday)

Session C-1 Noise and Vibration (Wednesday, 8 October 2008)

09:00am  Vibration characteristics of a rectangular tank with a horizontal plate to divide inside liquid
          Makoto Toyoda and Tomoki Sakurai

09:20am  Vibration study of heavy machinery in vessel with anti-resonance design concept
          Hyundong Cho, Youngmo Kong and Jooho Heo

09:40am  Radiated noise analysis for LNG carrier using power flow analysis method
          Sung-Hee Kim, Suk-Yoon Hong, Hyun-Wung Kwon and Jee-Hun Song

10:00am  Application of the Fourier-Kochin theory to the hydroelastic analysis of stationary floating structures
          Bahadir Üğurlu and Carlos Guedes Soares
10:20am Application of structural intensity analysis to reduce local structural vibration of a ro-ro passenger ferry

Dae-Seung Cho, Tae-Muk Choi, Jin-Hyeong Kim, Kyung-Soo Kim and Hyuk Kwon

Session C-2 Failure and Damage Analysis (Wednesday, 8 October 2008)

09:00am Analytical method for simulation of buckling and post-buckling behaviour of cylindrically curved plates under axial compression

Joo Shin Park, Kazuhiro Iijima, Tetsuya Yao and Masahiko Fujikubo

09:20am Comparison of structural strength according to the number of bottom girder for 180K bulk carrier based on CSR

Chun-Sik Shim, Kang-Kil Kim, Jeong-Hyun Hwang and Hun-Dong Lee

09:40am Target reliability for hull girder ultimate strength of bulk carriers and tankers by a risk model

Yuji Sasaki, Kazuhiro Iijima and Masahiko Fujikubo

10:00am An experimental study of torsional ultimate strength of a container ship


10:20am Study on the local stress evaluation technique for web stiffened cruciform joint subject to pressure loading

Naoki Osawa, Junji Sawamura, Shota Suzuki, Tsutomu Fujiwara and Masaki Kuwahara

10:40am Coffee Break

Session D-1 Operation and Maintenance (Wednesday, 8 October 2008)

11:00am Development of logistics simulation system by Petri net

Kunihiro Hamada, Mitsuru Kitamura, Masayuki Okimoto, Hiroshi Sorakubo and Krisana Punayangkool

11:20am Assessment of safety on the GPE blocks during on-shore transportation

Sung Chan Kim, Ki Sup Hong, Dae Kyun Shin, Byeong-Seok Yu, Gwan Heung Kim, Yong Seok Seo and Se Zin Paek
<table>
<thead>
<tr>
<th>Time</th>
<th>Session D-2 Loads and Hull Structural Responses (Wednesday, 8 October 2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00am</td>
<td>Long-term extreme value distribution of vertical bending moment of a ship</td>
</tr>
<tr>
<td></td>
<td>Shinichiro Kurata, Kazuhiro Iijima and Masahiko Fujikubo</td>
</tr>
<tr>
<td>11:20am</td>
<td>3-D F.E. analysis for cargo holds of CSR capesize bulker</td>
</tr>
<tr>
<td></td>
<td>ByungChang Ahn, ManSoo Kim</td>
</tr>
<tr>
<td>11:40am</td>
<td>Bow structure FEM analysis by considering bow flare impact and plunge for Containership</td>
</tr>
<tr>
<td></td>
<td>Shou-Hsiung Hsu, Ya-Jung Lee, Yi-Chih Kao and Chia-Neng Chen</td>
</tr>
<tr>
<td>12:00am</td>
<td>Motion characteristics of the downstream cylinder in tandem arrangements of two self-excited flexible in hanging-off circular cylinders in subcritical Reynolds numbers</td>
</tr>
<tr>
<td></td>
<td>Rudi Walujo Prastianto, Koji Otsuka and Yoshiho Ikeda</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Session E-1 Operations and Maintenance (Wednesday, 8 October 2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01:30pm</td>
<td>A study on the optimization of the container transportation network considering empty container flow</td>
</tr>
<tr>
<td></td>
<td>Tomohiro Yuzui and Makoto Arai</td>
</tr>
<tr>
<td>01:50pm</td>
<td>A study of the performance and economy of ballast-free ships with V-form sections</td>
</tr>
<tr>
<td></td>
<td>Yuji Arai and Makoto Arai</td>
</tr>
<tr>
<td>02:10pm</td>
<td>Ubiquitous marine structure inspection system based on mixed reality</td>
</tr>
<tr>
<td></td>
<td>Kyung-Ho Lee, Jung-Min Lee, Dong-Guen Kim and Young-Soo Han</td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>02:30pm</td>
<td>Design of a liner shipping network considering allocation of empty containers</td>
</tr>
<tr>
<td></td>
<td><strong>Session E-2 Loads and Hull Structural Responses (Wednesday, 8 October 2008)</strong></td>
</tr>
<tr>
<td>01:30pm</td>
<td>Comparative study on the bulkhead structure of ultra large container vessel</td>
</tr>
<tr>
<td>01:50pm</td>
<td>Assessment of stern slamming loads on large container carriers</td>
</tr>
<tr>
<td>02:10pm</td>
<td>Wet drop impact response analysis of cargo containment system in membrane type LNG carriers</td>
</tr>
<tr>
<td>02:30pm</td>
<td>Estimation of the maximum local stress of a container ship in each sea area on the trans-pacific route</td>
</tr>
<tr>
<td>02:50pm</td>
<td>Coffee Break</td>
</tr>
<tr>
<td></td>
<td><strong>Session F-1 Loads and Hull Structural Responses (Wednesday, 8 October 2008)</strong></td>
</tr>
<tr>
<td>03:20pm</td>
<td>On the parametric rolling of ships in regular and irregular waves</td>
</tr>
<tr>
<td>03:40pm</td>
<td>Ship docking analysis and planning in shipyard by grillage method</td>
</tr>
<tr>
<td>04:00pm</td>
<td>Finite element analysis of stiffened composite plate panels subjected to shock loading</td>
</tr>
<tr>
<td>04:20pm</td>
<td>Calculation of thermal stresses for a 7000 DWT oil tanker</td>
</tr>
</tbody>
</table>
Session F-2  Composites (Wednesday, 8 October 2008)

03:20pm  An experimental study on time-dependent characteristics of polyurethane foam
Tak Kee Lee, Min-Sung Chun, Chae Whan Rim and Yong-Suk Suh

03:40pm  Preliminary investigation of geopolymer matrix-ceramic fiber composites for high temperature structural applications
John W. Bridge, A. E. Grabher and Don Radford

04:00pm  A study on the application of hybrid panels with different core characteristics to hull structure
Yukichi Takaoka, Yohichi Kuwano, Masahiro Maeda and Takao Yoshikawa

04:20pm  Performances of glass reinforced plastics (GRP)/PVC sandwich T-joints in marine use under tension and compression loads
Gökdeniz Neşer, Çiçek Özdes, Ege Anıl Diler and Özgen Aydın

9 October 2008 (Thursday)

Session G-1 Structural Design and Optimization (Thursday, 9 October 2008)

09:00am  Structural optimization of the mid-ship section by applying genetic algorithm and neural network
Shinya Ohiwane, Shigehiro Mori and Takao Yoshikawa

09:20am  The development of production oriented design and knowledge base interface of ship structure design
Chen-Hsing Cheng and Chung-Ping Chen

09:40am  A study on a robust optimization of principal particulars
Kunihiro Hamada, Mitsuru Kitamura, Yoshifumi Takanobu and Souichi Yasui

10:00am  The optimum offset range on the top of T bar stiffener and bracket
Kyungseok Lee, Changhwa Yu, Sangyong Shon and Jungsin Che
10:20am  Application of ICP algorithm for optimized registration of object surface and unfolding surface in ship-hull plate forming

Jang Hyun Lee, Jong Sung Yoon, Cheolho Ryu and Hwang Beom Lee

Session G-2 Welding and Line Heating (Thursday, 9 October 2008)

09:00am  Strength and ductility of weld joint by heterogeneous nonlinear finite element method

Hirotaka Kihara, Yukiko Konno, Shigenobu Okazawa and Masahiko Fujikubo

09:20am  Design of induction heating coil for automatic hull forming system

Chang Doo Jang, Hyun Soo Ryu, Ho Kyung Kim and Do Won Seo

09:40am  Effect of deck welding sequence on panel buckling and welding deformation during block assembly of car carriers

Yusuke Tajima, Sherif Rashed, Yasuhiro Okumoto, Shigeki Sasaki, Hisashi Serizawa and Hidekazu Murakawa

10:00am  Prediction of welding distortion by 3D elastic FEM using inherent strain estimated through inverse analysis

Isaku Chimura, Hisashi Serizawa and Hidekazu Murakawa

10:20am  A systematic design of H/LTR methodology on autonomous diving and steering of unmanned underwater vehicles

Cheng-Neng Hwang, J.M. Yang, K.-L. Chen and Shun-Min Wang

10:40 am  Coffee Break

Session H-1 Operation and Maintenance (Thursday, 9 October 2008)

11:00am  A study on a method for a maintenance of floating platform considering remaining life benefit

Ryouji Iwata, Yasumi Kawamura, Tomonori Asa and Motohiko Murai

11:20am  Towards safer ships: how the use of active guidance systems on board may increase navigation safety

Luca Sebastiani, Giovanni Cusano, Alessandro Pescetto and Giorgio Bacicchi
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:40am</td>
<td>Preliminary study for controlling hydrodynamic performance of hydrofoils owing to the uneven surface structure with hemispherical asperity</td>
<td>Kei Shingu and Taishi Wada</td>
<td>473</td>
</tr>
<tr>
<td>12:00am</td>
<td>Smart material and distributed parameter control applications in hydrofoil design</td>
<td>Demir Sindel</td>
<td>479</td>
</tr>
</tbody>
</table>

**Session H-2 Failure and Damage Analysis (Thursday, 9 October 2008)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00am</td>
<td>A study on racking analysis for PCTC applied longitudinal stiffening system</td>
<td>Tae-Yong Kim, Young-Dal Choi, Sung-Kwang Shin, Kyu-Ho Lee, Hyung-Ju, Nam and Sung-Eun Kim</td>
<td>482</td>
</tr>
<tr>
<td>11:20am</td>
<td>Nonlinear FEM analysis of pitted mild steel plate subjected to in-plane compression</td>
<td>Xiaoli Jiang and Carlos Guedes Soares</td>
<td>489</td>
</tr>
<tr>
<td>11:40am</td>
<td>Design equation for the ultimate capacity of intact and grounded double hull tankers designed according to the common structural rules</td>
<td>Arwa W. Hussein and Carlos Guedes Soares</td>
<td>497</td>
</tr>
<tr>
<td>12:00am</td>
<td>Comparison study of the crashworthiness for different types of sandwich Structures</td>
<td>C.F. Hung, K.R. Chen and B.J. Lin</td>
<td>506</td>
</tr>
</tbody>
</table>