27th of August, Thursday

**Opening speech**
P. Kujala, Aalto University

**Keynote lectures**
- A Nautical Traffic Model from the Perspective of Ship Maneuverability and Collision Avoidance
  - J. M. Mou, Wuhan University of Technology
- The Vessel Triage System
  - J. Nordström, Finnish Border Guard, SAR and Maritime Safety Unit, Helsinki, Finland

**Maritime Transportation Models - TRA**
*Chair: J.M. Mou, Wuhan University of Technology, China*

1. Stochastic model of ships traffic congestion in waterways for two different traffic solutions based on Świnoujście – Szczecin case study
  - L. Gucma, A. Bąk, and M. Gucma

2. Estimating Port Network Traffic Capacity
  - X. Bellsolà Olba, W. Daamen, T. Vellinga, S.P. Hoogendoorn

3. Vessel Classification Method based on Vessel Behavior in the Port of Rotterdam
  - Y. Zhou, W. Daamen, T. Vellinga, S. P. Hoogendoorn

4. SHEBA Sustainable shipping and environment of the Baltic Sea region
  - J-P Jalkanen

5. A method for ice-aware maritime route optimization
  - R. Guinness
27th of August, Thursday

Maritime Transportation Risk Models - RISK
Chair: M. Gucma, Maritime University of Szczecin, Poland
A.P. Teixeira, University of Lisbon, Portugal

1. Risk Analysis of Maritime Accident in Estuary: a Case Study of Shenzhen Waters
   P. Chen, J. Mou, and Y. Li

2. Avoiding Collisions, Enhancing Marine Safety – A Simplified Model for the Aegean Sea
   N. P. Ventikos, D. K. Rakas

3. Tanker grounding frequency and spills in the Finnish Gulf of Finland
   O-V. E. Sormunen, M. Hänninen, J. Härkkinen, and Antti Posti

4. Assessing the Impacts to Vessel Traffic from Offshore Wind Farms in the Thames Estuary
   A. Rawson, E. Rogers

   H. Rong, A. P. Teixeira and C. Guedes Soares

6. Unmanned ship simulation with real-time dynamic risk index
   M. C. ter Brake, E. (W.H.) van Iperen, D. Looije, Y. Koldenhof

7. The Environmental Ship Index of the IAPH
   T. Vellinga

28th of August, Friday

Keynote lectures

Modeling of exhaust emissions from ships
J-P Jalkanen, Finnish Meteorological Institute

Capsizing of m/v Sewol in Korean waters- accident and its investigation
K. Hasegawa, Osaka University, Japan

Integrated and ecobased port design
T. Vellinga, Delft University of Technology

Safety of Maritime Transportation - SAFE
Chair: K. Hasegawa, Osaka University, Japan

1. Adapting ACAS for the Maritime Domain
   M. Baldauf, R. Mehdì, H. Deeb, K. Benedict, C. Krüger, S. Fischer, M. Gluch

2. Agent-based Approach to Illegal Maritime Behavior Modeling
   O. Hrstka, O. Vanek, S. Kopriva, J. Zelinka, J. Faigl, M. Pechoucek

3. Utilizing Geographic Information Systems tools for risk-informed maritime Search and Rescue performance evaluation
   F. Goerlandt, E. Venäläinen, M. Siljander

4. Bi-objective Maritime Route Planning in Pirate Infested Waters
   O. Vanek, O. Hrstka, S. Kopriva, J. Faigl, M. Pechoucek

5. Possible Approach for “Human Factor” Estimation
   V. Goncharov
28th of August, Friday

**Winter navigation - WINT**
*Chair: J. Montewka, Finnish Geospatial Research Institute*

1. **Real-time winter traffic simulation tool - based on a deterministic model**  
   M. Lindeberg, J. Toivola, H. Niemelä and P. Kujala

2. **Interaction of ships while navigation among ice floes**  
   V. Goncharov, N. Klementieva, E. Zueva

3. **Analyzing the winter traffic by combining AIS data and ice information**  
   M. Lensu

**BONUS program session**
*Chair: F. Goerlandt, Aalto University, Espoo, Finland*

1. **ESABALT**  
   S. Thombre

2. **STORMWINDS**  
   F. Goerlandt

3. **GEOWATCH**  
   I. Heiler

4. **SWERA**  
   J. Rytkönen

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29th of August, Saturday

0830 - 2100 Round trip to Tallinn, with the onboard discussion on the workshop topic areas. In Tallinn – city sightseeing (bus and foot), lunch, two hours of free time. On our way back to Helsinki we will have dinner on the ferry.
# 4th International Workshop on Nautical Traffic Models 2015. Program overview

## 26th of August, Wednesday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1800</td>
<td>Registration</td>
<td>AALTO UNIVERSITY, OTAKAARI 3, 02150 ESPOO</td>
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<tr>
<td>0830</td>
<td>Registration and morning coffee</td>
<td>AALTO UNIVERSITY, OTAKAARI 3, AUDITORIUM</td>
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<tr>
<td>0900</td>
<td>Opening of the 4th IWNTM</td>
<td>Professor Pentti Kujala</td>
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<tr>
<td>0915</td>
<td>Keynote lectures</td>
<td>Jun Min Mou &amp; Jori Nordström</td>
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<tr>
<td>1010</td>
<td>Coffee break</td>
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<tr>
<td>1030</td>
<td>Maritime Transportation Models</td>
<td>TRA1, TRA2, TRA3, TRA4</td>
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<tr>
<td>1200</td>
<td>Lunch</td>
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<tr>
<td>1300</td>
<td>Maritime Transportation Risk Models</td>
<td>TRA5, RISK1, RISK2, RISK3</td>
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<tr>
<td>1430</td>
<td>Coffee break</td>
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<tr>
<td>1500</td>
<td>Maritime Transportation Risk Models</td>
<td>RISK4, RISK5, RISK6, RISK7</td>
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<tr>
<td>1900</td>
<td>Dinner at Restauran Kilim, Mäntyviita 2, 02110 Espoo, Tapiola</td>
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## 27th of August, Thursday

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>0900</td>
<td>Keynote lectures</td>
<td>Kazuhiko Hasegawa / Jukka-Pekka Jalkanen / Tiedo Vellinga</td>
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<tr>
<td>1015</td>
<td>Coffee break</td>
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<tr>
<td>1030</td>
<td>Safety of Maritime Transportation</td>
<td>SAFE1, SAFE2, SAFE3, SAFE4</td>
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<tr>
<td>1200</td>
<td>Lunch</td>
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<tr>
<td>1300</td>
<td>Winter Navigation</td>
<td>SAFE5, WINT1, WINT2, WINT3</td>
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<tr>
<td>1430</td>
<td>Coffee break</td>
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<tr>
<td>1500</td>
<td>BONUS Session</td>
<td>ESABALT, GEOWATCH, STORMWINDS, SWERA</td>
</tr>
<tr>
<td>1730</td>
<td>Social evening, 1.5 hour guided tour in Helsinki, dinner at Saaga restaurant, Bulevardi 34, 00120 Helsinki</td>
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## 28th of August, Friday

<table>
<thead>
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<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>0830</td>
<td>Trip to Tallinn. Round-table discussion: current issues and future research needs in the conference topic areas.</td>
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<tr>
<td>1130</td>
<td>Visit in Tallinn</td>
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<tr>
<td>1845</td>
<td>Return to Helsinki</td>
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