

## PROGRAMME (1<sup>st</sup> week)

### Monday 3<sup>th</sup> November 2008

14.15-18.00

Linear theory of wave systems. Generation of wind waves. Stochastic model of wind waves. Wave spectra. (*C. Guedes Soares, IST*)

### Tuesday 4<sup>th</sup> November 2008

14.15-18.00

Short and Long term probabilistic models of wave elevation and crest heights. Extreme values of wave elevation and crest heights. (*C. Guedes Soares, IST*)

### Wednesday 5<sup>th</sup> November 2008

14.15-18.00

Wave loads on floaters with advance speed. Linear and non-linear strip theory. (*N. Fonseca, IST*)

### Thursday 6<sup>th</sup> November 2008

14.15-18.00

Wave loads in irregular seas. Design wave load predictions by linear and non-linear strip theories. (*N. Fonseca, IST*)

### Friday 7<sup>th</sup> November 2008

14.15-16.00

Wind and wind loads. Wind spectrum. Wind loading on ships and offshore structures. (*J. Prpić-Oršić, FE*)

## PROGRAMME (2<sup>nd</sup> week)

### Tuesday 2<sup>nd</sup> December 2008

14.15-18.00

Global hydro-structure interactions in seakeeping (nonlinear quasistatic interactions, springing, whipping, coupling with 3D FEM,...). (*Š. Malenica, BV*)

### Wednesday 3<sup>rd</sup> December 2008

14.15-18.00

Local hydro-structure interactions in seakeeping (slamming, sloshing, green water,...) (*Š. Malenica, BV*)

### Thursday 4<sup>th</sup> December 2008

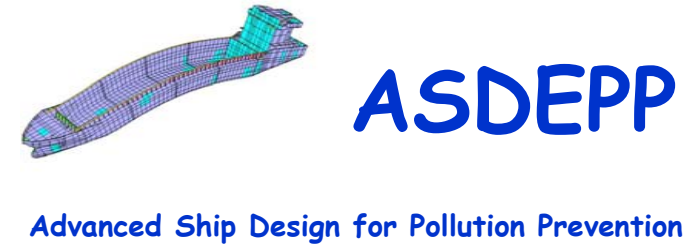
14.15-18.00

Winter navigation principles. Properties of ice. Definition of ice conditions. Model scale testing in ice. (*P. Kujala, HUT*)

### Friday 5<sup>th</sup> December 2008

14.15-18.00

Determination of ice loads. Statistical nature of ice induced loads. Ice induced damages of the hull. Ice rules. (*P. Kujala, HUT*)



## Modelling of Environment and Environmental Loads



### Course announcement

3-7<sup>th</sup> November 2008  
2-5<sup>th</sup> December 2008  
Rijeka, Croatia

## About the Course

The main aim of the lectures is to provide theoretical background and numerical modelling techniques that are necessary for rational determination of design values of environmental parameters and environmentally-induced loads for ship structural design.

The syllabus will include: basic elements of wind and wind loads; waves, stochastic models and extreme values; ice and ice loads; wave loads.

For more information about course please visit **ASDEPP** web page: <http://www.mar.ist.utl.pt/asdepp>.

## Lecturers

Prof. Carlos Guedes Soares, IST, Portugal  
Prof. Nuno Fonseca, IST, Portugal  
Prof. Šime Malenica, Bureau Veritas, France  
Prof. Pentti Kujala, HUT, Finland  
Prof. Jasna Prpić-Oršić, FE Rijeka, Croatia

## Who should attend

Course targets three main groups of students:

- a. **post-graduate Master of Naval Architecture (MNA) students.** Each course could bring up to 4 ECTS credits. Exercises and examinations will be organized using distance learning internet-based methods.
- b. **PhD students in Naval Architecture and Ocean Engineering.** Each course could bring up to 10 ECTS credits. Exercises, seminar work and examinations will be organized using distance learning internet-based methods.
- c. **Naval Architects and Marine Engineers** (shipyards, design offices, classification societies, personnel from Local Authorities, facilities operating companies ...).

## Cost

The cost of the course is covered by **EU Tempus Programme**. Therefore, registration fees are not required to attend courses and to receive course papers.

Students should make their own arrangements for travel and accommodation, although we can help by providing list of nearby hotels or budget accommodation.

For more information on accommodation in Rijeka please visit <http://www.tz-rijeka.hr/>.

## Admission

If you belong to group **a.** or **b.** and wish to participate in the course, E-mail should be sent to **ASDEPP Secretary** with short CV. Please note that for final acceptance, students will need to provide support letter by head of their study, department or research project on which they are working. Engineers from industry sector need to send E-mail with short CV to **ASDEPP Secretary** in first instance, while for final acceptance they will need to provide support letter of their company.

## Deadline

Deadline for submitting final application for the course with support letter is **20<sup>th</sup> October 2008**.

## Contact

### ASDEPP Secretary:

Mrs. Silvana Škoko Gavranović  
Faculty of Mechanical Engineering and Naval Architecture  
University of Zagreb  
Ivana Lučića 5  
10000 Zagreb  
Croatia  
E-mail: [silvana@fsb.hr](mailto:silvana@fsb.hr)

## Location



The course will be held at the **Faculty of Engineering, University of Rijeka (FE)** <http://www.riteh.hr>.

The **Faculty of Engineering** as a part of the **University of Rijeka** completely meets the needs of Primorsko-Goranska, Istarska and Ličko-Senjska Croatian Counties for graduate and undergraduate engineers in the fields of Mechanical Engineering, Naval Architecture and Electrical Engineering. The Faculty of Engineering enables students to earn the academic title of Master of Science and Doctor of Science in scientific fields of Mechanical Engineering, Naval Architecture and other fundamental engineering sciences.

**Rijeka** (in Croatian mean 'river') is the principal seaport of **Croatia**, located on Kvarner Bay, an inlet of the Adriatic Sea. It has 144,043 inhabitants (270,000 for greater area) and is Croatia's third largest city. Rijeka is the center of Primorje-Gorski Kotar County in Croatia. The city's economy largely depends on sea transport, ship-building (shipyards "3.May" and "Viktor Lenac") and tourism.

Rijeka hosts the Croatian National Theatre "Ivan pl. Zajc", first built in 1765, as well as the University of Rijeka, founded in 1632.

