

## About the Course

The course aims to provide participants with an understanding of the fundamental elements of risk analysis and structural reliability. It will also introduce the concepts of uncertainty modelling in load and strength applications. Practical applications for the safety assessment of engineering structures, considering the key techniques involved, will be highlighted. Emphasis will be on the use of reliability engineering methods in offshore and marine structures.

The syllabus will include: basic elements of the safety case concept, hazard identification techniques, risk assessment, risk reduction, safety management systems, uncertainties in load and strength predictions, structural reliability and the goal-setting approach to safety.

The course is intended for practising engineers and research scientists who need to understand the concepts behind risk analysis and structural reliability, to interact with experts in safety management or to begin to undertake a more extensive study of the subject.

## Who Should Attend

Engineers, managers and scientists involved in design, assessment and management of a wide range of public and industrial facilities. Personnel from Local Authorities, major facilities operating companies will benefit from attending this course.

Previous participants (Nov 2006): Lloyds Register, Germanischer Lloyd, LMS International, Fraser Nash Consultants, CTO, ABS, DNV, Defence R&D Canada, NAVANTIA, Zagreb Uni, Italian Defence, Uni. Of Genoa, Loughborough Uni. Virgin Tech., COPPE, MoD, Uni. Of Newcastle, MCA, QinetiQ.

## PROGRAMME

### Monday 26<sup>th</sup> November 2007

08.15 - 09.00 Delegate Registration

09.00 - 10.30 Risk Analysis Techniques I  
*Prof. P. Friis-Hansen, DTU, Denmark*

10.30 - 10.45 *Break*

10.45 - 12.15 Risk Analysis Techniques II  
*Prof. P. Friis-Hansen, DTU, Denmark*

12.15 - 13.30 *Lunch*

13.30 - 15.00 Probabilistic Load Modelling  
*Prof. C. Guedes Soares, IST, Portugal*

15.30 - 17.00 Probabilistic Strength Modelling  
*Prof. C. Guedes Soares, IST, Portugal*

### Tuesday 27<sup>th</sup> November 2007

9.00 - 10.30 Structural Reliability Analysis I  
*Prof. P. K. Das, Universities of Glasgow & Strathclyde, UK*

10.30 - 10.45 *Break*

10.45 - 12.15 Structural Reliability Analysis II  
*Prof. P. K. Das, Universities of Glasgow & Strathclyde, UK*

12.15 - 13.30 *Lunch*

13.30 - 15.00 Monte Carlo Simulation  
*Dr. Y. Pu, University of Newcastle upon Tyne, UK*

15.00 - 15.30 *Break*

15.30 - 17.00 Response Surface Methods  
*Prof. B. Leira, NTNU, Norway*

**19.30 - 21.30 *Workshop Dinner***

### Wednesday 28<sup>th</sup> November 2007

09.00 - 10.30 Reliability of Maintained Structures  
*Prof. Y. Garbatov, IST, Portugal*

10.30 - 10.45 *Break*

10.45 - 12.15 Reliability based code development  
*Prof. E. Rizzuto, University of Genoa, Italy*

12.15 - 13.30 *Lunch*

13.30 - 15.00 Comparison of JTP & JBP rules with other class rules in ship design.  
*Prof. E. Rizzuto, University of Genoa, Italy*

15.00 - 15.30 *Break*

15.30 - 17.00 Structural Reliability Analysis Software: Background & Demonstration  
*Prof. P.K. Das, Universities of Strathclyde & Glasgow*

## REGISTRATION FORM

Name \_\_\_\_\_

(Please print)

Organisation \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

I wish to register for the Workshop at a cost of £650 [£400 for students only]

I enclose a cheque for £650 [£400 for students only]

Please invoice me at the above address

Please send me information on local hotels

Signature \_\_\_\_\_

Date \_\_\_\_\_

The completed form, together with a cheque in pounds Sterling payable to *University of Strathclyde* should be sent to:

MARSTRUCT Secretariat  
Dept. of Naval Architecture and Marine Engineering,  
Universities of Glasgow and Strathclyde  
Henry Dyer Building, 100 Montrose Street  
Glasgow G4 0LZ, Scotland, by 15<sup>th</sup> November 2007.

**No refunds will be possible after 30th October 2007. However, the attendance of a replacement participant is permitted.**

## Cost

The cost of the Workshop will be £650 (pounds sterling) including registration, Workshop papers and Workshop dinner for authors and delegates. Students may apply to attend at the reduced rate of £400. You should make your own arrangements for accommodation, although we can help by providing lists of nearby hotels and budget accommodation. For more information on accommodation in Paris please visit [www.parisinfo.com](http://www.parisinfo.com) or [www.visit-paris.com](http://www.visit-paris.com).

## Venue

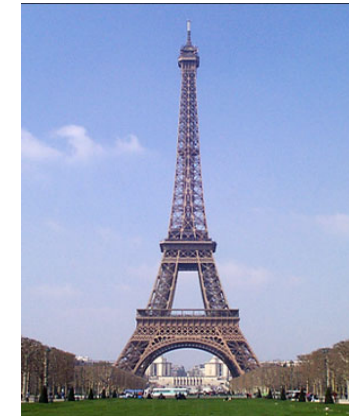
Ibis Accor Hotel  
Pont de Neuilly/Défense  
1 – 4, boulevard de Nully  
92081 Paris La Défense Cedex  
France

## Contact

Professor P.K. Das  
Department of Naval Architecture and Marine  
Engineering Universities of Glasgow and Strathclyde  
Henry Dyer Building  
100 Montrose Street  
Glasgow G4 0LZ  
Scotland  
Tel: +44 (0) 141 548 3462  
Fax: +44 (0) 141 552 2879  
Email: [p.k.das@na-me.ac.uk](mailto:p.k.das@na-me.ac.uk)



## Risk Analysis and Structural Reliability



**26 – 28<sup>th</sup> November 2007**

**Paris, France**