

## About the Course

The methods of advanced structural analysis meet the needs of increasing sophistication in standards by providing more accurate methods of predicting the structural behaviour and allowing for simplified design techniques. The objective of the course is to provide an update, which reflects changes and developments in the state-of-the-art in structural analysis and design. It will introduce direct design applications while at the same time improving the basic understanding of non-linear structural behaviour. Emphasis will also be given to conceptual design methods. Both ultimate and fatigue limit state will be covered. The ability to handle the structural aspects of innovative designs will be increased. It will also help to produce more efficient structural designs, based upon rational analysis and evaluation methods. Improved structural design-analysis expertise should lead to more efficient structures in some cases and to improved in-service performance in others.

## Who Should Attend

Engineers and scientists involved in the design and assessment of engineering structures, e.g. towers, bridges, offshore structures etc. Personnel from oil companies, consultancy organisations, classification societies and certifying authorities will benefit from attending this course.

## Previous participants

This will be the fourth time this course has been offered and 40 public and industrial organisations have sent staff to attend, including: ABS, Amerada Hess, Babcoc Group, BAE Systems, Bluewater Engineering (Netherlands), Bomel Ltd, Cetena (Italy), Corus, DERA, DNV, East Ayrshire Council, Germanischer Lloyd, Halcrow Crouch, HSE, MoD, Lloyd's Register, Scottish Office, Welsh Office, Weidlinger Associates Ltd, and many universities.

## PROGRAMME

### Monday 10 May 2010

08.30-09.00	Delegate Registration
09.00- 10.30	Introduction to Non-linear Computational Modelling in Structural Mechanics <i>Professor N. Bicanic</i>
10.30-11.00	<i>Break</i>
11.00-12.30	Computational Plasticity <i>Professor N. Bicanic</i>
12.30-13.30	<i>Lunch</i>
13.30-15.00	Non-linear FEA and Solution Schemes <i>Dr C. Pearce</i>
15.00-15.30	<i>Break</i>
15.30-17.00	Non-linear FEA and Solution Schemes <i>Dr C. Pearce</i>

### Tuesday 11 May 2010

09.00-10.30	Non-linear Solution Methods (Geometrical & Material) <i>Professor R. Dow</i>
10.30-11.00	<i>Break</i>
11.00-12.30	Practical Application of Non-linear Problems <i>Professor R. Dow</i>
12.30-13.30	<i>Lunch</i>

13.30-15.00	Application of Fatigue and Fracture Analysis for Onshore and Offshore Structures – I <i>Professor N. Barltrop</i>
15.00-15.30	<i>Break</i>
15.30-17.00	Analysis and Design of Unstiffened and Stiffened Plates I <i>Professor P.K. Das</i>
18.30-21.30	<i>Course Dinner</i>

### Wednesday 12 May 2010

09.00 –10.30	Application of Fracture Analysis using Finite Element techniques II <i>Professor N. Barltrop</i>
10.30-11.00	<i>Break</i>
11.00- 12.30	Analysis and Design of Unstiffened and Stiffened Plates – II <i>Professor P.K. Das</i>
12.30-13.30	<i>Lunch</i>
13.30-14.30	Unstiffened &Stiffened Shells I <i>Professor P.K. Das</i>
14.30-15.30	Unstiffened &Stiffened Shells II <i>Professor P.K. Das</i>
15.30-16.00	<i>Break</i>
16.00-17.00	Workshop: Fatigue and Fracture Analysis – III <i>Professor N. Barltrop</i>
17.00	<i>Closure</i>

## REGISTRATION FORM

Name \_\_\_\_\_

(Please print)

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

I wish to register for the Course at a cost of £650 including course material, lunches and course dinner

I enclose a cheque for £650

Please invoice me at the above address

Please send me information on local hotels

Signature \_\_\_\_\_

Date \_\_\_\_\_

The completed form should be sent by 10 April 2010 to:

University of Strathclyde, Dept. of NA-ME, Henry Dyer Building, Glasgow G4 0LZ

**No refunds will be possible after 10 April 2010 but the attendance of a replacement participant is permitted.**

### Cost

The cost of the workshop will be £650 (pound sterling) including registration, Workshop papers and Workshop dinner for authors and delegates. 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 Glasgow please visit [www.seeglasgow.com](http://www.seeglasgow.com).

### Payment

Payments can be made by cheque (made payable to University of Strathclyde), cash, bank transfer or credit card. Please enquire for details.

### Venue

Dept. of Naval Architecture & Marine Engineering  
Henry Dyer Building, University of Strathclyde  
100 Montrose Street  
Glasgow G4 0LZ  
Scotland, UK

### Contact

*Prof. P.K. Das*

Dept. of Naval Architecture & Marine Engineering,  
Henry Dyer Building, 100 Montrose Street, Glasgow  
G4 0LT, Scotland, UK

**E** [p.k.das@na-me.ac.uk](mailto:p.k.das@na-me.ac.uk)

**W** [www.strath.ac.uk/na-me](http://www.strath.ac.uk/na-me)

**T** +44 (0)141-548-3462

**F** +44 (0)141-552-2879



## Design by Advanced Structural Analysis

**10 – 12 May 2010**

**Glasgow, UK**