About the Course

With the escalation of the possibility of terrorist attacks on the transportation and building infrastructure, engineers and scientists are in a position to investigate the consequences of such attacks on both people and equipment. There are ongoing research to investigate the vulnerability of passenger/car ferries and cruise ships/liners to terrorist attack from explosive devices, and to investigate the resultant levels of damage and casualties. This is done using advanced numerical modelling techniques to investigate both the physics and damage mechanisms involved; using the results of these studies to look at design for blast resistance and methods of mitigating the extent of damage cause by the blast; then coming up with design criteria which can be used by designers, builders and operators to improve safety and protection of both people and equipment.

The syllabus will include: Characterisation of the blast wave, modelling of blast loading, both internal and external, Characterisation of the material performance at high loading rates, Looking at the structural response of typical ship designs and the damage mechanisms involved, Investigation of alternative structural arrangements to be more damage tolerant, Prediction of pressures generated in area surrounding blast zone and subsequent damage to people and equipments, Modelling using both deterministic and probabilistic methods, Development of simplified design criteria.

The course is intended for Engineers, Operations' managers, Applied Scientists and Technologists interested in design & structure under blast loading.

On completion of the course you will be able to apply a sound knowledge of various technologies for checking response of structures under blast loading.

Who Should Attend

Engineers, managers and scientists involved in design, assessment and management of a wide range of engineering structures.

PROGRAMME

Monday 1 December 2008

08.15 - 09.00	Delegate Registration
09.00 – 10.30	Overview of Structure Response to blast loading *N. Misselbrook, Weidlinger Associates Ltd.*
10.30 - 10.45	*Break*
10.45 - 12.15	Characterisation of blast wave & modelling *Prof. CP Vendhan*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Modelling of internal blast loading *S. Pahos*
15.00 – 15.30	*Break*
15.30 - 17.00	Modelling of external blast loading *Prof. CP Vendhan*

Tuesday 2 December 2008

9.00 - 10.30	Characterisation of material performance at high loading rates *Prof. CP Vendhan*
10.30 - 10.45	*Break*
10.45 - 12.15	Structural analysis based on analytical approach Prof *P.K. Das*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Non-linear analysis methods – I *Prof. CP Vendhan*
15.00 - 15.30	*Break*
15.30 - 17.00	Non-linear analysis methods – II *Prof. CP Vendhan*
19.30 - 21.30	***Workshop Dinner***

Wednesday 3 December 2008

09.00 - 10.30	Elasto-plastic analysis methods *Prof. CP Vendhan*
10.30 - 10.45	*Break*
10.45 - 12.15	Application to ship structures *S. Pahos*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Application to submarine structures *N. Misselbrook, Weiidlinger Associates Ltd*
15.00 - 15.30	*Break*
15.30 - 17.00	Application to building structures *N. Misselbrook, Weidlinger Associates Ltd.*
17.00	*Closure*

REGISTRATION FORM

Name _____
(Please print)
Address _____

_____

_____

Telephone _____
Fax _____

Email _____

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

☐ I enclose a cheque for £650 + VAT (£113.75)

☐ 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 by **15 November 2008 to:**

ASRANet Ltd., 141 St. James Road, Glasgow G4 0LT

No refund will be possible after 15 November 2008 but the attendance of a replacement participant is permitted.

Cost

The cost of the workshop will be £650 + VAT (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.

Venue

Dept. of Naval Architecture & Marine Engineering
University of Strathclyde
Henry Dyer Building
100 Montrose Street
Glasgow G4 0LZ
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Structural Response under Blast Loading

1 – 3 December 2008

(A spin-out company of the Universities of Glasgow & Strathclyde)

Glasgow, UK