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 practicing 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 engineering structures. Personnel from Local Authorities, major facilities operating companies will benefit from attending this course.

Previous participants: 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

Wednesday 29 August 2012

08.15 - 09.00	Delegate Registration
09.00 – 10.30	Basic Probability -I *Prof. John Quigley*
10.30 - 10.45	*Break*
10.45 - 12.15	Basic Probability -II *Prof. John Quigley*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Risk Analysis Techniques I *Prof. John Quigley*
15.00 – 15.30	*Break*
15.30 - 17.00	Risk Analysis Techniques II *Prof. John Quigley*

Thursday 30 August 2012

9.00 - 10.30	Structural Reliability Analysis I *Prof. PK. Das*
10.30 - 10.45	*Break*
10.45 - 12.15	Structural Reliability Analysis II *Prof. P.K. Das*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Monte Carlos Simulation I *Dr. Y. Pu*
15.00 - 15.30	*Break*
15.30 - 17.00	Response Surface Methods *Dr Y Pu*

Friday 31 August 2012

09.00 - 10.30	Application to Ship & Offshore Structure Design *Prof. PK Das*
10.30 - 10.45	*Break*
10.45 - 12.15	Application to Subsea Systems *Dr S Sriramula*
12.15 - 13.30	*Lunch*
13.30 - 15.00	Reliability Based Code Development *Dr S Sriramula*
15.00 - 15.30	*Break*
15.30 - 17.00	Structural Reliability Analysis Software: Background & Demonstration *Prof. PK Das*
17.00	*Closure*

REGISTRATION FORM

Name _____
(Please print)
Address _____

_____

_____

Telephone _____

Email _____

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

☐ I enclose a cheque for £650 + VAT

☐ Please invoice me at the above address

☐ Please send me information on local hotels

Disclaimer

All materials and information supplied during and associated with this course are intended purely for instructional purposes. Whilst every effort is taken to ensure that materials provided are accurate and suitable for training purposes, ASRANet Ltd accepts no responsibility for their accuracy or utility.

Signature _____

Date _____

The completed form should be sent by **20 August 2012 to:**

ASRANet Ltd.
50 Richmond Street, Glasgow G1 1XP

Cost

The registration fee of the workshop will be £650+VAT (pound sterling) which includes course notes and lunches. You should make your own arrangements for accommodation.

For more information on accommodation in Glasgow please visit www.seeglasgow.com.

Payment

ASRANet Ltd. accepts payment by cheque, cash and bank transfer. Please contact for further details.

Venue

ASRANet Ltd.
50 Richmond Street
Glasgow G1 1XP
Scotland, UK

Contact

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Risk Analysis and Structural Reliability

29-31 August 2012

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

Glasgow, UK

CVs of Lecturers:

Prof. Purnendu Das, BE, ME, PhD, C.MarEng, FIMarEST, C.Eng, FRINA, FIStructE is Director of 'ASRANet Ltd' (a maritime spin out company of the Universities of Glasgow and Strathclyde) and Ex-Professor of Marine Structures, University of Strathclyde, Glasgow. Recent EU projects are MARSTRUCT (a network of excellence on Marine Structure) and DIVEST (Dismantling of Vessels with Enhanced Safety and Technology). Industrial projects are with the UK Health and Safety Executive, Subsea-7, the UK and US navies. He has previously been the principal investigator of many EPSRC projects. Before joining the University of Glasgow he worked with British Maritime Technology as principal Structural Engineer (1984-91). He is author of more than 250 publications, including contract reports and more than 60 journal papers. He is a member of the editorial boards of 8 journals which includes 'Journal of Marine Structures', 'Journal of Ship & Offshore Structures' ,'Journal of Engineering under Uncertainty: Hazards, Assessment and Mitigation', 'Journal of Ocean and Climate System' and amongst others. His areas of research include ultimate strength & reliability analysis of ship & offshore structures. He has been running various successful CPD courses which have attracted many people from different industries. He is now a member of ISSC Committee (International Ship and Offshore Structure Congress). From 2002, he is organising the international ASRANet Conference (Network for Integrating Structural Analysis, Risk and Reliability), which is held every 2 years and the 6th International ASRANet Conference will be held in London in July 2012.

Prof. John Quigley gained a BMath in Actuarial Science from the University of Waterloo, Canada and a PhD in Management Science from the University of Strathclyde. John's main research interests lie in the development of models to support decision-making under uncertainty. He is interested in the acquisition of different data, both objective and expert judgement, and its integration within a common stochastic framework to facilitate decision-making. He was an investigator on the REMM (Reliability Enhancement Models and Methods) project, where he developed stochastic models, processes for data analysis and elicitation of expert judgement to support the decision making concerning the design and development of reliable aerospace systems. His work on reliability growth modelling and inference makes a core contribution to international standards IEC 61164 and forms part of BS5760. John has extensive experience with military, aerospace and railway industries and has been involved in consultancy with companies such as MoD, DSTL, RSSB, BAE SYSTEMS, Goodrich, Siemens and NASA.

Dr Srinivas Sriramula is a Lecturer in Safety & Reliability in the School of Engineering at the University of Aberdeen since August 2009. Prior to that, he was a Postdoctoral Researcher at the University of Surrey on the CREDO (Composites Reliability from Engineering Design Optimisation) project. He has received PhD from the Indian Institute of Technology Madras focusing on Copula based Simulations for Engineering systems and have a Masters degree in Structural Engineering and a Bachelors degree in Civil Engineering. His current research interests are in Modelling and updating the reliability of subsea structures based on intelligent monitoring systems, Safety analysis and stochastic modelling for renewable energy facilities and in the Multi-scale stochastic mechanics of composites. He has published a number of papers in peer-reviewed journals and conferences. He is presently involved in different projects assessing the reliability of subsea systems in a risk based framework.