EDUCATION AND PROFESSIONAL DEVELOPMENT OF ENGINEERS IN THE MARITIME INDUSTRY
7 - 8 DECEMBER 2011
NEWCASTLE UNIVERSITY, UK
This represents a preliminary programme.
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12.05 - 12.40
MULTI-DISCIPLINARY EDUCATION PROGRAM ON CRUISE SHIP DESIGN
J Rommelaere, P. Kujala, M Ahola and M. Remes, Aalto University, Finland
This paper presents the multi-disciplinary international education program for cruise ship design at Aalto University. It aims to educate professionals who master technology, economics and design and artistic factors in cruise ship design. The program is based on modular structure where the student can direct the curriculum towards his/her own specialization field. The program uses Problem-Based-Learning concept, emphasizes group work in multi-disciplinary research teams and life-long-learning, and is strongly linked to industry. In the end of the studies the program offers opportunity for the most promising students to participate on three inter-linked Master's thesis program where the students investigate a common research question from three different perspectives, i.e. technology, economics and arts/design. The experiences on the programme have been extremely positive from academia and Industry. The program is presently mainly intended to education on Master's level and is developed further, aiming for Doctoral education.

10.05 - 10.40
TEACHING NAVAL ARCHITECTURE: FOSTERING GRADUATE KNOWLEDGE AND UNDERSTANDING
PN Wright, Newcastle University and KW Hutchinson, Babcock International Group, UK
This paper will provide an outline of the current curriculum, course structure and key learning outcomes in the undergraduate teaching of Naval Architecture and Ship Design at Newcastle University to both BEng and MEng level. This will include the role of accreditation of such programmes by RINA either independently or on behalf of the Engineering Council. It will also examine how generic graduate skills are fostered at University as well as the possible implications of current changes to higher education in 2012. Recent trends in the internationalisation of both undergraduate and postgraduate courses will also be examined. The paper will also compare the different routes of achieving the academic requirements for subsequent registration with the EC. Finally the paper will provide some thoughts on how beneficial industrial exposure at University can be and how important the subsequent formative initial industrial development phase is on graduating and the need for comprehensive initial professional industry training schemes to meet and foster these needs.

10.40 - 11.00
A GRADUATE'S VIEW
E Beckett, Lloyd's Register, UK

11.00 - 11.30
COFFEE

11.30 - 12.05
AN INNOVATIVE MULTI-DISCIPLINARY PROGRAMME TO FOSTER MARITIME ENGINEERING STUDENTS’ COMPLEX PROBLEM SOLVING SKILLS THROUGH PRACTICAL ACTIVITIES AT SEA
Assoc. Prof. G. Thomas, Mr P Furness & Dr T Gaston Australian Maritime College, University of Tasmania, Australia
To address th requirement for students complex cross-disciplinary problem solving skills we have created a unique programme of teaching and learning voyages for Bachelor of Engineering (BE) maritime engineering students on the Australian Maritime College’s vessel Bluwin. These voyages provide a powerful learning experience for students by providing the environment to solve a large range of practical problems, which all link closely with their theoretical classroom learning. The engineering teaching and learning voyages consist of the following key components:
- Real engineering problems, each with a strong practical work component.
- Use of cross-discipline projects from the fields of marine ecology and fisheries technology.
- Students working on their projects in teams of three or four members.
- Living and working aboard a vessel with crew, academics and classmates.
- A strong focus on development and assessment of generic graduate attributes.

12.05 - 12.40
OUR STAND AND DELIVERY
M Heywood, BMT Defence Services, UK
This paper looks at the question of how well our needs and requirements are met by the graduates and apprentices we eventually employ. The paper provides an employer’s view of the skills, traits and experience expected in graduates and apprentices and compares this aspirational list to the reality of experiences during interviews and subsequent employment. The paper also takes the experiences of recent BMT employees both at graduate and apprentice levels and examines how they feel their education prepared them for the skills demanded placed on them by Industry. This examination will look at both the technical and non-technical skills to determine, in our view whether the full education package prior to joining Industry is meeting the expectations.

12.40 - 13.40
LUNCH

13.40 - 14.15
BRIDGING THE SKILLS GAP
H Desly, Matchtech, UK
To provide bridge between the Education and Industry presentations by providing an overview of the marine market as a whole detailing trends, skills shortages, projects (current and future) and the challenges presenting the industry. The paper and presentation will cover the following areas: Market Trends ~ Current and future requirements for professional skills ~ Skills Shortages/ Challenges-5 year look ahead (Projects ~ Rival Industries (Nuclear/ Oil and Gas?) ~ UK and Overseas market ~ International developments/ challenges ~ Visas and Permits- where we are now - What can be done to address the above challenges

14.15 - 14.50
MANAGING A GRADUATE TRAINING PROGRAMME
J. Burton, Lloyd's Register, UK

14.50 - 15.20
COFFEE

15.20 - 15.55
CHANGES TO PROGRAM CONTENT AND SEQUENCE AT THE UNITED STATES MERCHANT MARINE ACADEMY
J Tuttle, US Merchant Marine Academy, USA
The paper will describe the process to assess changes to program content and sequence at the United States Merchant Marine Academy that resulted in recommendations to place more emphasis on fundamentals than the current curriculum and changes to course sequencing and sea year scheduling to better prepare midshipmen prior to graduation. A committee was formed to; benchmark current practices at other maritime academies and colleges and universities, with marine engineering programs as to courses course content and sequencing; review current Marine Engineering Department offerings to identify shortfalls with the current curriculum and the sequencing; in consultation with our stakeholders develop a list of required objectives and topics for the engineering majors and categorize them by course and sequence; develop an implementation plan.

15.55 - 16.30
RECRUITMENT: HAS THE FUTURE ARRIVED?
R Wast - Graduate Resourcing Advisor, BP, UK
W Kelly - Naval Architect, Technical Authority, BP Shipping, UK
As the demand for professional engineers in the marine industry continues to grow, this paper explores BP Shipping’s graduate recruitment model. This is how BP Shipping defines what constitutes a ‘good’ candidate from both a technical and personal perspective; what it believes the qualities are a candidate needs to demonstrate to work, develop and succeed in both a large multinational company and the wider marine industry. The paper also looks broadly at the academic courses on offer from both UK and international academic institutions. Furthermore, it looks briefly into personal development, again aligning with business requirements, but described purely from an observational perspective. Finally, comparisons are made between BP Shipping candidate requirements and the courses, and offers suggestions on how the potential employers and academic institutions can work together to produce highly driven and motivated, technically competent professional engineers for the future of the marine industry.

16.30 -
GENERAL DISCUSSION
INTERNATIONAL CONFERENCE
EDUCATION AND PROFESSIONAL DEVELOPMENT OF ENGINEERS IN THE MARITIME INDUSTRY
7-8 DECEMBER 2011
NEWCASTLE UNIVERSITY, UK

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VENUE
The Venue for the conference is Rooms 2.21 & 2.22 The Research Beehive, Old Library, Newcastle University, Newcastle Upon Tyne, NE1 7RU.

EVENING DRINKS RECEPTION
Following the end of day one (7 December 2011), delegates are invited to attend an evening drinks reception at the conference venue.

ACCOMMODATION
Upon registration you will be provided with details of a hotel booking service offering reduced rate accommodation for conference participants.

CONTINUING PROFESSIONAL DEVELOPMENT
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STUDENT SPONSORSHIP
A number of sponsored places at this conference are available for Student Members of RINA. For more information, please contact Yuen Yee Pang, Professional Affairs, RINA on Tel: +44 (0)20 7235 4622 or e-mail: ypang@rina.org.uk

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The following charges will be made in the event of cancellation: £100 if received by 23/11/2011 and £200 thereafter. Cancellations received within 24 hours of the event, or in the case of non-attendance will not be refunded. Delegates may be substituted; this must be sent in writing and confirmed with the Conference Organiser.

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