

**Five-day WORKSHOP
ON
Offshore Structural Engineering: Recent
Developments, Challenges &
Opportunities
(Under TEQIP-II)**

25th -29th Sept.2013



**Department of Civil Engineering
National Institute of Technology, Durgapur,
West Bengal, India-713209**

In collaboration with



**Aryatech Marine & Offshore Services (P) Ltd
Add: E-36 Hauz Khas, New Delhi – 110016
(India)**

Channel Partner of



&



Aveva, India

Organizing Secretary:

**Dr. A. K. Banik
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National Institute of Technology
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Registration Fees for Participants

- 1) Faculty, Scientists from Academic and R&D Institutions– Rs. 5000/-
- 2) Industry Professionals– Rs. 10000/-
- 3) Students-Rs. 3000/-

Last date of Registration: 6th Sept. 2013

For registration, the registration form shall be filled up and sent to the Organizing Secretary with requisite fees.

Boarding & Lodging

Number of hotels is available in and around the Institute. Participants may arrange their accommodations by contacting with them directly. The help for booking hotel rooms can be done, provided a request is received sufficiently in advance. No TA/DA will be paid to the participants by NIT Durgapur.

Registration Form

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Name:

Designation:

Organization:

Address:

Email:

Phone:

Mobile:

Fax:

Fees Payable to NIT Durgapur at Durgapur

Draft / Cheque No.:

Dated:

Drawn on: (Bank):

Rs.:

Signature of the Applicant

Introduction

In the beginning of 19th century, progress of industrialization & civilization felt great demand for conventional energy sources. Due to drying up of onshore hydrocarbon sources and advancement of exploration technology, offshore exploration and production of oil and gas is growing steadily, obviously because oceans provide potentially more energy resources. In the latter half of 20th century rapid globalization, growing consumption, environmental pollution fuelled the Green House Effect and marked the Renewable Energy era; other offshore energy sources like wind, wave, tide, current identified as potential green energy resources. Since, harnessing of offshore energy resources is capital intensive activity, on-going development of offshore industry is continuing to be challenging & standing on all branches of engineering, science & technology.

About the Workshop

The five-day workshop provides the participants a comprehensive coverage on offshore industry, technology relevant to shallow and deep water. The challenges lie in the design, construction, and operation of fixed/floating offshore structures recent research & development of computer modeling, software based design and analysis of offshore infrastructure & facilities. Participation will be from renowned industry experts, premier academic institutions and research laboratories. The objective of this meet is to integrate and enrich the knowledge from academics & industries, and to understand the technological challenges, as well as present & future opportunities in Offshore Industry.

The programme starts with an introduction to exploration of onshore & offshore hydrocarbon sources, featuring on recent developments in offshore structure technology, including analysis & design of fixed offshore structures, floating structures, sub-sea systems etc.; special emphasis on fatigue analysis, offshore structural steel fabrication (casting, forging, forming, joining etc.) requirements, corrosion protection of offshore structural materials, welding technology of steel.

Coverage

- ◆ Exploration of Onshore & Offshore Hydrocarbon Sources
- ◆ Offshore Facilities for Oil Exploration & Transportation
- ◆ Wave Hydrodynamics & Wave Loads on Structures
- ◆ Analysis & Design of Jacket Structures, Fatigue Analysis
- ◆ Offshore Structural Steel, Fabrication (Casting, Forming, Forging and Joining etc.) Corrosion protection of Offshore Structural Materials, Welding Technology of Steel
- ◆ Compliant Offshore Structures
- ◆ Deep Sea Production Technologies
- ◆ Deep Sea Risers and Moorings
- ◆ Health Monitoring & Maintenance of Offshore Facilities
- ◆ SACS and its Application to Design/Analysis
- ◆ Applications of OrcaFlex software: deep seas Risers & Moorings; Pipeline and Pipelay Analysis

Resource Persons

Prof. T. Kumar (Director, NITD)
Prof. T. K. Datta (IITD)
Prof. M. C. Deo (IITB)
Prof. C. P. Vendhan (IITM)
Prof. S. Laik (ISM Dhanbad)
Prof. S. Ahmad (IITD)
Prof. Sadhan Sarkar, (IMU Kolkata)
Mr. Niladri Sinha (ONGC)
Mr. Dinesh Kumar (ONGC)
Mr. Tarun Rewari (Aryatech, Delhi)
Mr. Bhaskar Pal (EIL, New Delhi)
Dr. R Balaji (IITB)
Prof. D. K. Mondal (NITD)
Prof. K. S. Ghosh (NITD)
Dr. Diptesh Das (NITD)
Dr. P. Roy (NITD)
Dr. A. K. Banik (NITD)

Who may Participate

Faculty members, JRF / SRF, scientists, students from the scientific & technological universities, R&D institutes, engineering colleges, technical professionals, advisors, consultants, management personnel from offshore industry, consultancy houses, software companies; practicing engineers.

About the Organizing Institute & Department

The National **Institute** of Technology Durgapur, which was established in 1960, is an Institute of National Importance and an autonomous institution under the Government of India since 2003. The Institute offers nine B. Tech. and fifteen M. Tech. programmes besides, MCA, MBA and M. Sc. Programmes. NIT Durgapur gradually evolved to become a teaching and research centric institution and has also initiated collaborative research programmes with esteemed research and academic institutions and industries.

The Department of Civil Engineering is one of the oldest functioning Departments with its highly qualified faculties and well equipped state-of-the-art UG and PG Laboratories. It is also a DST-FIST sponsored Department.

The city of Durgapur is well connected by rail with Kolkata, 158 km away, on New Delhi-Kolkata (Howrah) route. It is a two and a half hours' drive from Kolkata airport along Durgapur Expressway. The place is only an hour's drive from Tagore's Santiniketan and has quite a few tourist spots nearby. The climate is moderate.

The chairman of the workshop, Prof. T. Kumar present Director of the Institute is B.Tech. & M.Tech. (ISM Dhanbad) and PhD (Heriot-Watt University, UK under the prestigious Commonwealth Academic Staff Scholarship award) in Petroleum Engg. His areas of interest of research include petroleum production and reservoir engineering. He has to his credit over hundred national and international technical publications and a patent on plant based corrosion inhibitor for protection of steel. He has coordinated several courses for executives of petroleum and related industries and delivered special lectures.

The Organizing Secretary of the workshop Dr. A. K. Banik Associate Professor of the Department is B.Tech. (NIT Calicut), M.Tech. (IIT Delhi) & has obtained his PhD degree from IIT Delhi on Stability Analysis of Compliant offshore Structures. He has some publications on compliant offshore structures under regular and stochastic environment in ASME Journals and Proceedings apart from Marine Technology Proceeding. He has also attended some International Conferences outside India in the relevant areas.