

**USIEF Fulbright Nehru Specialist & IIT Kharagpur sponsored
Lecture Series**

Large Eddy Simulations for Ship research

Objectives: Numerical simulations using the Reynolds Averaged Navier - Stokes (RANS) methodology have been widely used to study fluid problems in a variety of fields including ship research. Although computationally cheap, RANS fails to predict the fluid behavior accurately in complex flow problems where the underlying physics is dominated by unsteady complex physical phenomena. In this lecture series the use of Large Eddy Simulation (LES) to study such complex flow physics is discussed. The predictive capability of LES is demonstrated in three complex flow problems: crash back, cavitation, and hydro-acoustics. LES results are shown to be in good agreement with experiments for the mean and root mean square values of flow quantities in all these cases.

Faculty: Prof. Krishnan Mahesh, Professor, Aerospace Engineering and Mechanics, University of Minnesota

Dr. Vishwanath Nagarajan, Associate Professor, IIT Kharagpur

Prof. Om Prakash Sha, Professor, IIT Kharagpur

Dates: December 17 - 26, 2018

Venue: Department of Ocean Engineering and Naval Architecture
IIT Kharagpur, Kharagpur 721 302, West Bengal India

Sponsor: United States – India Educational Foundation and IIT Kharagpur

Agenda:

Day	Date	Time	Topic
1	17 th Dec.	0930 – 1145†	***
		1400– 1700	***
2	18 th Dec.	0930 – 1145†	***
		1400– 1700	***
3	19 th Dec.	0930 – 1145†	***
		1400 – 1700	***
4	20 th Dec.	0930 – 1145†	***
		1400 – 1700	***
5	21 st Dec.	0930 – 1145†	***
		1400 – 1700	***
6	24 th Dec.	0930 – 1145†	***
		1400 – 1700	***
7	26 th Dec.	0930 – 1145†	Discussions and exercises
		1600 ~ 1730	Institute lecture

†Lectures will be of 1 hour duration with 15 min break.

Pedagogy

Lectures will be delivered through audio-visual presentation, group activity, structure exercise, and case analysis. Participants are advised to bring their laptop (with WiFi internet connectivity) for classroom usage.

No of Participants: 40 (Seats are available on first-cum-first basis)

COURSE FEES

Course Fees for Industry participants = Rs. 10,000/-

Faculty from Colleges = Rs. 2500/-

Research Scholar/ Graduate Students = Rs. 500/-

No fees for participants from IIT Kharagpur

GST 18% Extra For All Categories Mentioned Above.

Course fees should be paid in form of *Demand Draft in favour of CEP-STC, IIT Kharagpur, payable at Kharagpur or through online bank transfer through NEFT. The bank account details are provided at the end of this form.*

TA & DA

No TA/DA for any participants

Accommodation

10 nos. AC double bedrooms are available in the main guesthouse. They will be offered on first come first serve basis. Other participants may apply for accommodation in student hostels or hotels outside campus. Participants have to pay for their food and lodgings.

Venue of the Programme

Department of Ocean Engineering & Naval Architecture, IIT Kharagpur, Kharagpur, 721 302, West Midnapur, West Bengal

How to Apply

Interested participants should download and submit the application form with required information in a prescribed format given below, and send it to the coordinator as per the mailing address.

Mailing Address

Dr. Vishwanath Nagarajan, Associate Professor, Course Coordinator, STC on *Large Eddy Simulations for Ship research*

Department of Ocean Engineering and Naval Architecture

Indian Institute of Technology Kharagpur

Kharagpur- 721302, West Bengal, India Tel: 03222-283 782 (o), Mob: 8016727912 Fax: 03222-255 303/ 282 284 Email: vishwanath_n@naval.iitkgp.ernet.in

Important Dates

Last date for receiving application (with course fee) 05th Dec 2018

Intimation to participants 07th Dec 2018

Application Form

USIEF and IIT Kharagpur Sponsored STC on “Large Eddy Simulations for Ship research”

17 - 26 December 2018

Organized by Dept. of Ocean Engineering & Naval Architecture

1. Name:

2. Age:

3. Sex:

4. Work Experience:

5. Designation:

6. Name of the Institution /Organization:

7. Address for communication:

8. Highest academic qualification:

9. Phone No:

10. Fax No.:

11. Email:

12. For Self / Industry Sponsored Candidate:

DD No.: Date: Amount: or NEFT money transfer details (in a separate sheet)

Date: Signature of Applicant

Approval for Candidates/ Sponsorship

We approve the above applicant as a candidate / sponsor for the STC on **Large Eddy Simulations for Ship research** being organized by IIT Kharagpur during 17th – 26th December 2018.

Date: Signature and Seal of Approving/Sponsoring Authority

Payment Mode

The payment can be made through cheque / demand draft drawn in favor of "CEP-STC, IIT Kharagpur", payable at Kharagpur, INDIA. The payment can also be made through electronic fund transfer. The bank details are as follows:

Account Name: CEP-STC, IIT Kharagpur

Account Number: 955 622 0000 2955

Bank Name: SYNDICATE BANK

Bank Branch Name: SRIC, IIT KHARAGPUR (Branch Code: 9556)

Bank Address: IIT KHARAGPUR, KHARAGPUR- 721 302, MEDINIPUR DIST. (W. B.), INDIA,
(Telephone No: +91-3222 255221)

Swift Code: SYN BIN BB 120

IFSC CODE SYNB0009556

PAN No.: AAAJI0323G

MICR Code 721025103

Branch Code 009556