

Signals and Systems: IIT Kharagpur and IIT Bombay 2 week workshop Dec-Jan 2014

Participants:

Dr Susmita Karan (Assistant Professor)

Dr Indrani Sarkar (Assistant Professor)

This web-course attempts to provide a comprehensive coverage of Signals and Systems, a fundamental subject of Electrical Engineering. Integrating interactivity and an audio-visual platform, this unique course acts as a complement to various texts on Signals and Systems. The course is divided into four logical modules with on the underlying concepts, and presenting them in an easy to understand manner as well.

Module 1:

Introduction to Signals and Systems, System Properties, Convolution of Signals, Linear Shift Invariant Systems and their Properties.

Module 2:

Introduction to Transforms, Fourier Series and Fourier Transform, Convergence of Fourier Transform, Properties of Fourier Transform.

Module 3:

Sampling Theorem, Sampling/Reconstruction of Signals, Realistic Sampling, Aliasing, Introduction to Digital Signal Processing, Discrete Time Fourier Transform and Properties.

Module 4:

Introduction to Laplace Transform and Z-Transform, Region of Convergence, Properties of Laplace and Z Transform, Inverse Laplace and Z Transforms, Rational System Functions.



Mechanics In Physics:IIT Kanpur 23-27 June 2014

Participants:

Dr Susmita Karan (Assistant Professor)

Dr Indrani Sarkar (Assistant Professor)

In the workshop Mechanics in Physics, we learnt these topics in Mechanics, Newtonian, quantum and relativistic mechanics. These topics constitute the very basic building blocks of any other topic in physics.

The workshop presented with the opportunity to discuss the contemporary aspects of teaching mechanics in a physics course. We had the experience of delivering model lectures by experts to make a topic interesting. There were model tutorial-sessions and discussions on model homework/exam problems that can be used to propel the course in a uniform pace without sacrificing lecture-hours..Highlights of the workshop were seminars by experienced experts on how to make transition from Newtonian mechanics to quantum mechanics and relativistic mechanics in a classroom. The speakers were:

1. Dr. Jayanta Kumar Bhattacharjee, HRI Allahabad
2. Dr. Kaushik Bhattacharya, IIT Kanpur
3. Dr. Sagar Chakraborty, IIT Kanpur
4. Dr. Saikat Ghosh, IIT Kanpur
5. Dr. K. Srinivasan, Toronto
6. Dr. Tapobrata Sarkar, IIT Kanpur
7. Dr. Mahendra Kumar Verma, IIT Kanpur
8. Dr. H.C Verma
9. Dr. Ishan Sharma

**TEQIP-II Short Term Course on Faculty development Programme for Effective Teaching
From the 17th to the 19th of July and 24-26 September 2014**

Participants:

Dr Susmita Karan (Assistant Professor)

Dr Indrani Sarkar (Assistant Professor)

Dr Dhananjay Kumar Tripathi (Assistant Professor)

The three day short term course was organized by The Center for Educational Technology IIT, KGP. It focused on the emerging trends in educational technology that is vital to combat and solve the current educational challenges. The aim of the course was to improve the educational standard in all engineering institutions. The course was designed to aid faculties of engineering colleges with the new pedagogic designs, developments, delivery and evaluation as well as focus on pedagogical issues in education.

ICCACCS-2014 : 30 Oct-1 Nov 2014

Participants:

Dr Indrani Sarkar (Assistant Professor) (Paper presented)

Dr Susmita Karan (Assistant Professor)

Debtosh Panda(JTA)

Karuna Ketan Karan (JTA)