

# Event Report

Organised by : JU E-Cell, IIC

**Title of the Session:** Computational Aspects in Electrodynamics Measurement: Some Innovations and Applications

**Date and Time of Organization:** 2:00 - 6:00 pm, 16.01.23

**Venue:** Jadavpur Campus, Mechanical Department, Seminar Hall

## **Brief Intro of Program:**

Computational Electrodynamics Measurement has been revolutionizing the field of Electrodynamics for decades by providing a range of powerful technologies for accurate and reliable measurement of the electric and magnetic fields. In this event, we took a closer look at some of the new and innovative innovations in the field and how they can be applied in various applications. We also explored the impact of Computational Electrodynamics Measurement on the field and its potential role in other disciplines.

**Speaker:** Dr Arijit Hazra

**Faculty Coordinator in Charge:** Prof Pranibesh Mandal

## **Detailed Report:**

Dr. Hazra began his presentation by defining the various aspects and applications of electrodynamics. He described how electromagnetism is a fundamental field that is of great practical importance. He then discussed how different aspects of EMC (electromagnetic compatibility) can be used for testing or guaranteeing the performance of electrical and electronic devices, which is important for their safe operation.

The main topic of Dr. Hazra's presentation was on the computational aspects related to measuring and probing the physics of electronics. He discussed the use and development of methods for simulating and analyzing electromagnetic fields, including finite element analysis, Maxwell solvers and commercial tools. He pointed out the challenges and potentials of integrating those methods into electrical engineering systems.

Dr. Hazra then went on to discuss various advances in the measurement and modeling of electrical phenomena. He presented examples of commercial tools and technologies used in the design and testing of electrical circuits and systems, such as SPICE and PSpice. He also discussed modelling and analysis methods used in computer aided engineering (CAE), such as finite element methods (FEM) and boundary element methods (BEM).

The final part of the presentation focused on innovations in the field of computational electrodynamics, describing some of the most recent research developments. He discussed advances in methodology for the testing and characterization of electrical components, such as resistors and other active and reactive components. In addition, he discussed progress in numerical modeling for high-fidelity and low-power systems, as well as the potential of optical antennas in the measurement of electrical phenomena.

Dr. Hazra concluded the presentation by discussing the potential applications of computational electrodynamics in contemporary and future electronic and electrical applications. He emphasized the importance of this field for the designing and testing of electrical and electronic systems and machines, as well as for research purposes.

**Poster of the Event:**

**Pictures of the Event:**



**Attendance Sheet:**

**COMPUTATIONAL ASPECTS IN ELECTRODYNAMIC MEASUREMENTS: SOME INNOVATIONS AND APPLICATIONS**

Date: 16<sup>th</sup> January, 2023

Venue: SEMINAR ROOM, MECHANICAL ENGINEERING BUILDING

Sl. No	Name	Department	Designation	Signature
1	Dr. Susangata Taha	ME	Asst. Professor	[Signature]
2	Suman Kishor	ME	Asst Prof	[Signature]
3	Jaydeep Choudhury	Physics	Professor	[Signature]
4	Sourav Sarkar	M.E	Asst. Prof.	[Signature]
5	Swarna Basak	M.E	Student	[Signature]
6	Mad. Rakina	M.E	Student	[Signature]
7	Mr. Abhinava Jana	ME	Student	Kumar Abhinava
8	Trisita Das	Physics	Student	Trisita Das
9	Rishi Ray Banik	Physics	Student	R.R.Banik
10	Soumit Ghosh	Physics	Research scholar	[Signature]
11	Saikat Majumdar	Physics	Research scholar	[Signature]
12	Pragna Mondal	Physics	Research scholar	P. Mondal
13	Sudipta Saha	SNMA	Research scholar	S. Saha
14	Saumya Nath Mishra	M.E.	Research scholar	[Signature]
15	Deblina Sengupta	C.E	Research scholar	D. Sengupta
16	Prantik K. S.	M.E.	Research scholar	[Signature]
17	Dipa Ghosh	Ch.E	Student	Dipa Ghosh
18	Anish Sarkar	ChE	Student	Anish Sarkar
19	Bishwanath Paul	ChE	Student	Bishwanath Paul
20	Rishi Bandyopadhyay	IEE	Professor	Rishi Bandyopadhyay
21	Rishi K. Das	Biotech	Asst Professor	[Signature]
22	Indranil Sengupta	Biotech	Research scholar	[Signature]
23	Subhankar Mandal	ME	Research scholar	[Signature]
24	Lakshminarayana Kundu	PTME	U.G (PVE)	[Signature]
25	Nishu Mondal	ME	Research scholar	Nishu Mondal
26	Aranyak Chatterjee	SNMA	Asst. Prof.	[Signature]
27	Dr. Haran Roy	M.E.	Student	[Signature]
28	Ajit Das	ME	Student	Ajit Das
29	Subhojit Nath	IEE	Lab Tech.	[Signature]
30	Sapnika Bandyopadhyay	IEE	Student	[Signature]
31	Sirsha Naskar	SNMA	Scholar	[Signature]
32	Pranay Mondal	ChE	UG-3	[Signature]
33	Dibomita Banerjee	ChE	UG-2	[Signature]

