



**J.C. BOSE UNIVERSITY OF SCIENCE & TECHNOLOGY YMC,
FARIDABAD (HARYANA)- 121006**
(Established by Haryana State Legislative Act No.21 of 2009)
Accredited 'A+' Grade by NAAC
(Mechanical Engineering Department)

ACTIVITY REPORT

EXPERT LECTURE DELIVERED

1.	Name of Activity (Title)	Expert Lecture Delivered (Under MOU with Ehime University, Japan)
2.	Type of Activity (FDP/Lecture/Technical/conference etc.)	Lecture
	Name of department/ Section/ cell conducting the activity	Mechanical Engineering Department
3.	In coordination with (if any)	International Affairs Cell
4.	Date of conduct	27.11.2024
5.	Name of Activity Coordinator (s)	Prof. Sandhya Dixit, Dr. Mamta Kathuria and Dr. Nitin Panwar
6.	Amount Spent	Nil
7.	Funding/ grant from (University/ Industry/ UGC/ AICTE/ DST/ TEQIP/ Outside Society/ agency/others (mention)	-
8.	Target audience	B.Tech ME V Sem Students /B.Tech RAI VII Sem Students/ Research Scholars and Faculty members
9.	No. of beneficiaries	120
10.	Name of Outside guests	Prof. Keiji Ogi, Graduate School of Science and Engineering, Ehime University, Japan
11.	Any other information	

An insightful expert lecture was delivered by Prof. Keiji Ogi from the Department of Mechanical Engineering, Graduate School of Science and Technology, Ehime University, Japan, on the topic "**In-situ Monitoring of Delamination in CFRP Laminates during Drilling using Electrical Impedance Method**". The event witnessed an engaging discussion on innovative methods to monitor damage in carbon fiber-reinforced polymer (CFRP) laminates, a critical subject in advanced material engineering and manufacturing.

The session began with a welcome address by **Dr. Mamta Kathuria**, Director, International Affairs Cell, who expressed gratitude to the distinguished speaker and highlighted the importance of the subject matter for both research and industrial applications.



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Prof. Ogi emphasized the relevance of CFRP (Carbon Fiber Reinforced Polymer) laminates, which are widely used for their lightweight and high-strength properties, and the need for effective damage monitoring during drilling operations to ensure structural integrity.

Prof. Ogi delivered an in-depth presentation on the innovative use of electrical impedance measurement for detecting damage in CFRP laminates during the drilling process. He explained the complex behavior of CFRP materials under mechanical stress and drilling-induced forces, shedding light on how electrical impedance can provide real-time data on damage progression, which is crucial for improving the reliability of composite materials.

The successful realization of the aforementioned session was made possible through the indispensable support and guidance of **Prof. S.K. Tomar**, the Vice Chancellor of J.C. Bose University, YMCA, Faridabad, Haryana. His guidance has been instrumental in shaping our institution's global initiatives. The academic discourse was thoughtfully organized under the guidance of **Prof. Arvind Gupta, Prof. Sandhya Dixit and Dr. Mamta Kathuria**. The session was coordinated by **Dr. Nitin Panwar**.

The event saw the participation of over 120 attendees, including experts, researchers, and students, with notable attendance from many Professors from Mechanical Engineering department, whose presence added to the prestige of the lecture.

The session concluded with a vote of thanks delivered by **Prof. Sandhya Dixit**, who thanked Prof. Ogi for his valuable insights and the attendees for their active participation. She also acknowledged the importance of such expert sessions in fostering global collaboration and advancing research in Mechanical Engineering.

The event was a part of activities under MOU between J.C. Bose University of Science and Technology, YMCA, Faridabad, Haryana and Ehime University Japan and was organized by department of Mechanical Engineering in collaboration with International Affairs Cell.

This expert lecture was a resounding success, with attendees gaining valuable knowledge on the latest advancements in composite material testing and damage monitoring. The session reinforced the significance of interdisciplinary research and innovation in enhancing the safety and durability of engineering materials.



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(Established by Haryana State Legislative Act No. 21 of 2009 & Recognised by UGC Act 1956 u/s 22 to Confer Degrees)
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EXPERT LECTURE

on
"In-situ Monitoring of Delamination in CFRP Laminates during Drilling
using Electrical Impedance Method"

Department of Mechanical Engineering
in co-ordination with
International Affairs Cell



Patron
Prof. S.K. Tomar
Vice Chancellor
JCBUST, YMCA, Faridabad (Haryana)



Speaker
Prof. Keiji Ogi
Department of Mechanical Engineering,
Ehime University, (Japan)

Conveners

Prof. Arvind Gupta Dr. Mamta Kathuria Prof. Sandhya Dixit Dr. Nitin Panwar

AUDIENCE : • **Students, Researcher and Faculty of J.C. Bose University of Science and Technology, YMCA, Faridabad, Haryana**

PLATFORM : ZOOM

Meeting ID : 541 187 0021

Meeting Link : <https://us02web.zoom.us/j/5411870021?omn=89748477369>

Date: 27.11.2024

Time: 14:30(JST)/10:45(IST)

The screenshot shows a Zoom meeting interface. At the top, there are participant thumbnails for Dr. Krishan Verma, Keiji Ogi (Ehime Univ.), Sandhya Dixit, J.C. Bose University of S..., Yoshiteru Itagaki, and Dr. Arvind Gupta. The main content is a PowerPoint slide with the following text:

**In-situ Monitoring of Delamination in
CFRP Laminates during Drilling**

Keiji Ogi
Ehime University

The slide also features the Ehime University logo (愛媛大学) and the number '1' in the bottom right corner. The Zoom interface includes a top bar with 'Meeting', 'Recording', and 'View' options, and a bottom bar with 'Participants', 'Chat', 'React', 'Share', and 'More' options. The system tray at the bottom shows the time as 11:31 AM on 11/27/2024.



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Stress-Strain Diagrams and Damage in Laminates

Applied load

Final failure ← Fiber breakage

Initiation and saturation of ply cracks

Delamination

Stress

Strain

CFRP

GFRP

0° 90°

Participants (99)

Waiting Room (1) Message

Hema

Joined (99)

- J. C. Bose Univers... (Co-host, me)
- SD Sandhya Dixit (Host)
- KO Keiji Ogi_Ehime ... (Co-host)
- YI Yoshiteru Itagaki (Co-host)
- LC Lalit CE Dept.
- 2 21001016019_Dipali
- 2(22001013001 (Aadarsh Chaudh...

Invite Mute all

Zoom Meeting

Recording Paused

Participants (68)

Waiting Room (1) Message

AJ Ankur Jangra

Joined (68)

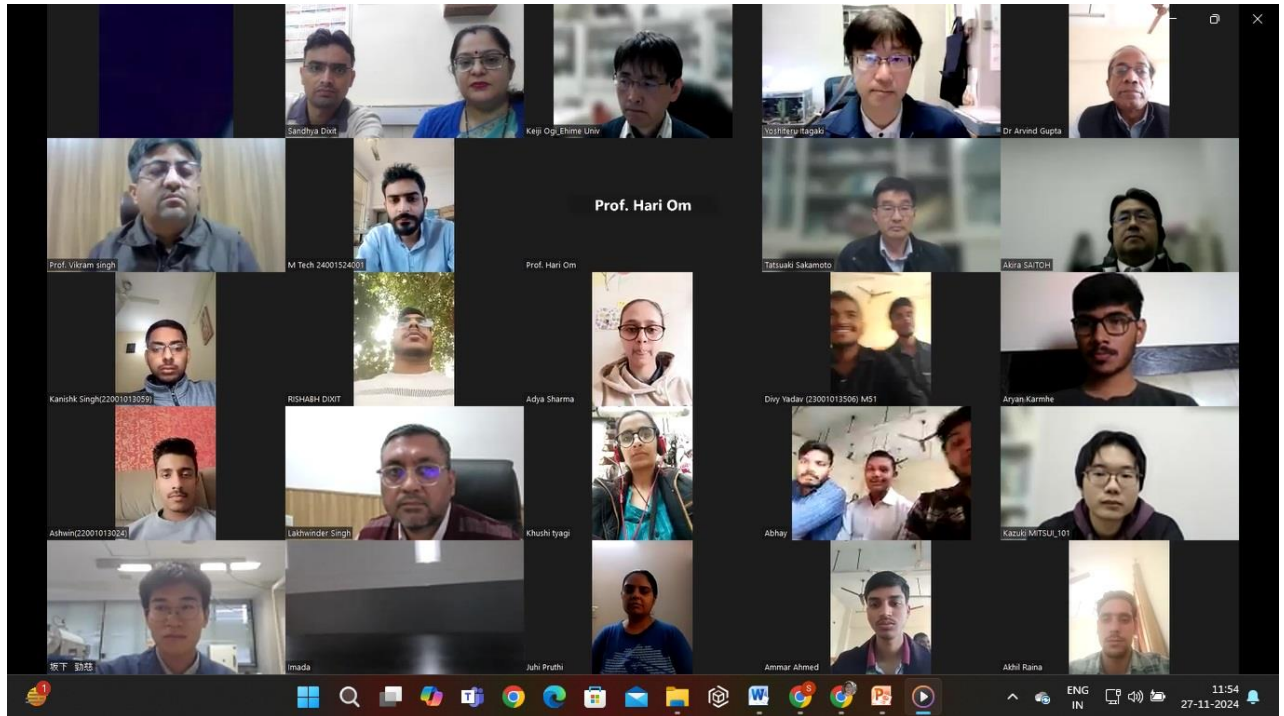
- SD Sandhya Dixit (Host, me)
- J. C. Bose University ... (Co-host)
- KO Keiji Ogi_Ehime Univ (Co-host)
- YI Yoshiteru Itagaki (Co-host)
- 2 21001016019_Dipali
- 2R 21001016056 Rishita
- 2 21001020009_Jagriti
- 22001013105
- AK Aaditya Kaushik (22001013002)
- A Aarzo
- A Abhay

Mute Stop Video Security Participants Chat Share Screen Start Summary AI Companion Resume/stop recording Reactions

11:39 27-11-2024



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Participants (87)

Find a participant

J. C. Bose Univers... (Co-host, me)	🔇	🗨️
SD Sandhya Dixit (Host)	🔇	🗨️
KO Keiji Ogi_Ehime Univ (Co-host)	🔇	🗨️
YI Yoshiteru Itagaki (Co-host)	🔇	🗨️
2 21001016019_Dipali	🔇	🗨️
2R 21001016056 Rishita	🔇	🗨️
2A 22001013005 Abhay	🔇	🗨️
2M 22001013033 mechanical	🔇	🗨️
22001013105	🔇	🗨️
AK Aaditya Kaushik (22001013002)	🔇	🗨️

Invite Mute all ...