



**J.C. BOSE UNIVERSITY OF SCIENCE & TECHNOLOGY YMCA,
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	29.08.2025
5.	Name of Activity Coordinator (s)	Prof. Sandhya Dixit, Dr. Mamta Kathuria, Dr. Rajeev saha
6.	Amount Spent	Nil
7.	Funding/ grant from (University/ Industry/ UGC/ AICTE/ DST/ TEQIP/ Outside Society/ agency/others (mention)	-
8.	Target audience	Research Scholars and Faculty Members Ehime University Japan and J.C.Bose University of Science and Technology, YMCA, Faridabad, India
9.	No. of beneficiaries	25
10.	Name of Speaker	Prof. Sanjeev Goyal
11.	Any other information	

The Department of Mechanical Engineering in coordination with the International Affairs Cell, J.C. Bose University of Science & Technology, YMCA, Faridabad, Haryana organized an expert lecture on the topic **“Biomass Pellet Technologies for Sustainable Marine-Coastal Integration” on August 29, 2025**. The lecture was aimed at providing insights into sustainable energy technologies and their integration with marine-coastal ecosystems.

The lecture was part of the activities under the MoU between J.C. Bose University of Science and Technology, YMCA, Faridabad, Haryana, India, and Ehime University, Japan, and was intended for the researchers and faculty of Ehime University, Japan.

The session was delivered by Prof. Sanjeev Goyal, Professor, Department of Mechanical Engineering, J.C. Bose University of Science & Technology, YMCA, Faridabad. Prof. Goyal



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engaged the audience with a thought-provoking presentation on biomass pellet technologies and their potential in sustainable marine-coastal applications. His talk further highlighted innovative approaches for environmental sustainability and energy efficiency, with a special focus on the energy sector and its potential applications in Japan.

The successful realization of the aforementioned session was made possible through the indispensable support and guidance of Prof. S.K. Tomar, Vice Chancellor, J.C. Bose University of Science & Technology, YMCA, Faridabad. His encouragement has been instrumental in shaping the university's global collaborations. The academic discourse was thoughtfully organized under the guidance of Prof. Arvind Gupta, Prof. Sandhya Dixit, Dr. Mamta Kathuria, and Dr. Rajeev Saha.

The expert lecture served as a platform for knowledge exchange and dialogue on sustainable energy technologies. By bringing together researchers and faculty members from both universities, the event fostered a deeper understanding of innovative solutions for marine-coastal integration.

The audience from Ehime University actively participated in the Q&A session, reflecting their keen interest and enthusiasm in the subject. The lecture was attended by faculty members and researchers from Ehime University, Japan, and J.C. Bose University of Science & Technology, YMCA, Faridabad, India.



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EXPERT LECTURE

on

**Biomass Pellet Technologies for Sustainable
Marine-Coastal Integration**

Department of Mechanical Engineering

in co-ordination with

International Affairs Cell



Patron

Prof. S.K. Tomar

Vice Chancellor
JCBUST, YMCA, Faridabad (Haryana)



Speaker

Prof. Sanjeev Goyal

Department of Mechanical Engineering
JCBUST, YMCA, Faridabad (Haryana)

Conveners

Prof. Arvind Gupta Dr. Mamta Kathuria Prof. Sandhya Dixit Dr. Rajeev Saha

AUDIENCE : . Students and Faculty of Graduate School of Science and Engineering, Ehime University, Japan.
. Students, Researchers and Faculty of J.C. Bose University of Science and Technology,
YMCA, Faridabad, Haryana.

PLATFORM : ZOOM

Meeting Link : <https://us06web.zoom.us/j/81276932320?pwd=qbam0Ca65dY9gvWH8gcpQtaRTwqYB7.1>

Date: 29.08.2025 (Friday)

Time: 11:00(IST) / 14:30(JST)



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Marine-Coastal Integration for Advanced Biomass Pellet Production
An Indo-Japan Collaborative Pathway

Marine Resources Agricultural Waste Biomass Energy Circular Economy

Prof. Sanjeev Goyal
J.C. Bose University of Science and Technology, YMCA, Faridabad, India
Presented to: Ehime University, Japan
August 29, 2025

video1772836750

14:10
30-09-2025

The Challenge of Reducing Coal Reliance

Japan's Coal Dependency

- Coal constitutes 31% of Japan's electricity generation

Government Goals

- Target to reduce coal share to ~19% by 2030
- Mandate for coal plants to achieve 43% minimum efficiency by 2030

Policy Drivers

- Forces operators to upgrade, retire, or co-fire with biomass
- Addresses Japan's high carbon emissions from power sector

Coal Share in Japan's Energy Mix

Current vs. Target Coal Share in Japan's Electricity Generation

Year	Coal Share (%)
2020	31%
2030	19%

Path Forward

- Upgrade aging plants
- Early decommissioning
- Convert to biomass co-firing
- Develop renewable alternatives

video1772836750

14:27
30-09-2025



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Media Player

Thank You & Discussion

Thank you for your attention
Questions and further discussion are welcomed

Contact Information

- Prof. Sanjeev Goyal
- sanjeev@jcbouseust.ac.in
- J.C. Bose University of Science and Technology, YMCA, Faridabad, India

Collaborative research opportunities available

J.C. Bose University & Ehime University
Partnership for Sustainable Energy Solutions

01:01:19 00:03:51

video1772836750

14:28 30-09-2025

ENG IN

Participants: Sanjivya Dutt, Dr. Sanjeev Goyal, Yoshitomo Nagai, Kazuki MITSUJIMA, Akira Saitoh, Sota Imada