



KLEF
Department of PHYSICS

DATE: 07.02.2026

Report on Alumni-Guest Lecture organised by the Dept. of Physics on 7.02.2026 (8.00 AM IST)

Information communicated on 05/02/2026 to get registrations from the participants and the same was shared with the colleague groups.

The Department of Physics (DST-FIST Sponsored), KLEF, Vijayawada is organizing a Guest Lecture on “*Materials informatics Accelerating the Discovery of New Materials using AI and Big Data*” in association with MRSI.

The details are as follows.

Date: 7th February 2026 (Monday)

Time: 8.00 AM (IST) (Re-scheduled the time of Guest Lecture as per the request of Speaker)

Platform: Online Meeting link:

<https://meet.google.com/eky-hkao-zzy>

Resource Speakers:

Mr. Pathan Imran Khan

Senior software consultant

CDW Technologies India Pvt Ltd

Hyderabad, Telangana Registration is free and the link to register is given below:

<https://forms.gle/JP4bmLE7k8UxfNr87>

For any queries on the workshop, the following are contacted.

Dr. Sk. Mahamuda, Assoc. Prof., Dept. of Physics,

Email: mahamuda.ss@kluniversity.in, Mobile: 990842265.

Dr. K.Swapna, Assoc. Prof., Dept. of Physics,

Email: swapnakon@kluniversity.in, Mobile: 9652163632.

Total registrations received: 36

Brochure:

KL | Department of Physics

CATEGORY 1 UNIVERSITY | 48 YEARS OF EDUCATIONAL LEADERSHIP
nirf | RANKED 26
2025 | RANKED 26
2025 | RANKED 26

An Alumni Guest Lecture on
**Materials informatics Accelerating the Discovery
of New Materials using AI and Big Data**

07 - 02 - 2026 | 2:00 PM onwards | Venue: Online

Convener: Dr. Mahamuda Shaik,
RPAC & Associate Professor,
Department of Physics, KLEF

Chair: Dr. K. Swapna,
HoD-Physics,
& Associate Professor, KLEF

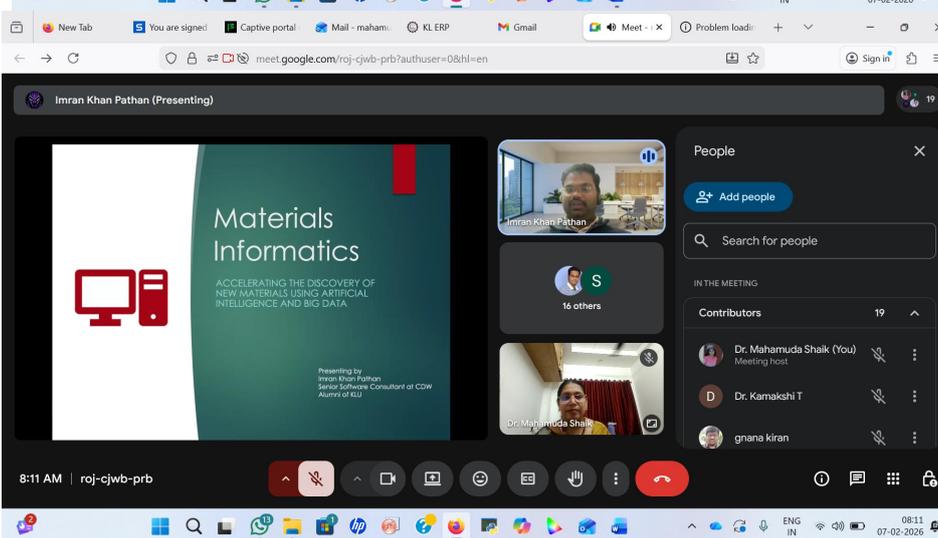
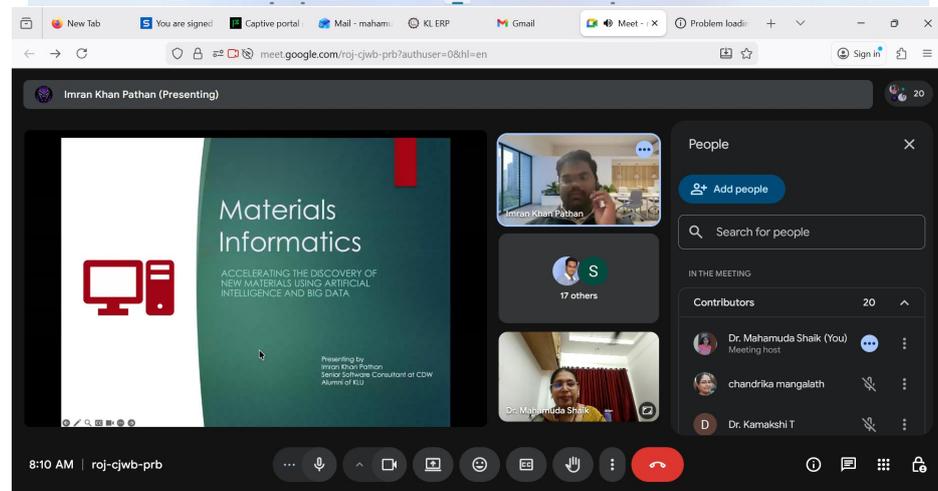
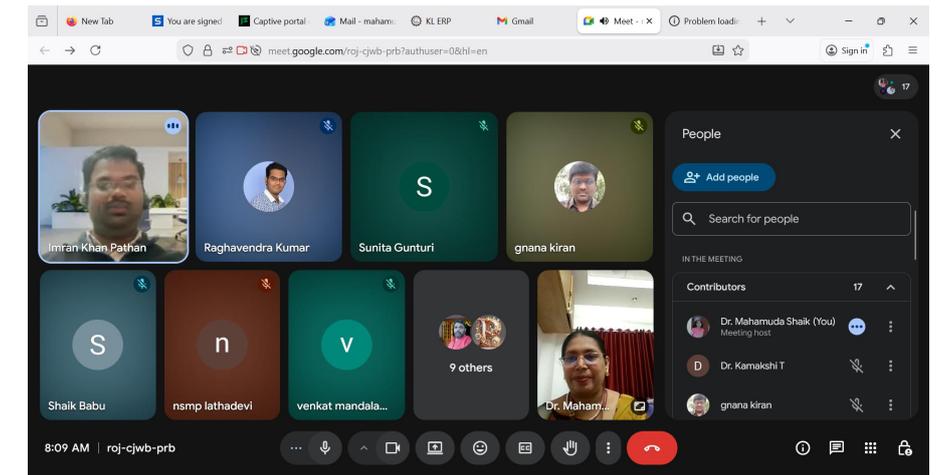
Online Link: <https://meet.google.com/eky-hkao-zzy>

No Registration Fee

Registration Link: <https://forms.gle/JP4bmLE7k8UxfNr87>

Organized by Department of Physics (DST-FIST & DST-PURSE Sponsored)

Resource Person
Pathan Imran Khan
Senior software consultant
CDW Technologies India Pvt Ltd
Hyderabad



Imran Khan Pathan (Presenting)

The Four Paradigms of Science

Empirical Paradigm

1600 1950 2000

8:13 AM | roj-cjwb-prb

Imran Khan Pathan (Presenting)

Introduction

Materials enable modern technology

Traditional discovery is slow and expensive

Data-driven methods are transforming the field

8:16 AM | roj-cjwb-prb

Imran Khan Pathan (Presenting)

Role of Big Data

HIGH-THROUGHPUT EXPERIMENTS

SIMULATIONS

MATERIALS DATABASES

8:27 AM | roj-cjwb-prb

meet.google.com/roj-cjwb-prb?authuser=0&hl=en

Imran Khan Pathan (Presenting)

Key Applications

- Batteries and energy storage
- Semiconductors
- Structural alloys
- Biomaterials

8:31 AM | roj-cjwb-prb

People: Add people, sudheesh rajput, Sunita Gunturi, Veera Kumari, venkat mandalapu, Y Anantha Lakshmi

meet.google.com/roj-cjwb-prb?authuser=0&hl=en

Imran Khan Pathan (Presenting)

Real-World Impact

- FASTER BATTERY INNOVATION
- BETTER CATALYSTS
- SUSTAINABLE MATERIALS

8:33 AM | roj-cjwb-prb

People: Add people, Search for people, IN THE MEETING, Contributors: 24, Dr. Mahamuda Shaik (You) Meeting Host, chandrika mangalath, Dr. Kamakshi T

meet.google.com/roj-cjwb-prb?authuser=0&hl=en

Imran Khan Pathan (Presenting)

Challenges

- DATA QUALITY
- INTERPRETABILITY
- EXPERIMENTAL INTEGRATION

8:34 AM | roj-cjwb-prb

People: Add people, sudheesh rajput, Sunita Gunturi, Veera Kumari, venkat mandalapu, Y Anantha Lakshmi

8:36 AM | roj-cjwb-prb

Future Direction

AUTONOMOUS LABS HUMAN-AI COLLABORATION OPEN DATA ECOSYSTEMS

Imran Khan Pathan (Presenting)

People

- Add people
- Raghavendra Kumar
- Shaik Babu
- sudheesh rajput
- Sunita Gunturi
- Veera Kumari
- venkat mandalapu

23 others

Dr. Mahamuda Shaik

8:37 AM | roj-cjwb-prb

Conclusion

FOURTH PARADIGM OF SCIENCE AI + BIG DATA ACCELERATE DISCOVERY TRANSFORMING MATERIALS RESEARCH

Imran Khan Pathan (Presenting)

People

- Add people
- Raghavendra Kumar
- Shaik Babu
- sudheesh rajput
- Sunita Gunturi
- Veera Kumari
- venkat mandalapu

23 others

Dr. Mahamuda Shaik

8:39 AM | roj-cjwb-prb

Imran Khan Pat... asad Sunita Gunturi naveen kumar

venkat mandalapu Dr. Shanmugam Se... 17 others Dr. Mahamud...

People

- Add people
- Search for people
- IN THE MEETING
- Contributors 25
- Dr. Mahamuda Shaik (You) Meeting host
- chandrika mangalath
- Dasaradha ram



The Guest Lecture conducted successfully and the participants actively interacted with our KL Alumni and get clarified their queries regarding the materials informatics.
