

REPORT FOR THE WEBINARS/SEMINARS/WORKSHOP CONDUCTED

1. NAME OF THE DEPARTMENT : PHYSICS
2. TITLE OF THE PROGRAMME : "MATERIALS FOR QUANTUM TECHNOLOGY"
3. NAME OF THE RESOURCE PERSONS : Dr. Alestine Mawrie, Asst. Professor of Physics, IIT Indore, (Alumnus of Physics Dept)
4. NAME OF THE ORGANIZING FACULTY: : Prof. B.L. Giri
5. DATE : 12th August, 2022
6. TIME : 5:00 PM
7. VENUE (IF OFFLINE) : NA
8. MODE : Online
9. PLATFORM : Google meet
10. LINK (if online) link) : <https://forms.gle/wx7FzrJPgGKW7FT9A/> (registration link)
: <https://meet.google.com/hcn-trch-too> (meeting link)
: <https://forms.gle/3xXDQdR9eDx5Mi387> (feedback link)
11. NO OF PARTICIPANTS : 73
12. TEACHERS : 8 (6 from the department +2 Guests)
13. STUDENTS : 65

14. OUTCOME OF THE PROGRAM:

The resource person enlightened the students about the recent progress in the field of technology advances, mainly in the area of electronics within the quantum domain. He introduce by narrating his success story of how from a simple village he got in St. Edmund's College and then work hard and persevere to clear JAM exam and got to study in IIT and finally landed as a faculty which by no means an achievement of a tribal boy, with this he motivate and encourage the participating students to work hard to achieve their ambitions. He gave an idea about the various challenges that the researchers are currently working on. He then discussed in detail about the work which his team is pursuing at present and some of their interesting findings. He also outlined the future perspective. Both the teachers enjoyed and had a fruitful interaction with the resource person.

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ISSUE: Power dissipation in the form of heat!!!!

Diffusive limit

$\lambda < L$

Source Drain

$$\sigma = \frac{ne^2\tau}{m}$$

Ballistic limit

$\lambda > L$

Source Drain

$$G = \frac{2e^2}{h}M$$

Dr. Alestin is presenting

Cal, Sebril, Rishiben, Dr. Alestin, You, PHYSICS, 31 others

5:28 Fri, 12/08

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Topological insulator

Continuous deformation (no holes)

Continuous deformation (with a hole)

10

Dr. Alestin is presenting

Pinky, Rishiben, Daniel Marwein, Dr. Alestin, You, PHYSICS, 30 others

5:50 Fri, 12/08