

Online Familiarization Workshop

On

Nano Sensors and Optoelectronic Devices



14-02-2024: Day 1

Time	Title of the talk	Guest/Speaker
Inaugural Session		
10.00-10.15	Welcome Address	Dean (IIT Guwahati)
10.15-10.30	Address by Chief Guest	Director (IIT Guwahati)
10.30-10.45	Introduction to INUP-i2i & Selection Process	Prof. Dipankar Bandyopadhyay (IIT Guwahati)
10.45-11.00	Introduction to CFN & Other Facilities at IITG	HoC, Centre for Nanotechnology (IIT Guwahati)
11.00-12.00	Devices for the Detection of Breath Components	Prof. Roy P. Paily (IIT Guwahati)
Tea Break		
12:15-13:15	How to write and structure a journal paper for publication at high impact venues?	Prof. Salil Kashyap (IIT Guwahati)
Lunch Break		
Theme: Photodetectors		
15.00-16.00	Design and Development of Transient Sensor	Dr. Ravindra Kumar Jha (IIT Guwahati)
16.00-17.00	Device Engineering for Deep-UV Photodetectors using Gallium Oxide	Dr. Ankush Bag (IIT Guwahati)



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15-02-2024: Day 2

Time	Title of the talk	Resource Person
Theme: Photovoltaics		
9:00-10:00	Solar Photovoltaic Technology: Overview, Technological Innovation & Market Status"	Dr. Amit Singh Rajput (Adani Power)
10.00-11.00	Perovskite solar cells: Device Physics and characterization of recombination phenomena from spectroscopy transients	Prof. Pradeep Nair (IIT Bombay)
11:00-12:00	Hybrid perovskites for photovoltaics and beyond	Prof. Monojit Bag (IIT Roorkee)
Tea Break		
12.15-13.15	SCAPS: Tutorial on Si-Perovskite Tandem Solar Cells	Dr. Himangshu Jyoti Gogoi (IIT Guwahati)
Lunch Break		
Theme: Nanodevice Simulation Tutorials		
14.15-15.30	A Bird and an Ant Look at Solar Photovoltaics	Dr. Gayatri Natu (Applied Materials)
15.45-17.45	LAOSS: Tutorial on Crosstalk in Device Arrays	Er. Anil Sharma (Impulse Technology)

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16-02-2024: Day 3

Time	Title of the talk	Resource Person
Theme: Opto- and Bio-electronics		
10:00-11:00	Introduction to Cognitive Science and Applications	Prof. Cota Navin Gupta (IIT Guwahati)
11:00-12:00	Group-III Nitrides for Optoelectronics: QCSE in Nanowires LEDs	Prof. T. Malleswararao (IIT Guwahati)
Tea Break		
12:15-13:15	Building a Venture: Challenges, Roadblocks and the Fun of it	Dr. Swapnil Sinha (BioNEST-IIT Guwahati)
Lunch Break		
Theme: Nanomaterial Simulation Tutorials		
14:00-15:00	A basic introduction to Density Functional Theory	Prof. Pankaj Kumar Mishra (IIT Guwahati)
15:15-17:15	Density Functional Theory Calculations using VASP	Dr. Sayandeep Ghosh (Chungbuk National University, South Korea)
17:30 – 18:30	QUIZ	