744

THE LNM INSTITUTE OF INFORMATION TECHNOLOGY, JAIPUR

(Deemed-to-be-University under De-Novo category and Section 3 of UGC Act 1956)

Event Report Format

S. No.	Particulars	Response
1	Name of the Event/ Activity	Algebraic Quantum Physics: Entropy & Entanglement
2	Program Type (FDP/ EDP/ UHV-FDP/ Conference/ Workshop/ Webinar/ Seminar/ Invited Talk/ Distinguished Lecture/ Induction Program/ Orientation Program/ Hackathon/ GIAN Course/ Sort-Term Course/ Training Session/ Cultural Activity/ Quiz Contest/ Debate/ Competition/ Sports Event/ Social Service Activity/ Awareness Program/ Charity Program/ Swachhta Program/ Healthcare Activity/ Others)	Invited talk cum Distinguished Lecture
3	Theme of the Event (Technology/ Innovation/ Research Methodology/ IPR/ Start-up/ Entrepreneurship/ Skill Development/ Stress Management/ Motivation/ Gender Sensitization/ Women Empowerment/ Career Development/ Leadership/ Awareness Program/ Social Service/ Mentoring/ Road Show/ Exhibition/ Fun Activity/ Games/ Cultural Activity/ Disaster Management/ Environmental Awareness/ Others)	Academic Colloquium (Others)
4	Program Level (National/ International/ Departmental/ Institutional/ District/ State)	Institutional
5	Program Category (Institute Lead Activity/ Student Lead Activity)	Institute lead Activity
6	Event Organized for? (Faculty/ Staff/ Students/ Industry Persons/ External Participants/ Open for All)	Open for all
7	Program Starting Date (dd/mm/yyyy)	March 22, 2024
8	Program Ending Date (dd/mm/yyyy)	March 22, 2024
9	Program Duration (in hours)	1:30 hrs.
10	Event Organized by (Name of Department/ Centre/ Club/ Society/ Group)	Department of Physics
11	Name and Contact details of Coordinator(s)	Rakesh Tibrewala
12	Details of External Partner(s) or Sponsoring Body/ Organization, if any?	—
13	Mode of Conduction (Online/ Offline/ Hybrid)	Offline
14	Venue of the Event	LT-1
15	Details of Participants (Please attach hard copy of the list of participants)	

No. of Internal Students	25
No. of Internal Faculty	14
No. of Internal Staff	1
No. of External Students	
No. of External Faculty	
No. of External Staff	
No. of Industry Persons	
No. of International Participants	
Total Participants	40

16	Details of Invited Speakers/ Experts/ Industry Persons/ Guests (Name, Designation, Organization/ Industry Name)	Prof. A. P. Balachandran Syracuse University
17	Funding details	

Expenses from the Institute Fund	
Grant received from Sponsoring or Partnering Body/ Organization	—
Grant received from Govt. Bodies	—
Total Expenditure	

18	Details of the Winners along with Prize details? If any.	—
19	Brief note about the event	The colloquium highlighted new developments taking place in quantum physics. There was decent participation of faculty & students in the talk. The participants also had several questions & there was a good amount of discussion during & after the talk.
20	Program Outcome? If any	—
21	Google Drive Link of Geotagged and Simple Photographs (Please upload photographs on your google drive and share the link here with editing rights)	

Supporting Documents to be attached with the report:

1. Copy of participation certificates if issued to the participants
2. Copy of Poster/ Flier/ Brochure of the activity
3. Copy of the email/notice circulated
4. List of the participants (Faculty/ Staff/ Students/ External Participants etc.)
5. List of the Winners, if any
6. Copy of Agreement/ MoU in case of collaborative activity
7. At least 5 Geotagged Photographs
8. At least 5 Simple Photographs

Important Notes:

1. Soft copy along with all the applicable documents must be sent to events@lnmiit.ac.in
2. Signed Hard copy along with all the applicable documents must be submitted in IDAAR Cell.

Date of report submission: March 22, 2024

Rakesh Tibarewala

Name and Signature of the Coordinator(s)

LNMIIT
The LNM Institute of Information Technology

Dr. Rakesh Tibrewala <rtibs@lnmiit.ac.in>

Physics Colloquium

Dean Office <deanoffice@lnmiit.ac.in> Thu, Mar 21, 2024 at 9:49 AM
To: LNMIIT_Faculty <faculty@lnmiit.ac.in>, Visiting Faculty <visitingfaculty@lnmiit.ac.in>, ug@lnmiit.ac.in, PG LNMIIT <pg@lnmiit.ac.in>, PhD <phd@lnmiit.ac.in>
Cc: "Dr. Rakesh Tibrewala" <rtibs@lnmiit.ac.in>

Dear Colleagues,

Prof. A. P. Balachandran from Syracuse University is visiting us. He will be giving a colloquium tomorrow. The details are as follows:

Title: Algebraic Quantum Physics: Entropy and Entanglement
Date: March 22, 2024
Time: 3:00 pm-4:00 pm
Venue: LT-01
Abstract
The world is quantum. The emergence of classical physics from it is an approximation.But what exactly is 'quantum'? Also its description using Hilbert spaces , as taught in basic courses, is mysterious. In this talk, it will be argued that this need not be the case . Thus while classical physics is probability theory on commuting observables, quantum physics is just its generalisation to noncommuting observables. The Hilbert space comes out of this observation using the basic 'Gel'fand-Naimark-Segal' (GNS construction). From this, we can also understand that 'wave functions' are not functions, in particular there is no a priori need for them to be single valued. Standard text books are misleading. Dirac showed this already in 1931 while discussing magnetic monopoles. We will use these ideas to discuss entropy, the second law, entanglement and phase transitions. The work of Sorkin et al. on black hole entropy using entanglement will also be mentioned,

All are welcome to attend.

Regards,
rakesh

Attendees of the Physics Colloquium by Prof. Balachandran

(1) Rakesh Tiberewala (Faculty)
(2) MOHIT GUPTA (Faculty)
(3) Pawan Kumar (Faculty)
(4) Ashok Gharai (Faculty)
(5) Roopesh (student)
(6) S. Rajput (PhD student)
(7) Subhasyan Bera (Faculty)
(8) PRATIBHA GARG (Faculty)
(9) Pranay Raja (Student)
(10) Vijay Sharma (Student)
(11) Vageesh Mishra (Student)
(12) Shishir .S.D (Student)
13) Ajit S. Pathak (student)
14) Prateek Sharma (student)
15) Mamta Yadav (student)
16) Anjali Jangid (student)
17) Ishika Singh (student)
18) Jaya Katariya (student)
19) Ashwani Kumar (student)
20) Abhishek (student)
(21) Ram Prasad (student)
(22) Laxmi Narayan Sharma (Staff)
(23) Rishi Shekhawat (student)
(24) Divya (PhD Student)
25. G. Manideep (PhD)

Avinash Kumar Dubey	(Ph.D. Student)
Azad Rohilla	(Student)
Omprakash Tangrd	(PhD. Student)
Ratan Kumar Giri	(Faculty)
Trivedi Hash C.	(Faculty)
Suhail Shah	(PhD. Student)
Amishi singh	(UG student)
Pamita Choclat	(Faculty)
Nakul Agarwal	(UG Student)
Yashwardhan Gupta	(UG Student)
Amit Negi	(Faculty)
Manish K. Singh	(Faculty)
M. K. Kadalbajoo	(Faculty)
ANUPAM SINGH	(FACULTY)
Somnath Trivedi	(Faculty).