



Miranda House

UNIVERSITY OF DELHI

Departmental Annual Report - 3

Departmental Activities: Curriculum and Beyond

Department: Physics

Year: 2017-2018 (from 1.7.2017 to 30.6.2018)

Department Society and its Office Bearers:

Physics Society, Vidyut organizes various seminars and workshops to create a holistic environment of learning beyond classrooms. Activities also include arranging Freshers' Welcome, Farewell party and Student Excursion. Physics Society works closely with the DS Kothari Centre to organize many of its seminars and workshops.

President	Vice President	General Secretary	Joint Secretary	Treasurer
Keshvi Tuteja	Suchita Agrawal	Manisha Siwach	Ananya Kumari	Lulu Thamei

Staff Advisors:

Dr Abha Dev Habib

Dr Bilasini Devi Naorem

Dr Monika Tomar

Part B.1

Seminars/conferences/workshops conducted by the Department

Lecture by Dr. Aya Ikegame, University of Tokyo on 1.8.2017 from 10:30 am to 11:30 am. Over 50 students participated in the Lecture.



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One of the most appreciated events of the Academic year 2017-18 was an interactive **talk on the Big Bang by Dr. Mick Storr and Dr. Archana Sharma** on 2 August 2017. Both speakers are pioneer in high energy physics and are senior scientists at CERN, the European Organization for Nuclear Research. DS Kothari Centre for Research and Innovation in Science Education and Vidyut, the Physics Society, Miranda House in collaboration with Life Lab Foundation organised this interactive session entitled “Interactive Programme on The Big Bang: Unlocking the Secrets of the Universe”. Students had virtual visit of the CERN laboratory via video conferencing. They explored different aspects of large hadron collider and interacted with the experts.

The event, held in the Auditorium, VP Chest Institute, saw participation of 250 students and teachers from across colleges.



Vidyut Physics Society, Miranda House
July 31, 2017 · 🌐

Hello everyone, greetings from Vidyut. We are overwhelmed by the enthusiastic response we have received regarding the event. Unfortunately, we have a limited seating capacity of 300 people in the audience and have received confirmed registrations (along with money) of about 270 participants and have a window of only 30 more participants. All those who make the first 30 payments via paytm or via cash first will be registered for the event. We have hence closed the registration on the Google forms.

Regards
Vidyut, The Physics Society

13 4 Comments



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Physics Department organized a series of interactive sessions with the motivated graduate and final year students in which they shared their experiences and work done by them in the internship programmes/ summer workshops. This was to provide information and to motivate Physics students of the first and second years.

The first session of this series titled **A Career Counseling Series: Internships and Projects** by Ms. Unnati Akhouri, Former Student, B.Sc. (Hons) Physics, Miranda House was held on 21.8.2017.

The session held in the Physics Lab – I was extremely well attended. Over 60 students attended the session and interacted with Unnati.





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Under the aegis of DS Kothari Centre, **Physics Baseline Test** was held on 20 September 2017 for the undergraduate Miranda House students. The top three students were qualified for a presentation round required for the Science award.

Out of the 45 students who had registered, 27 students appeared for the Test.

D.S. Kothari Centre for Research & Innovation in Science Education
Miranda House, University of Delhi

Conducts
BASELINE TESTS 2017-18

24 August Biology	30 August Chemistry	6 September Earth Sciences
13 September Mathematical Sciences	20 September Physics	

Time: 3:30 pm to 4:30 pm (Wednesday afternoon)
Venue: room no. 146 (or as announced one day before test)
Attractive cash prizes for top three in each test

The 15 short-listed candidates to make
PowerPoint presentations (8 min + 2 min interjection)
on a contemporary topic of inter-disciplinary nature

The winner will get the prestigious
Science Award 2017-18
Cash prize of Rs. 20,000

Eligibility
Any I, II, III Year student of
any course in Miranda House

Format of Tests
40 Multiple Choice Questions
2 Concept based Questions
2 Numerical Problems

Last Date for submitting Entry Forms: 21 August 2017
Entry fee: Rs. 70 per student per subject
Concessional rates for multiple entries: 20/Rs. 40; 30/Rs. 100; 40/Rs. 140; 50/Rs. 200
Forms available with Shri Ravi Kumar, Room no. 143, Science Block

THE ROBOTICS SOCIETY
MIRANDA HOUSE
WITH
DESIGNCUT
presents
**IOT
WORKSHOP**

Introduction to Robotics
Introduction to Embedded Systems
Advanced Learning in IOT

14th-15th October
9 am - 4 pm
DSKC Lab Room 315

For information, contact:
Rajnandini Mukherjee: 9582947228
Suchita Agrawal: 8860951506

Sponsored by: DEPARTMENT OF BIOTECHNOLOGY
Ministry of Science & Technology

A two-day workshop was organised by Robotic society of Miranda House on **Internet of Things (IOT) Technology** on 14-15 October 2017. An expert from DesignCut Mr. Ashish introduced students about robotics, design and working of the Robots. He discussed in his talk about the embedded systems and the advance learning in IOT.

Over 30 students participated in the Workshop held in the DS Kothari Centre Lab.

A three-days **Science Conclave: Research on the Frontiers** was held from 10 January 2018 to 12 January 2018. Experts from various fields were called to enhance the research aptitude of undergraduate students. It was an intra-university event where students and faculty from various colleges of Delhi University participated. Teachers and students from the Physics Department participated and worked hard for making the event successful. 316 students and 36 faculty members participated in the three-days Science Conclave.

D S Kothari Centre for Research and Innovation in Science Education
Miranda House
University of Delhi

Science Conclave
**Science Conclave:
Research on the Frontiers**
Wednesday 10 January to Friday 12 January 2018
Heritage Hall, Miranda House
9.00 am to 4.00 pm

Eminent Speakers

Dr. Ashutosh Sharma Secretary, Department of Science and Technology	Dr. Ramgopal Rao Director, Indian Institute of Technology, Delhi
Dr. Archana Pai Indian Institute of Technology, Mumbai	Dr. Subhayauchi Bhattacharya Professor, Acharya University & Former Director, IITR
Dr. S. Ganesha Biological Sciences & Bioengineering Indian Institute of Technology, Kharagpur	Dr. Amit Sharma International Centre for Genetic Engineering and Biotechnology, Delhi
Dr. Shobha Vasu Jawahar Lal Nehru Centre for Advanced Scientific Research, Bangalore	Dr. Subhash Khusha Institute of Nuclear Medicine and Allied Science Defence Research and Development Organisation
Dr. Igal Galili The Hebrew University of Jerusalem, Israel	Dr. Anurag Agrawal Director, CSIR Institute of Genomics & Integrative Biology, Delhi
Dr. Subhashish Banerjee Indian Institute of Technology, Delhi	Dr. Rajamoni Vijayaraghavan Tata Institute of Fundamental Research (TIFR), Mumbai

inspire
DEPARTMENT OF SCIENCE AND TECHNOLOGY
GOVERNMENT OF INDIA
SCIENCE EDUCATION
Science Conclave
UNIVERSITY OF DELHI

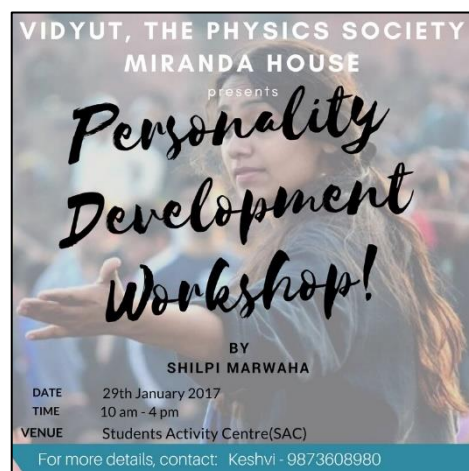
Email: science.conclave@mirandahouse.ac.in | www.mirandahouse.ac.in



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A **Personality Development Workshop** by Ms. Shilpi Marwaha was organized by the Physics Society on 29 January 2018 in the Student Activity Centre. Over 30 students participated in this 5-hours workshop.



As part of the ongoing series wherein Vidyut created platform for interaction with Senior and Former students, the next session - **Computational Neuroscience** by **Shreya Kapoor**, III year student, B.Sc (Hons) Physics **was held on 1 February 2018**. The interaction session was held in LT-1. Over 60 students participated in the programme.



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The Physics society organized an interactive workshop *VIGYANshala – Communicate and Inspire Workshop* on 5 February 2018 by alumnae Dr. Darshana Joshi from University of Cambridge, UK along with Dr. Aditya Sadhanala and Dr. Robin Lamboll from the same University for the students of Physics Department.

The workshop was held in DS Kothari Centre Lab. Over 40 students attended the workshop.

VIDYUT, THE PHYSICS SOCIETY, MIRANDA HOUSE
PRESENTS
VIGYANSHALA
Sponsored by DBT

DATE - **5 FEBRUARY, 2018**
TIME - **1:00 PM**
VENUE - **DSKC LAB, ROOM NUMBER 315**

TOPICS

- * POLYMERS AND GELS - INTRODUCTION TO SOFT MATTER
- * NEW AGE DEVICES - FROM PLASTICS TO ELECTRONIC DEVICES
- * BLENDING PHYSICS AND POETRY-THE ART OF COMMUNICATING SCIENCE
- * SMALLER THAN THE SMALLEST- FASCINATING WORLD OF NANO
- * DNA EXTRACTION FROM BANANA

Vidyut Physics Society, Miranda House
PRESENTS
VIGYANshala WORKSHOPS

The schedule of the program is as follows:
Date: 5th February 2018
Venue: DSKC Lab (Room number- 316)

S.No	Time	Topic	Speaker
1.	1.00 pm - 1.40 pm	Polymers and Gels - Introduction to Soft matter	Dr. Darshana Joshi, Cavendish Laboratory, University of Cambridge
2.	1.40 pm - 2.20 pm	New age devices: From plastics to flexible electronics	Dr Aditya Sadhanala Cavendish Laboratory, University of Cambridge
3.	2.20 pm - 3.00 pm	Blending Physics and Poetry - The art of communicating Science	Robin Lamboll
4.	3.00 pm - 3.40 pm	Smaller than the smallest - Fascinating world of Nano	Dr Shahab Ahmad Asst. Prof. Jamia Milia Islamia
5.	3.40 pm - 4.20 pm	DNA extraction from Banana	

As part of an ongoing series, interaction session **Sensing the Unseen: A Glimpse of Particle Detection** by **Divya Pal**, III year, B.Sc (Hons) Physics was held on **15 February 2018**. Over 60 students participated in the programme.

As part of the celebration of the **National Science Day on 28 February 2018**, three projects/posters namely (i) Neuroimaging using fMRI data; (ii) Path Planning with Dijkstra and (iii) QuarkNet: Detection of cosmic ray muons and the time correlation analysis were presented by the students of Physics Department at the INSA, Delhi.




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Teachers and students of the Department also participated in a three-days NASI Conference on ‘Technological Empowerment of Women’ scheduled on March 8-9, 2018 at Vigyan Bhawan, New Delhi.



The Society organised the **Annual Physics Festival, Iridescence 2018, on 20 March 2018**. The fest was a celebration of Physics with a myriad of events. Fest included a mind-boggling Debate and Comic Strip competitions that gave the young physicists a chance to showcase their ideas. The most attractive event of the fest was the *Demonstration of Robots* by the Robotics society students where the students demonstrated the projects carried out by them all through the year.



Vidyut , The Physics Society
Miranda House
Presents
IRIDESCENCE



- ✓ Inaugral demonstration by Robotics Society @ 9:30 am
- ✓ Debatobot @ 10:30 am
-Debate on interesting topics
- ✓ Comicta @ 10:30 am
-Let your creativity run wild through comic art
- ✓ TALAASH @ 11:30 am
-Treasure Hunt (hunt to get the clues)
- ✓ Lecture by Anjan Ananda Sen @ 2:00 pm
Topic: The Dark Side Of The Universe

For details ,
Contact Keshvi : 9873608980
Manisha : 7042027191

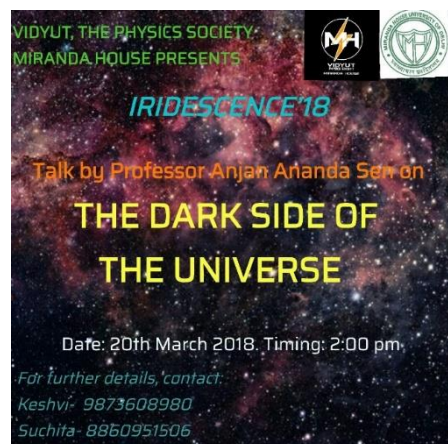
20th March 2018



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The fest was a great experience for all, and saw participations from colleges all over Delhi. Over 100 students participated in various activities.

The Fest included a riveting talk on **Nothing can be more entertaining than doing science: A journey into the magical world of Quantum Mechanics** by **Professor Anirban Pathak**, Department of Physics, Material Science and Engineering, IIIT, Noida.



A talk **The Dark side of the Universe** by **Professor Anjan Ananda Sen** from Jamia Milia Islamia was held as part of the Fest. Over 70 students attended the session.

A seminar **Seeking N-lightenment** by **Professor Arnab Bhattacharya, TIFR** was held on 6 April 2018. Over 70 students attended this very interesting seminar and the discussion session which followed.





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Part B.2

Extension Activities organized

Summer Workshop for Undergraduate Science Students, Flavor of Research: Investigative Projects in Multidisciplinary Contexts held at the D. S. Kothari Centre for Research and Innovation in Science Education, Miranda House, University of Delhi, was held from 5 June to 19 July 2017.

Participation: 5 faculty members of the Physics Department guided 39 undergraduate Physics students from across institutions. Out of 39 students who successfully worked on hands-on projects, 26 students were from BSc (Hons) Physics, Miranda House.

For more info:

<https://mirandahouse.ac.in/uploads/dskc/summerworkshop/2017%20DSKC%20Summer%20Workshop%20Report.pdf>

**D S Kothari Centre for
Research and Innovation in Science Education**
Miranda House, University of Delhi

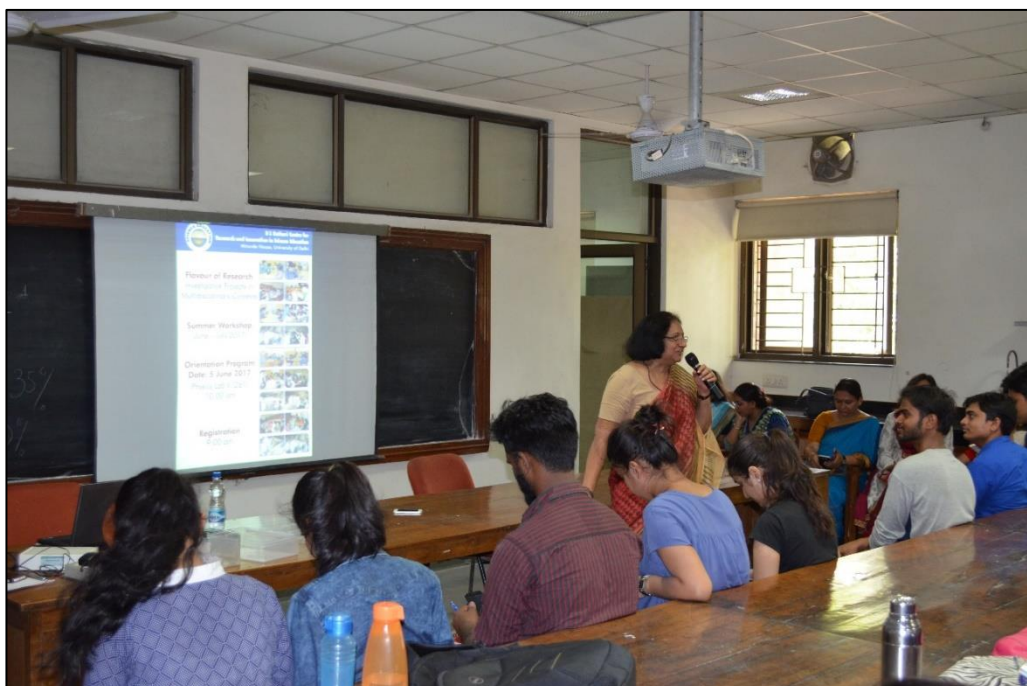
Flavour of Research
Investigative Projects in
Multidisciplinary Contexts

Summer Workshop
(June – July 2017)

Orientation Program
Date: 5 June 2017
Physics Lab II (261)
10:00 am

Registration
9:00 am





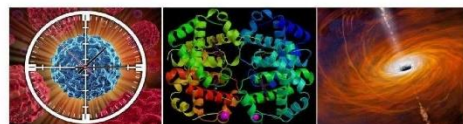


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Physics Department participated actively in the **Inspire Internship Programme 2017**, an extension activity organised by **D S Kothari Centre for Research and Innovation** from **18 December 2017 to 22 December 2017**. Four workshops namely, The World in Motion, Sense, Measure and Control the World, Amusement Park Robotics: Impacting Life, were organised by Physics Department to develop the experimental skills of the school students. These workshops helped the students to understand physics behind daily life activities by hands on experiments. Undergraduate students mentored the school children which enhanced their understanding.

204 students from 21 schools and 56 school teachers participated in the Inspire Internship Programme 2017.



Inspire Internship Programme 2017
Innovation in Science Pursuit for Inspired Research
An initiative of DST, Government of India



18-22 December 2017

Organized by
D S Kothari Centre for Research and Innovation in Science Education
Miranda House, University of Delhi



Detailed report of INSPIRE 2017:

https://mirandahouse.ac.in/uploads/dskc/inspireprogramme/2017_Final%20Inspire%20Report.pdf



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Part B.3

Any other event organized as part of students' activities (not listed above)

As one of the activities Vidyut, the Physics Society organised an excursion from 22.9.2017 to 25.9.2017 to Dalhousie and Amritsar. A total of 40 students, 4 teachers and 3 lab staff went for the excursion. The excursion involved trekking and visiting local tourists' spots including the Golden Temple and Wagah Border.

