

**Loyola College, Chennai-34**  
**Department of Physics**  
**Loyola Physics Association (LPA )**  
**Annual Report-2017-18**

The Loyola Physics Association activities were formally inaugurated by Dr.Govindraj, CSIR-Central Electronics Engineering Research Institute (CEERI), Pilani, Chennai-chapter, on 21<sup>st</sup> August 2017 at 11.20 am for the academic year 2017-18. Dr. Govindraj delivered the inaugural address on “The Latest Trends in Electronics and Microprocessor”, importantly elaborating on recent developments in research based on embedded systems.



The elected student office bearers of LPA for the academic year 2017-18, Vinnarasi N.- Association secretary, John Dcoutho – Cultural secretary (Shift I), Sreekanth – Joint secretary (Shift I), S. V. Iniyar – Sports secretary (Shift I), Aakash – Cultural secretary (Shift II), Subham Bhandari S. – Joint secretary (Shift II), A. Infant Joe – Sports secretary (Shift II).



The First event of LPA was an invited lecture by Russian state cooperation for nuclear energy “ROSATOM” jointly with Russian Centre of Science and Culture in Chennai. In this lecture Mr. Andrey Akatov, Senior Lecturer from Saint Petersburg Institute of Technology highlighted the safety and cleanliness of nuclear power. Students and staff of the department of physics actively listened and attained clarity about their ideas on hazards of nuclear power.

This academic year LPA arranged many invited lectures by inviting the experts from various foreign universities. To mention a few, “A study of Brown Dwarfs in the constellation of Perseus and an outlook of Higher education in Taiwan” by Bhavana

Lalchand, National Central University, Taiwan. Two professors from Tunghai University, Taiwan motivated the students by the lecture on “The World through Expat Eyes”. This lecture concentrated on the various facilities and offers of pursuing higher education in Tunghai University, Taiwan and it mainly elaborated on the student friendly atmosphere and safe surrounding of Taiwan. Next Invited Lecture is on “Holistic View of Active Galactic Nuclei: From Low-Luminous to Ultra-Luminous Ones” delivered by Dr. Venkatesh Ramakrishnan (Postdoctoral Researcher, University of Concepcion, Chile). Invited Lecture on “Optical communication - a popular presentation” was delivered by Sebastian Lourdudoss, an alumnus of St. Joseph’s College, Trichy, currently in KTH-Royal Institute of Technology, Stockholm, Sweden on February 19, 2018. To motivate the students regarding opportunities in National Institute of Importance of India an Invited lecture on nanoscience titled “Is there still enough room at the bottom?” by Dr. Vinayak Kamble, Assistant Professor, School of Physics, Indian Institute of Science Education and Research, Thiruvananthapuram. He emphasized the openings and scholarships in IISER and other Indian Institutes.

In This academic year a new initiative was taken by the office bearers of LPA from the inputs received from their student friends. A departmental lecture series named “LUMINA: Illuminating young minds” was that initiative. In this series first lecture was given by Prof. G. Sreekumari, Assistant Professor, Department of physics, Loyola College, about “INTRODUCTION TO QUANTUM OPTICS”. Second lecture was given by Dr. S. Pauline, Associate professor, Department of Physics, Loyola College on “Magneto resistance”. “Machine learning using artificial neural networks” was the third lecture in this series delivered by Dr. Stanley Raj Assistant Professor, Department of Physics, Loyola College Chennai-34.

LPA whole heartedly thank these three experts for their contribution to the betterment of student community outside the class hours.

## **Inter and Intra College Cultural Events and Achievements**

Our students had participated in various cultural events held at different colleges in and around the city. They have won overall trophies in Madras Christian College and Stella Maris College and won many prizes by showcasing their talents and have achieved great success. One of our students secured 2<sup>nd</sup> prize in the zonal level Quiz competition conducted by IGCAR.

Students have shown overwhelming responses in participating inter collegiate competitions conducted by different colleges in the city and won many medals and prizes.

Physics department students have actively participated in various cultural events of Ovarions 2017, an Inter Departmental Cultural Extravaganza conducted by our college, and exhibited their talents.

To embed the competitive mind among our physics department students an Inter departmental competition was also conducted and the institution witnessed an overwhelming student participation.

## **Department Festival**

The most important activity of LPA is department festival. Loyola Physics Association conducted PHYSICA 2K17, an inter-collegiate annual department festival on 15<sup>th</sup> December 2017 in Lawrence Sundaram Hall. Students from more than 15 colleges in and around the city participated in the festival. It was inaugurated by Mr. M. Francis Dhanaraj, Assistant General Manager, L&T, MHPS Boilers Pvt. Ltd. Eight events namely, Quiz, Pot Pourri, Debate, Adzap, Meme creating, Numericals, Black box and Treasure Hunt, both onstage and offstage, were conducted. The students from other institutions took part in the events actively and a healthy competition was maintained. Certificates and medals were distributed for the winners of these events. DG Vaishnava College, Shift-II students bagged the Overall Winners Trophy.

Every year pongal is celebrated in a grand and traditional way in our college. This year pongal was celebrated on 11<sup>th</sup> January 2018. As a department we cooked pongal. Dr. Nirmala Jothi guided the students in preparing the department pongal along with the active participation of teaching and non-teaching staff.

### **Sports and Games**

Physics department students participated in various track events and Games conducted by physical education department in view of the Sports day. Our department students took part in the march past event and shown their solidarity, unity and physical fitness.

### **Research**

Apart from the teaching, Physics department also excels in the research. Staff members spend time in active research after class hours. Their research interest includes nonlinear optical materials, Nano Materials for magnetic applications, solar cell applications, Super capacitors, Photocatalytic application and Computational material Science. Among the 12 government aided faculties of Physics department, 10 are recognized research guides from the University of Madras. 41 Ph.D scholars and 12 M.Phil students are pursuing research under these guides.

Seven research scholars won the best paper award in various national and International conferences.

In this academic year 30 research manuscripts were published by our Research supervisors and scholars in peer reviewed journals.

Four of our staff members delivered 7 invited lectures in different National and International Conferences.

A major and a few minor research projects to the tune of Rs.27,70,000/-are carried out in the department this academic year.

Through these unassuming activities, the LPA has played a vital role in the enhancement of the knowledge of the students and faculty in a significant way.