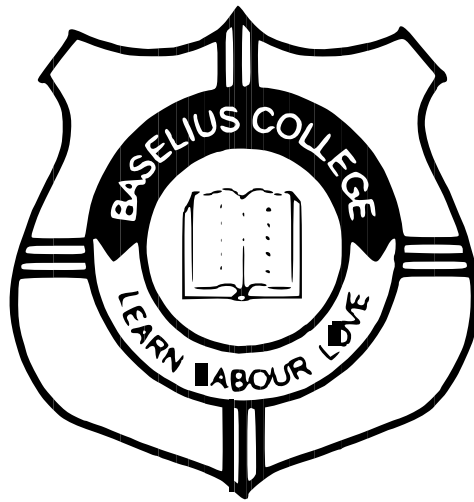


# Association Report

2018–2019



Department of Physic, Baselius College,

Kottayam.

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## Preface

2019-2020 marked a spectacular milestone for the physics association, successfully completing 25 years since its inception in 15<sup>th</sup> November 1995. Ever since then physics association 'Beats' succeeded in promoting students in their academic as well as co-curricular activities. The association played a key role in conducting seminars, workshops, exhibitions, intercollegiate competitions and other department level functions. The association took its proud moment by conducting an international seminar on "Recent trends in Nanotechnology" and "physibit 2019", a mini-science exhibition. Thus the year was vibrant with a lot of activities for the students and the faculty members.

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## Association Committee Members 2018-2019

Teacher-in-charge      Neha P.R

Association Secretary    Lydiya Annie John

Joint Secretary          Tinu J Thankachan

Treasurer                 Annu Annie George

Committee members      Varghese Reji,  
Second year B.Sc. Physics

Rajelekshmi,

First year B.Sc. Physics

### **Post-Event Report Of International Seminar On**

### **Recent Trends In Nanotechnology**

The international seminar on recent trends in nanotechnology was organized on 13<sup>th</sup> August 2018 by the post-graduate department of physics and center for research, Baselius College Kottayam in association with MG University Kottayam. The main objective of the seminar was to discover the area, scope and the recent trending events in present scenario of nanotechnology. The seminar highlighted the importance of advance

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material research. The event was attended by about 150 attendees including students, research scholars and teaching faculty of different colleges.

The seminar started with a divine prayer song followed by welcome remarks of Dr. Sindu Jones, Head of the department of physics Baselius College Kottayam. At the outset she welcomed the speakers and attendees to the event. Dr. C. S. Menon, former Dean of science and Director of School of Pure and Applied Physics M.G. University kottayam, inaugurated this year's association by lighting the lamp.

The seminar was spread over three sessions in which the first session was handled by Dr. C. S. Menon where he discussed about various concepts of physics and brief history of science through his jocular way of speech.

Dr. Krishnakumar Pillai, Institute Of Technology, Dublin UK delivered talk on the topic of the day "Recent trends in nanotechnology". He briefed on history, art and science of manipulating matter at the nano-scale level also elaborated chemical vapour deposition (CVD), being a basic tool of manufacturing technique in nanotechnology. He also discussed the scope of TEM (transmission electron microscopy) and recent trend in nano-wires and other nano-materials. In the third session Dr. Aparna Thankappan,

assistant professor, Department of physics Baselius College Kottayam, conducted an interactive talk on nanotechnology and its application, focussing on dye-sensitized solar cell (DSC's) currently being the most efficient and stable excitonic photocell.

All the sessions were interactive, students asked various queries that were solved by the speakers. Seminar ends with the vote of thanks to speakers, organizing committee, faculty members and students by Ms. Lidiya

Annie John, Association secretary.



## **4 Fresher's Day Report 2018**

Continuing the tradition of the college senior students of the Physics department Baselius College, Kottayam, organized an enthralling fresher's day for the newcomers on 13<sup>th</sup> August 2018. The program started at 3:30 pm. at Dr. A. P. Mani media center, Baselius College. It was a fun filled event at which the fresher's got an opportunity not only to showcase their talents but also to interact with the seniors. The program included several games and tasks which was a good ice breaker and wove the magic of fun and joy to the event. The newcomers introduced themselves and showcased their talents. Tinu J. Thankachan, Association joint secretary, delivered vote of thanks and finally the program ended, leaving behind sweet memories that will be cherished life long.

## **5 Ozone day 2018**

The department of physics observed "ozone day-2018" on 17<sup>th</sup> September 2018, at Dr. A. P. Mani media centre, Baselius College Kottayam in connection with the "international day for the preservation of the ozone layer 2018". A seminar on "Alternative life style", poster making competition and various awareness programmes were conducted. To bring out the creative expression of the students and also to gauge their awareness quotient, poster making competition on "preservation of ozone layer" was held, students of various department participated in the event. The welcome address was proposed by Dr. Nibu A George, Assistant professor, Department of physics. The chief resource person of the day was Abraham

Poovathany, Manager, malanadu development society Kanjirapally, who gave an effective talk on “alternative life style” that must be adopted in our day to do life so as to reduce the risk of threatening our environment .The programme was concluded by a vote of thanks by Miss Annu Annie George.



## **6 Awareness programme on ozone layer preservation**

An awareness programme on ozone layer preservation was organised at Govt. UP School Vettathukavala, puthupally on 17<sup>th</sup> September 2018, by the department of physics, Baselius College, Kottayam in connection with the ‘international day for the preservation of ozone layer 2018’ The purpose of the programme was to sensitize the children about the relevance of ozone day celebration in current scenario where ozone layer depletion is one of the serious problems faced by the earth. An engaging and informative presentation was done by Miss Lakshmi G Ashok, second year PG student.



To stress upon the need of preserving ozone layer, a skit was organised by third year degree students which helped to raise awareness about various threats of ozone depletion. The overall programme was fruitful in creating a consciousness among the attendees about preserving ozone layer.



## 7 11<sup>th</sup> Prof. Susan John K. Memorial Intercollegiate Quiz Competition 2018

The ever-prestigious Prof. Susan John K memorial all Kerala intercollegiate quiz competition was organized by Beats, Physics association 2018, parallel with 3<sup>rd</sup> Prof. V. John memorial Power Point presentation. The programme was held on 26<sup>th</sup> September 2018 in Mrs. Mammen Mappillai hall.

It was the 11<sup>th</sup> year of successfully organizing all Kerala intercollegiate quiz competition in the loving memory of late Prof. Susan John K., who has touched hundreds of children. Cash prizes for second and third prize were sponsored by 1999<sup>th</sup> batch of Baselius college Kottayam.

The valedictory function started with a prayer song followed by the welcome speech of Prof. Neha P.R., Association in charge, followed by the presidential address of Dr. Sindu Jones, head of the department. Dr. Sunnykutty John and Dr. Jancy Thomas, Principal of Baselius college, Kottayam commemorated late Prof. Susan John K. and Prof. V.John. The event concluded with a vote of thanks proposed by Ms. Lydiya Annie John, association secretary.



## 8 Seminar On Nobel Prize Discoveries In Physics

2018

A seminar on Nobel prize discoveries in physics 2018 was held on Dr. A.P.Mani media centre, Baselius college Kottayam on 5<sup>th</sup> October. The seminar was conducted by Dr. Nibu A. George, Assistant professor department of physics Baselius college Kottayam. The 2018 Nobel Prize in Physics was awarded to

Arthur Ashkin “for the optical tweezers and their application to biological systems” and jointly to Gerard Mourou and Donna Strickland “for their method of generating high-intensity, ultra-short optical pulses”. Dr. Nibu A. George briefed the discoveries in a comprehensible way. The session was useful and exciting since the topic concerned, was his field of research. He also shared his experiences in ultra-fast laser and spectroscopy lab, materials science center, University of Groningen, Netherlands as a post-doctoral fellow. The seminar concluded with the vote of thanks delivered by Miss.

Lydiya Annie John, association secretary.



## 9 CKK Lecture Series

Lecture series on Frontiers of Physics (quantum field theory) by Prof. H. S. Mani scientist, high energy physics, IMSC Chennai Adjunct faculty, Chennai mathematical institute, Retd. professor IIT Kanpur-on 6<sup>th</sup> December 2018 at Baselius college Kottayam. The lecture series was exclusively meant for post graduate students. He explained about relativistic quantum field theory as a one-term self-contained subject in quantum field theory. Concepts and basic technique are developed through

applications in elementary particle physics and condensed matter physics. Summing up, the lecture gave the attendees a deep insight into quantum field theory.



## 10 Study Tour 2018

A study tour was organized by physics association of Baselius college Kottayam for degree third year students. A two-day tour for 30 students and teachers was commenced on 13<sup>th</sup> December to 16<sup>th</sup> December. The places of visit were coorg and belur. The visit to coorg monastery and belur temple was worth remembering and cherishing. Another mesmerizing experience was the visit to Dubare elephant camp in coorg and the moments at Yagachi water park in Chikmaglur. The tour gave students a refreshing, adventurous nostalgic and tremendous learning experience through visits to some of the prominent places in the destinations.

## **11 Career Guidance Class**

A career guidance class was arranged by physics association of Baselius college Kottayam for second year post- graduation students on 18<sup>th</sup> January 2019. The class was held in college premises and was presided over by

Dr. Ninan Sajeeth Philip, head of the department of physics, St. Thomas College Kozhencherry and a leading scientist in the area of artificial intelligence. In the session he introduced several options for higher studies and career after post graduation. The students were motivated to think about their skills and interests. He also mentioned about the soft skills that is often noticed and also communication skills required in the career field.

Overall the class was beneficial for the students.

## **12 CKK Lecture Series On Quantum Measurements**

Lecture series on quantum measurements by Dr. Moncy V. John, visiting professor, pure and applied physics, Mahatma Gandhi University Kottayam and former head of the department of physics, St Thomas Kozhencherry, on 4<sup>th</sup> February 2019 at Baselius college Kottayam. The lecture mainly focused on quantum measurements. The level of description offers a rather flexible position for the interpretation of quantum mechanics. The postgraduate students and the faculty of teachers attended the lecture. Over all the lecture paved the way of a better understanding about quantum measurements.



## 13 Physibit 2019

Physics department of baselius college kottayam organized “PHYSIBIT 2019”, a one day science exhibition on 28<sup>th</sup> January for the benefit of school students. The program was inaugurated by Dr. Jancey Thomas, Principal of baselius college. The program was held in physics department section, it was open to students from M.T. Seminary higher secondary school Kottayam, St. Annes higher secondary school Kottayam, CMS college Kottayam and students from other departments of Baselius college. There were about 250 attendees in all.

The exhibits spanned experiments from various fields of physics and all the working models and activities were highly appreciated by the visitors as amply received in remarks left behind. With an endeavour to promote scientific attitude among budding young students, this exhibition was one of its kind.









## 14 Field Visit-1

To enhance the learning-teaching experience and create an effective and friendly explanation of physical concepts, the Physics association of Baselius college Kottayam in collaboration with Nattakom Poly technique college Kottayam arranged a field visit. The postgraduate students and the Physics faculty of Baselius college took part in the field visit which was arranged on the national science day, 28<sup>th</sup> February 2019. The main purpose of the field visit was to understand the machine working on the basis on laws of physics. Thus, field visit enabled students and teachers to examine the way scientific theories interact with real life.

## 15 Field Visit-2

A field visit was arranged for the postgraduate students of Physics department, Baselius college Kottayam to M.G. University, Kottayam on 25<sup>th</sup> March. The field trip was specifically to the instrumentation and Nano-technology lab. The students were accompanied by the faculty members. During their visit they saw the potential for further careers in its field and were given a rare opportunity to see how what they are learning in the classroom translates into cutting edge science that solves real world problems.

## 16 Summary of Physics Association 2018- 2019

Sl.No	Date of the program	Title of the program
1	13/8/2018	Association Inauguration by Dr. C.S. Menon
2	13/8/2018	International seminar on “ Recents trends in Nanotechnology”
3	17/9/2018	Ozone day celebration Abraham poovathany
4	17/9/2018	Poster presentation competition
5	17/9/2018	Extension program Govt . Up School Ericad
6	26/9/2018	11 <sup>th</sup> All Kerala inter collegiate Susan memorial Quiz competition Dr. Mathew George
7	26/9/2018	3 <sup>rd</sup> V . john memorial Inter collegiate Power point presentation competition
8	4/10/2018	Nobel prize Lecture series

Dr. Nibu A George

Sl.No Date of the program Title of the program

9 23/11/2018 Career guidance class  
for B.Sc. Third year students  
Dr. Nibu A George

10 6/12/2018 C.K.K lecture series-1  
Prf.(Dr.) H. S. MANI

11 13/12/2018 Study tour

12 18/1/2019 Career Guidance class  
Final year M.Sc. Students

Dr. Sajith Ninan

13 28/1/2019 Physibit 2019

Mini exhibition

14 4/2/2019 C.K.K. lecture series-2  
Dr. Money V john

15 28/2/2019 Field visit-1  
Nattakom poly technique college Kottayam

16 25/3/2019 Field visit-1  
Research Labs at  
M.G. University Kottayam