Volume: VI 2021-2022 | Published by Research and Post Graduate Department of Physics (DST-FIST Assisted) - St. Aloysius College, Edathua, Alappuzha

The Department of Physics is celebrating the **Ruby Jubilee** in this academic year. It was established in 1981 with B.Sc. Physics programme and M.Sc. Physics was started in 1999. There are seven faculty members in

the department. In 2018, the department was upgraded as a research department, with two research guides. The department is wellequipped with necessary facilities and resources for teaching, higher learning and research, under the financial support of DST FIST programme. Aloysian Instrumentation lab and Research Centre are functioning under the department ensure

amenities for research work. This facility is also open to research scholars / faculties of other colleges.

The department hosts a wide spectrum of national/ regional level invited lectures and seminars by renowned resource persons based on relevant topics in the field of physics. Inter and intra departmental competitions like essay writing, poster designing and lecture series

MANAGER'S MESSAGE

I am glad to know that the department of Physics is bringing out 6th edition of the news letter PHYSIK. It is a record of the association activities, achievements and memorable events in the department during the academic year 2021-22.



Research and post graduate department of Physics is celebrating its Ruby Jubilee in this year. Jubilee year gives an opportunity to look backwards on the distance travelled and forward to the journey that lies ahead and has to be planned. I congratulate the involvement of faculties and wholehearted cooperation of students in conducting various programmes. I would like to wish success in future endeavours of the Physics department.

Rev. Fr. Mathew Chooravady

are organised every year to help the overall skill enhancement of the students. Alumnae lectures and peer group lectures add momentum to the progress of the students. In fond memory of late Prof. Sabu Jacob,

the department conducts Prof. Sabu Jacob Memorial All Kerala Intercollegiate Science Quiz competition every year. Best orator is selected from the elocution competition instituted by our rtd. faculty Dr. Varghese Mathew. The annual meeting of our alumni forum - Diamond Dual, is conducted on the second Saturday February. There are 16 endowments instituted by the former faculty and wellwishers for outstanding

students.

Programmes Offered

- B. Sc. Physics with Mathematics and Chemistry as Complementary Courses
- M. Sc. Physics with Specialization in Material Science
- Ph. D. Research Areas: Material Science Crystal Growth & Thin films, Solid State Ionics, Plasma Physics
- Certificate course in Origin software

PRINCIPAL'S MESSAGE

I am very happy to know that the department of Physics is publishing 6th edition of the news letter PHYSIK. In this Jubilee year, Physics department organised diverse programmes to promote students. I look forward for



various activities and achievements for the department to march towards excellence. I congratulate all teaching staff and students for the active participation in various events and compliments to editorial team for consistent effort in publishing the newsletter.

Dr. Jochan Joseph

HOD'S MESSAGE



After the covid pandemic, college reopened in October and most of the programmes were conducted in hybrid mode. Research and Post Graduate Department of Physics celebrates its 40 years in excellence, innovation and intellectual pursuit. Various competitions, day observations and seminars were conducted as part of Ruby jubilee celebrations. I wish success to the editorial team.

Mrs. Rosmin John

EDITOR'S DESK

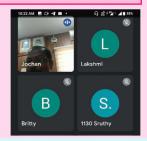


It is with great delight and excitement Physics association releases 6th edition of PHYSIK. First of all I would like to express word of gratitude to the Principal, HOD, all faculty members, association secretaries and entire student community for their support and teamwork to materialise the newsletter. In the Ruby Jubilee year of the department, association made efforts to introduce innovative programmes to promote student community. The programmes were conducted in hybrid mode due to the confines of covid pandemic. PHYSIK encompass activities of physics association, achievements of physics family members and relevant breakthrough in physics world.

Dr. Lakshmi Vijayan

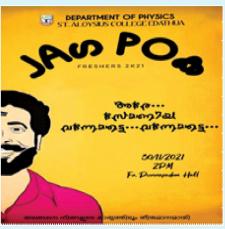
ORIENTATION PROGRAMME

An orientation class was conducted in online platform on1st June 2021. Principal Dr. Jochan Joseph handled a session on their behaviour and responsibilities to the college.



FRESHER'S DAY

Fresher's day of degree students "JAGA POKA" was conducted on 30th November 2021. B.Sc. III year students welcomed both I and II year students. HOD Mrs. Rosmin John gave wishes and message to the students.







PTA MEETING

PTA meeting of I and II year B.Sc. students was conducted on 14th March 2022. HOD Mrs. Rosmin John, class teachers Dr. Vinu T Vadakel (II DC) and Mrs. Rani George (I DC) conducted the meeting. Problems and the challenges faced by students were discussed with parents. They were given a brief overview of rules and regulations in the College.







THE NOBEL PRIZE

The Nobel Prize in Physics 2021 was awarded "for ground breaking contributions to our understanding of complex physical systems" with one half jointly to Syukuro Manabe and Klaus Hasselmann "for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming" and the other half to Giorgio Parisi "for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales". Three Laureates share this year's Nobel Prize in Physics for their studies of complex phenomena. Syukuro Manabe, Princeton



University, Princeton, NJ, USA and Klaus Hasselmann, Hamburg, Germany laid the foundation of our knowledge of the Earth's climate and how humanity influences it. Giorgio Parisi, Sapienza University of Rome, Rome, Italy is rewarded for his revolutionary contributions to the theory of disordered and random phenomena

JAMES WEBB SPACE TELESCOPE (JWST)

This landscape of "mountains" and "valleys" speckled with glittering stars is actually the edge of a nearby, young, star-forming region called NGC 3324 in the Carina Nebula. Captured in infrared light by NASA's new James Webb Space Telescope, this image reveals for the first time previously invisible areas of star birth, called the Cosmic

Cliffs, Webb's seemingly three-dimensional picture looks like craggy mountains on a moonlit evening. In reality, it is the edge of the giant, gaseous cavity within NGC 3324, and the tallest "peaks" in this image are about 7 light-years high. The cavernous area has been carved from the nebula by the intense ultraviolet radiation and stellar winds from extremely massive, hot, young stars located in the center of the bubble, above the area shown in this image. The James Webb Space Telescope is the scientific successor to the Hubble Space Telescope. It is a cryogenic infrared space observatory with a 25m² aperture (6m class) telescope that will achieve diffraction limited angular resolution at a wavelength of 2µ. The JWST is being developed by



NASA, in partnership with the European and Canadian Space Agencies, as a general user facility with science observations to be proposed by the international astronomical community in a manner similar to the Hubble Space Telescope. In contrast to the Hubble Space Telescope (HST), the JWST is designed as an infrared optimized telescope to observe the redshifted visible and ultraviolet radiation from the first galaxies and supernovae of the first stars.

DEPARTMENT OF PHYSICS TEACHING STAFF



Mrs. Rosmin John (Asst. Prof., HOD)



Dr. Lakshmi Vijayan (Asst. Prof.)



Dr. Vinu T Vadakel (Asst. Prof.)



Dr. Rani George (Asst. Prof.)

NON TEACHING STAFF



Mr. Babu K Thomas (Asst. Prof.)



Mrs. Indu Treesa Jochan (Asst. Prof.)



Mrs. Reemi Joseph (Guest Lecturer)



Sri. Tinu Joseph (Mechanic)



Smt. Santhamma Shaji (Management Staff)



Mr. Johny Thomas (Lab Assistant)

DAY OBSERVATIONS

WORLD ENVIRONMENT DAY

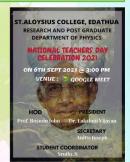
To commemorate World Environment Day, an International webinar on Ecosystem restoration was conducted in "Google meet" on 5th June 2021 in association with Nature and Energy club. Mr. Suthish Kumar. S, Sr. HSE officer, NUHAS, Oman was the resource person. Dr. Lakshmi Vijayan coordinated the programme.





NATIONAL TEACHERS' DAY

National Teacher's day was celebrated on 6th September 2021 in online mode. Principal Dr. Jochan Joseph was honoured during the programme. Dr. Jochan Joseph gave teacher's day message. Students



presented a video to honour former and current faculties in the department.



NATIONAL ENERGY CONSERVATION DAY

To observe Energy Conservation Day, dept. of physics organised an Essay writing and poster designing competitions in association with Nature and Energy Club of the college. The competitions were conducted on the theme Energy Efficient India on14th December 2021.







WINNERS OF VARIOUS COMPETITIONS

ESSAY WRITING



Jomol James
I prize



Anjali. P



Bhama. J. III prize

POSTER DESIGNING



Gopika Vrinda .B I prize



Arun Kumar II prize



Navya James III prize

NATIONAL SCIENCE DAY CELEBRATIONS

National Science day celebrations were funded by APT. On 26th February 2022, an invited talk on "Role of space" and near space based astronomical instrumentation in sustainable development" was given by Dr. Binu Kumar G, Indian Institute of Astrophysics, Bangalore.

Malayalam essay writing and power point presentation competitions were conducted for school and college students. Essay competition was conducted on 28th February 2022 on the topic: "Climate change and environment

pollution". Students of different age groups from various schools participated in the event. A power point presentation was conducted for the students of Physics department on the topic "Integrated approach in science and technology for a sustainable future". Dr. Lakshmi Vijayan coordinated the programme.

II prize I prize

Amiitha

Ajmal



Benny



III prize Gopika Vrinda B



ST ALOYSIUS COLLEGE EDATHUA RESEARCH AND POSTGRADUATE DEPARTMENT OF PHYSICS NATIONAL SCIENCE DAY **CELEBRATIONS 2022 Supported By APT** INVITED TALK ESSAY COMPETITION POWERPOINT PRESENTATION Date: 26.02.2022 Dr.BinuKumar G

Time: 3.00 PM

PROF. SABU JACOB MEMORIAL ALL KERALA **SCIENCE QUIZ COMPETITION**

8th Prof. Sabu Jacob Memorial All Kerala Intercollegiate Science Quiz Competition was held on 28th February 2022. Dr. Nibu A George of Baselius College, Kottayam was the guiz master. Around 15 teams from various parts of Kerala were participated in the preliminary round of competition. After the elimination round 5 teams were selected for final round. Hamna N and Rajesh R from CUSAT got I prize. Godwin Thomas and Christo Kunjumon of SB College got II prize. Kashyap Suresh and Alex Varghese of St. Aloysius College, Edathua got III prize. Dr. Vinu T Vadakel coordinated the guiz competition.





III prize: 8 Prof. Sabu Jacob Memorial Quiz Competition III prize: Mr. Mahesh Kumar Memorial Quiz Competition by EEM, SAC







Alex Varghese

DR. VARGHESE MATHEW ENDOWMENT **ELOCUTION COMPETITION**

IIA Banglore

Dr. Varghese Mathew Endowment Elocution competition was held on 3rd March 2022 exclusively for the students of the department. Ms. Cibina Thomas, Asst. Prof., Dept. of English and Mr. Reji T Reju, Guest Lecturer, Dept. of Economics were served as judges. The topic for Elocution competition was "Relevance of gender neutral uniforms in educational institutions". Jomol James, Veena Lekshmi and Aswathy Krishnan were got I, II, III prizes respectively. Ms. Rani George coordinated the competition.





Best Orator Jomol James



II prize



Veena Lekshmi Aswathy Krishnan

INVITED TALKS BY PHYSICS ALUMNI

MEET THE ALUMNUS-INSPIRE 1

It was a series of spearheaded talks by our alumni, designed to create and motivate next generation of scientific leaders and budding scholars in various James fields. Alumni, Fr. Kumbamthanathu, inaugurated the programme. The first talk was given by Dr. Mamman Joseph C, Head (i/c), Department of Applied Psychology, Central university of TN. The talk was conducted on 14th September 2021 in online mode on the topic "Re-discovering Yourself". Dr. Vinu T Vadakel was the coordinator of the programme.



The second talk was given by Mr. Manikanthan Nair T. M., Manager, Aeodrome Operations, HAL, Bangalore. The talk was conducted in Google meet on 18th January 2022 on the topic "Air traffic Management-Opportunities and Challenges for Youngsters".

RUBY JUBILEE CELEBRATIONS OF THE DEPARTMENT

Department of Physics celebrated 40th anniversary in the academic year. Inauguration of Ruby Jubilee celebrations was held on 10th December 2021 by Sri. Thomas K Thomas, Hon. MLA of Kuttanad. The function was presided over by

Rev. Fr. Mathew Chooravady, Manager of the college.

Smt. Mariyamma C.A (President, Edathua Panchayat), Prof. James Sebastian, (Former HOD), Sri. Jogy Joseph (Vice-Principal, Dr. Jubin

Antony (IQAC Coordinator) and Tom J Kootakkara (HM, St. Aloysius School) were felicitated the function. Dr. Jochan Joseph, gave Principal's message and Mrs. Rosmin John, HOD, welcomed the gathering.









STUDENT POWER POINT PRESENTATION SERIES

COMMEMORATION OF GREAT SCIENTISTS

To inculcate presentation skill in students, a PPT presentation series was started. Students from PG and UG, presented PPT on the contributions of scientists on their birthdays. Dr. Lakshmi Vijayan coordinated the programme and Ms. Vihinamol Varkey of II M.Sc. Physics was the student coordinator. The presentations were conducted in Google meet platform. First presentation was done by Ms. Amrutha M.S. of II M.Sc. about Dr. Vikram Sarabhai on 12th August 2021.

Second presentation in the series was conducted as part of the World

Space Week celebrations from 5th to 8th October 2021. Midhun. G., Reshma Kurup and Lekshmy A. K from III B.Sc. presented contribution of Thanu Padmanabhan, Meghnad Saha and A.P.J Abdul Kalam. P. Arundhathi Nair presented contribution of Subrahmanyan Chandrasekhar.

A photography competition was conducted in association with World Space Week celebrations on the topic "Night Sky View". Gopalakrishnan from I DC got I prize in the competition.

Third presentation was given by Ms. Gopika Vrinda R and Swathy

Krishnan of I M.Sc. Ms. Gopika presented contributions of Sir Issac Newton and Swathi about Prof. Srinivasa Ramanujan on Ist January 2022.

Ms. Ayisha Baiju and Irene Sara Benny of I B.Sc. presented on Prof. S.N. Bose and Prof. Stephen Hawking respectively on 17th January 2022.

Fifth presentation was on Bhatnagar and Galileo Galilei. Ms. Stephy Ann Varghese and Mr. Kashyap Suresh were made the presentations on 4th February 2022.













DEPARTMENT AS A CENTRE FOR EXTERNAL AGENCY'S EXAMINATION AND QUIZ

POWER QUIZ BY KSEB OFFICER'S ASSOCIATION

Dr. Vinu T Vadakel coordinated the online Power quiz conducted on 30th October 2021 by KSEB officers association. Students from different science departments participated in the quiz. Sravan. S of III DC Physics and Aneesa Ashraff of III B.Sc. Mathematics were the college level top scorers. They got certificate from KSEB.



ALL KERALA PHYSICS TALENT SEARCH EXAMINATION

To identify the talented students, among undergraduates and motivate them to pursue research careers in Physics, Academy of Physics Teachers Kerala (APT) conducted All Kerala Physics Talent Search Examination. Our college was one of the centres and this year the examination was conducted on 24th January 2022 in online mode. Twenty four degree students attended the examination. Ms. P. Arundhathy Nair from III B.Sc. was the college level topper in the first round. Dr. Lakshmi Vijayan was the local coordinator of TSE.

VISIT TO ALOYSIAN INSTRUMENTATION LAB AND RESEARCH LAB

A team of 16 final year B.Sc. students and 3 faculties from Illahia College, Koilandy visited the Aloysian Instrumentation lab and Research lab as part of their Industrial visit on 13th January 2022. The students were explained about the facilities available in the labs







WEBINAR ON GENERAL TOPICS

PERSONAL HYGIENE AND FAMILY HEALTH

A webinar on personal hygiene and family health was conducted on 22nd February 2022 in online platform. Dr. Gayathri L. K., Assistant Professor, Department of Community Medicine, GTDMC, Alappuzha was the resource person. Mr. Babu K Thomas coordinated the programme.



OVERSEAS CAREER OPPORTUNITIES

A webinar on Overseas Career Opportunities was conducted on 29th March at 3pm in Google Meet platform. Dr. Denny Thomas, Academic at La Trobe Business School, La Trobe University, Melbourne, Australia, was the resource person. He interacted with the students on different opportunities and options in abroad. Mrs. Rosmin John coordinated the webinar.





ASSOCIATION VALEDICTORY AND FAREWELL FUNCTION

During the technical section of valedictory function Dr. Jacob Mathew (former Principal, SB College, Changanacherry) gave the keynote address and a technical session on "Nanomagnetic materials for Hyperthemia Applications". Staff and students of Department of Physics bid adieu to our beloved members Dr. Jochan Joseph, Principal and Mr. Johny Thomas, lab assistant, on 23rd March





2022 at Fr. Punnapadom Hall. Very Rev. Fr. Joseph Vaniyappurackal (Vicar General, Arch Diocese of Changanacherry) delivered the benedictory address. Mrs. Rosmin John (HOD) presided over the function. College





bursar, Vice Principal, teaching and student representatives gave felicitations. Dr. Jochan Joseph and Mr. Johny Thomas gave the reply speech.

In the afternoon session, prize distribution ceremony of various competitions was conducted. Dr. Jochan Joseph and faculties distributed prizes for various competitions. After the prize distribution

students perform their talents on stage. As a token of love, Gopika Vrinda B gifted a digital portrait to Dr. Jochan Joseph and Mr. Johny Thomas.









GET TOGETHER

DIAMOND DUAL 2022

23rd annual get together of alumni was held on 23.04.2022 @ 3.00pm at Punnapadom hall. Alumni gave farewell to Dr. Jochan Joseph and Johny Thomas. **Mr. Manikanthan Nair T.M.** presided over the function. Mrs. Kochurani Michael (Former faculty), Dr. K.C. Mathai (Former HOD), Mrs. Lizymol Xavier (Former HOD), Dr. Mereena Aloysius (HOD, Physics department, Assumption College & Alumni) were felicitated the function. Dr. Jochan Joseph and Johny Thomas were honoured during the function. Alumni were honoured for their achievements like top scorers in B.Sc. and M.Sc. Alumni who received Ph.D. degree and other recognitions were honoured. Few alumni shared their memories in online platform also.









GET-TOGETHER WITH RETIRED FACULTY

There was an informal get together with retired faculty and current faculty of the department on 25th May 2022. All beloved teachers shared their memory about Jochan sir, while he was a student in the department. Jochan sir's family were also present. James Sebastian sir moderated the function. We junior faculty experienced the warmth of beloved seniors. Lizymol teacher served as a bridge between retired teachers and junior teachers.









BIDS FAREWELL TO M.Sc.

I year M.Sc students gave farewell "Nirakuttu 2021" to their beloved seniors. The program was conducted in online mode on 10th July 2021.



ONAM CELEBRATION

Onam is celebrated in online platform on 14th August 2021 with various programmes. Teachers gave onam greetings and students arranged various events like floral decoration, Sadya and Malayali Manka /Sreeman competitions.









CHRISTMAS CELEBRATION

College conducted Christmas celebration on 23rd December 2021. Team of Vihinamol Varkey and Gopika Vrinda B got first prize for card making in college X'mas celebration. The department team got third prize in carol song competition. The department students actively participated in star making, crib making and angel competitions too.







CHRISTMAS CELEBRATION



CAROL TEAM: III Prize:
Anupama, Irene Sara Benny, Aswathy
Krishnan, Vihinamol Varkey, Jomol
James, Lekshmi A. K., Navya James,
Gopika Vrinda B & Sona Sara Sanu





I Prize: Card making competition

7





STUDY TOUR

Last year degree students were eagerly waiting for the most awaited study tour. This year tour was conducted from 30th March to 3rd April. They enjoyed the serene beauty of Wayanad, Belur and Coorg. Mr. Babu K Thomas and Ms. Reemi Joseph accompanied the students.



BIDS FAREWELL



Dr. JOCHAN JOSEPH Principal (2019-2022)

Dr. Jochan Joseph started his journey as a pre-degree student in 1981 at St. Aloysius College. Further he completed B.Sc. from department of Physics and joined as Assistant professor in 1989. He became the principal of St Aloysius College Edathua in 2019. He was the first principal who was also the alumnus of the college.

We honour and thank you for dedication and service to the Aloysian community. Your smile and friendly greeting has given many students the courage to continue on their educational journey. You encouraged us to be the best we could be and we will always be thankful to you for all the hard work and efforts you have put in to make us who we are today. For your devotion and hard work, you deserve the best retirement ever. Enjoy the new journey of your life.



Mr. Johny
Thomas
Lab assistant
Thank you for remarkable service to the department as lab assistant

Congratulations

Dr. Vinu T Vadakel

Inaugurated Sastrarangam, Science club at Republican VHSS, Konni on 9th August 2021.

Mrs. Rosmin John

Inaugurated Sastrarangam, Science club at St. Aloysius Higher Secondary School, Edathua on 11th August 2021.

Refresher Courses / FDP attended by faculty

Dr. Vinu T Vadakel

- Completed Refresher Course on "Recent Advances in Physics" organized under UGC- Scheme for Trans –
 Disciplinary Research for India's Developing Economy (UGC STRIDE) Mahatma Gandhi University, Kottayam
 in association with Mar Thoma College for Women Perumbayoor from 10th to 24th July 2021.
- Completed One Week Online Short-Term FDP on "Digital Technologies for E- Learning" organized by Sree Narayana Mangalam College, Maliankara, Ernakulam in collaboration with Kerala State Higher Education Council from August 5th to August 11th of 2021.

Dr. Lakshmi Vijayan

Two-week Interdisciplinary Refresher Course on "Managing Online Classes and Co-creating MOOCs 7.0" (05 - 19 August 2021), organised under the Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme, Ramanujan College, Duty, CMS, Kottayam.

Gongratulations

B.SC. RESULT 2022



MIDHUN. G A+: 9.46



P. ARUNDHATHI NAIR A+: 8.95



A: 8.41



LEKSHMY A.K A: 8.36



RESHMA KURUP A: 8.32



MEENAKSHI MURUKADAS SONA SARA SANU A:7.80 A:7.79



AMINA SAFNA A:7.66



M.SC. RESULT 2021

LESLY ANNA ABRAHAM A GRADE:4.28



Best outgoing student of the St. Aloysius College was identified by a prestigious contest called Aloysian Exemplar. Among from the 10 finalists, five were selected as Aloysian Exemplars. AMJITHA AJMAL (II M.Sc) from the department was selected as one of the Aloysian Exemplars .



ALEX VARGHESE Cadet Captain NCC



Rev. Dr. Thomas Pothanamuzhi Prize for best out going student in UG M.Sc. @ Nanocenter, MGU



SRAVAN. S College level highest scorer in Power quiz



P. ARUNDHATHI NAIR

Qualified Preliminary round of APT-TSE 23rd rank: I international Olympiad of Physics M.Sc. @ IIT Palakkad



VINAYA P A GRADE in other forms of classical dance M.G. University Arts Festival (Wakeup call 2022) on 1st-5th April,2022

UNION MEMBERS



MUHAMMED ALTHAF (Arts Club Secretary)



AMEESHA S (Vice Chairperson)

ASSOCIATION SECRETARIES



MIDHUN G



ANITTA JOSEPH

SPORTS SECRETARIES



MIDHUN. M



ASWATHY KRISHNAN

PG FEST WINNERS



SHAJITHA S R
Paper Presentation:
I prize



GOPIKA VRINDA B Paper Presentation: I prize Water colouring (I prize)



AMJITHA AJMAL Poetry writing: I prize JAM: II prize

SPORTS



VYSHAK MOHANAN (I B.SC.) Member of College Cricket & Kabadi team



MATHEWS CICIL (I B.SC.) Member of College Cricket team



ABHISHEK V.K. Logo Designing: Ruby Jubilee



SWATHY KRISHNANPoetry writing: III prize



AMRUTHA. M S Spot dance: III prize

ST. ALOYSIUS COLLEGE, EDATHUA M.Sc PHYSICS (2020-2022)





youtube channel of Physics Department