



**FORMAN  
CHRISTIAN  
COLLEGE**  
(A CHARTERED UNIVERSITY)

# PHYSICS DEPARTMENT (COLLEGE SECTION)

## ANNUAL NEWSLETTER 2024 - VOL # 4



### *Message of the Head of the Department*

Dear Readers,

Greetings from the Physics Department (College Section) to all members of the Forman family. We are delighted to share the fourth edition of our Departmental Annual Newsletter for the session 2023-24. This newsletter will highlight the department's accomplishments and the collaborative spirit that propels our endeavors forward. Throughout the session, our team successfully conducted regular teaching activities and provided essential services for student welfare.

We are also pleased to welcome Mr. Sarjeel Sarwar as a laboratory demonstrator in this session.

The Physics Department reassures our readers that we are committed to focus our efforts at fostering excellence in both academic achievements and the holistic development of our students. Our mission extends beyond the classroom, as we strive to infuse the fundamental values of FCC in our students, alongside their pursuit of academic excellence.



*Prof. Muhammad Iqbal,  
Head of the Physics Department  
Forman Christian College, Lahore*

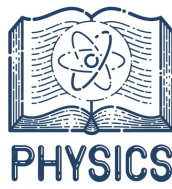
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**Sub-Editors: Muhammad Umer  
Chaudhry, Raheel Shamir Farhat,  
Hafiz Ahmad Awan**



# The Department



The Physics Department at Forman Christian College, Lahore is the largest department within the college section, boasting the highest count of faculty members and academic support staff. During the academic session of 2023-24, the Physics Department diligently attended to the academic requirements of 23 FSc (Pre-Engineering) sections, 21 FSc (Pre-Medical) sections, and 18 ICS (Physics) sections, catering comprehensively to the educational needs in the realm of Physics.

The Physics department's faculty and staff consistently lead in delivering essential services to the institution. They actively engage in teaching Character Building classes, offering Proctorial services, contributing to College Admissions Campaign and Commencement activities, and participating in numerous departmental and college committees. Moreover, they extend their support to BISE, Lahore, fulfilling diverse roles as needed.

## Benade Physics Museum

Forman Christian College, Lahore has a rich legacy of providing top notch experimental science education. With a wealth of scientific equipment and apparatus utilized by both faculty and students over a century ago, the college embarked on a mission to preserve and revive this invaluable heritage. Envisioned by the College Vice Rector, Dr. Ivan Suneel, and spearheaded by Prof. M. Iqbal and Mr. Tanvir Ahmad, the Physics Museum was established by the department and officially unveiled in 2020, with the inauguration ceremony graced by the Rector, Dr. James Tebbe. Since then the museum has been a place of wonder and awe for dignitaries and guests visiting the college section.



Prof. J. M. Benade  
(1912-1957)  
(1965-1970)





## Joined us in 2023



Mr. Sarjeel Sarwar joined the Physics Department as a Laboratory Demonstrator in 2023. Mr. Sarjeel is a formante who did his BSc (Hons) in Physics from the Department of Physics, FCCU and is currently pursuing his MPhil degree. Mr. Sarjeel is deeply passionate about teaching Physics and hopes to foster a sense of camaraderie, share valuable resources, and celebrate the achievements of his colleagues as part of the Department of Physics.

## Physics Laboratories

Physics experiments are a part and parcel of Physics syllabus for Intermediate students. What is learnt in the theory classes is expected to be demonstrated practically in the laboratories. For facilitating this important area of studies, the Physics department has three large and well-ventilated, well-equipped and well-maintained laboratories in Susheela Building (P-Block).

The Physics laboratories have high quality and modern equipment, which helps us in building a strong base of experimental knowledge in Physics for our students. Students usually perform a given experiment in a pair or, in some experiments individually, under the guidance and supervision of our learned faculty and laboratory demonstrators.



***Laboratory Demonstrator explaining an experiment related to current electricity to the students***



***Laboratory Demonstrator explaining an experiment related to optics to the students***



***A student getting apparatus issued for performing his experiment***



# Our High Achievers



Recognizing and celebrating high-achieving students and their teachers is crucial for fostering a positive learning environment and encouraging others to strive for excellence. It not only acknowledges the hard work and dedication of these students but also motivates others to set ambitious goals and work towards achieving them.



## Pre- Medical Group:

Mr. Shoukat Masih's student, Mr. Atal-ur-Rehman Aziz was honored with the Brig.(R) Dr. Muhammad Sharif Medal for securing 1st position in Pre-Medical group. Mr. M. Usman Yousaf's student, Mr. Wali Umer was awarded the Dr. K. C. Chaterjee Medal for securing 2nd position in same group. Mr. M. Bedar Bakht's student, Mr. Shabaan Masih secured 3rd position in Pre-Medical group.

## Certificates of Distinction (1st Year):

Joint 1st Position: Mr. Ahmed Ali, student of Mr. Sarosh Inayat

Joint 1st Position: Mr. Ali Haider, student of Ms. Komal Yousaf

2nd Position: Mr. Moazzam Khalid, student of Mr. M. Waqas Shabaz

3rd Position: Mr. Affan Arshad, student of Mr. M. Waqas Shahbaz





# Our High Achievers



## Pre-Engineering Group:

Ms. Ambreen Imran's student, Mr. M. Behzad Abid was honored with the Dr. Carter Speers Medal for securing 1st position in Pre-Engineering group. Mr. Muhammad Iqbal's student, Mr. Ahmad Bilal was awarded the Dr. Muhammad Izaz-ud-Din Chughtai Medal for securing 2nd position in the Pre-same group. Mr. Muhammad Iqbal's student, Mr. Abdul Hadi Arshad secured 3rd position in the Pre-Engineering Group.

Certificates of distinction:

1st Position: Mr. M. Muneeb Hussain, student of Dr. Naila Noreen

2nd Position: Mr. Muhammad Yahaya, student of Ms. Komal Yousaf

3rd Position: Mr. Muhammad Bin Rafaqat, student of Dr. Shazaib Khurshid

## Computer Science Group:

Mr. Muhammad Umer Chaudhry's student, Mr. Abdullah was honored with the Dr. S. K. Dutta Medal for securing 1st position in General Science (ICS) group. Mr. Ghulam Murtaza's students, Mr. Dawood Naveed Masih and Mr. Jodat Hassan secured 2nd and 3rd positions, respectively, in the ICS group.

Certificates of distinction:

1st Position: Mr. M. Umar Adnan, student of Dr. Ayesha Saleem Siddiqui

2nd Position: Mr. Hafiz M. Ahmad Babar, student of Mr. Sarosh Inayat

3rd Position: Mr. Ibtihaj Iqbal, student of Ms. Ambreen Imran

## 100% Marks

Mr. Syed Nabeel Hassan section 1M2 got full marks in Physics in his BISE 1st year Examinations, 2023. Mr. Ahmed Awan was his instructor for Physics.

*"My journey at Forman commenced in September 2021. Throughout my time here, I've not only cultivated a spirit of service but also learned the invaluable virtues of kindness, care, and cooperation. Each day, I step onto this campus with a sense of purpose, eager to contribute with my full potential for our collective growth. Guided by my HOD, I have continuously strived for improvement, and enhancing my productivity to better serve our students. Joining the esteemed proctor team was a moment of immense pride, as I was inspired by the remarkable ethos of care upheld by the CPO office. The grandeur of events like the Christmas Gala, Science Fair, etc. and enriching training workshops has expanded my horizons, unveiling new dimensions of versatility and learning. Under the insightful guidance of the College Vice Rector, FC College has become more than an educational institution to me - it is a realm of endless learning and growth."*



Ghulam Murtaza

# Departmental News and Achievements



Head of the Department,  
Mr. Muhammad Iqbal was  
promoted to the rank of  
Professor

Dr. Naila Noreen was  
promoted to the rank of  
Professor



Dr. Shazaib Khurshid  
received his Doctorate  
in Physics degree from  
the Department of  
Physics, FCCU, Lahore

Mr. Muhammad Umer  
Chaudhry received his  
Executive MBA degree  
with distinction and also  
received the FCCU Post  
Graduate Gold Medal





# News and Achievements

## Research Publications and Certifications, 2023-24

Dr. Naila Noreen's paper titled 'Effect of Energy Anisotropy on Ordinary Mode in Relativistic Regime' was published in Plasma Physics Reports in 2024



She also completed a certified course 'Teaching and Assessing: Core Skills' with the British Council in 2023



Dr. Ayesha Saleem participated in the following symposiums as a speaker:

A- 8th International Symposium on Biomedical Materials, Developing Commercialization Capacity in Innovative Ecosystems" organized by IRCBM, COMSATS University Islamabad, Lahore Campus, March 24.

B- International Symposium on "Environmental Applications of Carbon-based Nanomaterials" organized by Department of Environmental Science, FCCU, Dec 23.

Dr. Ayesha also presented at a virtual conference, Physics 2024: Innovations and Discoveries' organizes in Rome, Italy on May 24, 2024



She also completed the following certified courses:

1. 'Professional development: Improve yourself, always' offered by the Macquarie University, Sydney, Australia.



2. 'AI for everyone' offered by Deep Learning AI



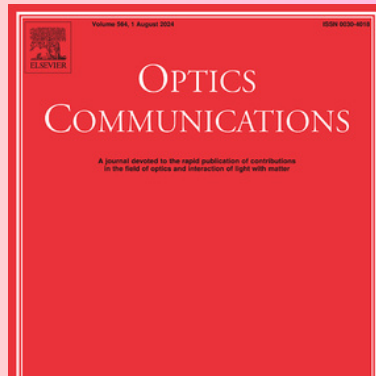
3. 'Exploring Teaching and Assessment for Higher Education' by Coventry University, England, UK



# News and Achievements

## Research Publications and Certifications, 2023-24

Mr. Ghulam Murtaza's paper titled 'Effect of finite temperatures on the dispersion properties of Surface Magnetoplasmon Polaritons in the Voigt reflection geometry' was published in the journal, Optics Communications in 2024



Mr. Ahmed Awan presented his paper on  $J/\psi$   $J/\psi$  scattering cross sections of quadratic and Cornell potentials in "1st International Conference on Emerging Trends in Physics" UMT Lahore.



Mr. Muhammad Umer Chaudhry completed a certified course. 'Learning how to Learn for Youth' offered by the Arizona State University, USA.



*"My journey with FCC is one decade long and I have excellent experience since I have joined FCC. It is not just an educational institute; it also provides a platform for career development and personality grooming. The head of department and my co-fellows are very supportive and always motivate to enlighten my skills. Its really a wonderful experience in FCC to work under a kind and supportive management."*

Dr. Naila Noreen



# News and Achievements

**Mr. Shoukat Masih attended and presented his insightful views at a conference on “Fulfilling the Dream of Free & Compulsory Education (Article 25-A of the constitution of Pakistan)” organized by Centre for Social Justice (CSJ) and People Commission for Minorities Rights (PCMR).**



**The Head of the Department, Prof. Muhammad Iqbal attended an international seminar on “Leadership Role and Quality Assurance” held at Forman Christian College (A Chartered University), Lahore. Over 155 participants were engaged in person and through ZOOM which included participations from 10 universities of the United Kingdom. Other participants from the Physics Department included Mr. Muhammad Umer Chaudhry and Mr. Raheel Shamir Farhat.**

**Mr. Muhammad Umer Chaudhry conducted a session on "How to be a useful employee for FCC" for new faculty who joined FCC in 2023. The session focused on the opportunities for faculty to serve and grow at FCC, the importance of embracing the institution’s work-culture and the need for having a growth mindset.**



**Some faculty members from the Physics Department with the honorable Rector at the International Conference on Trends in Material Science and Nanotechnology, 2024 at FCCU.**

# Strategic Academic Planning to Enhance BISE Results

In preparation for the BISE physics examination, the physics department is focused on strategic planning to improve student results. Under the supervision of the Head of the Department, faculty members have developed a syllabus breakdown that ensures comprehensive coverage and deep understanding, aiming to boost BISE results through rigorous test sessions. By utilizing innovative approaches such as effective classroom management, teaching strategies, and time management, the faculty has established a thorough academic plan for the upcoming session.

Additionally, faculty members have structured, organized, and compiled short answers, multiple-choice questions, numerical problems, and key long questions in line with the BISE paper pattern. These notes were then proofread using multimedia projectors by the entire department to minimize errors and enhance their effectiveness.





# Community Service

## Armacost Coaching Classes and Pre-College Summer Coaching Classes- 2024

Mr. Raheel Shamir Farhat, Mr. Arif Allah Rakha, Ms. Ambreen Imran and Mr. Shoukat Masih have been teaching in the Armacost Coaching Classes and Pre-College Summer Coaching classes, 2023 that were arranged by the Forman Church Relation Office. In addition to teaching, they have also been involved in providing various services for these initiatives including discipline, scheduling, record-keeping, etc.



At the Annual Fundraising Appreciation Ceremony 2023, the honorable Rector commended the Department of Physics as the top contributor to the Advancement Office.



Faculty Members of Physics Department with Dr. John Schwaiger after attending his seminar "Uniquely Yours, Unlocking Your Team's Potential" in March 2024.



# Service and Community



**(Left):** Head of the Department with faculty at the 2nd Annual Science fare 2024  
**(Right):** Faculty members serving at the 2nd Annual Fair after receiving certificates from the College Vice Rector and College Coordinator in the Appreciation Ceremony.



**(Left):** Mr. Raheel Shamir Farhat served at the Admission Open House  
**(Right):** Head of Department and Faculty members of the Physics department along with other colleagues at the Annual Staff Club Dinner, 2024, where some of them were appreciated for degree improvement



**Physics Department Faculty and Staff at the Parent Teaching Meetings (Left: for Super Sections, November 2023) and (Right: January, 2024)**



# Community



Continuing its cherished tradition, the Department of Physics hosted a Christmas Lunch, providing a wonderful opportunity for everyone to gather, share in the holiday spirit, and enjoy each other's company. The festive celebration was honored by the presence of the esteemed Vice Rector and his family, the College Coordinator, as well as all members of the faculty and staff.

**Birthday celebrations of Mr. Shoukat Masih at the Physics Department**

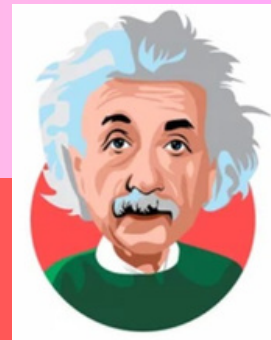


**An end of session Departmental Lunch**





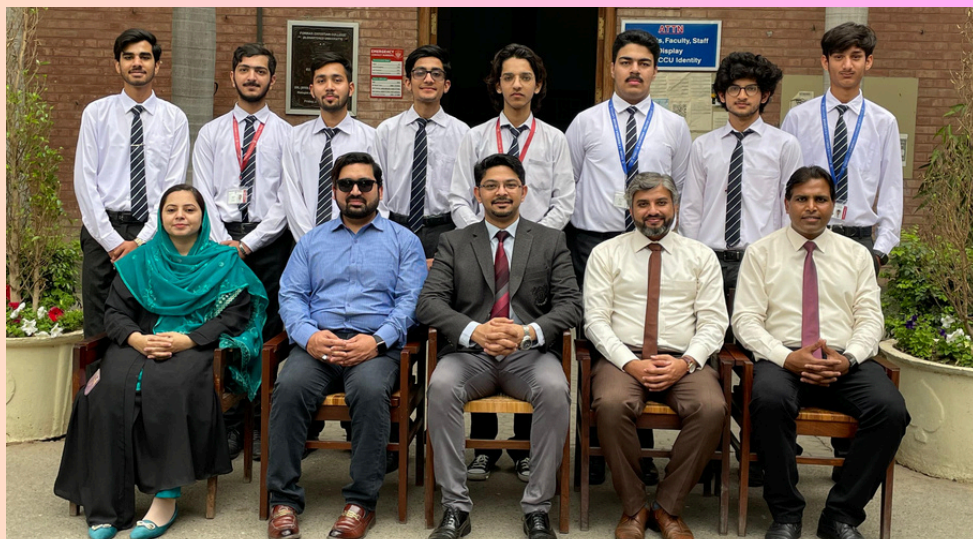
# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

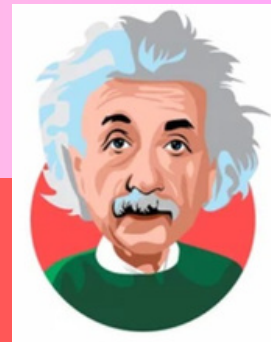
**Forman Einsteins (Formanites Physics Club) is an eminent student club of Forman Christian College led by highly qualified advisory team which aims to provide their students with rich opportunities for overall development and to help them transform into their best selves. It is an amazing experience working at such an organized platform for the advancement and dispensation of the knowledge of Physics through outstanding activities like Scientific Essay Competition, Poster Presentation, Model and Quiz Competitions, Scientific Seminars, and other related activities. These events encourage students to think out of the box and to become well acquainted with various aspects of Physics and related fields. Being part of this society not only enriches understanding of Physics but also fosters a sense of collaboration and camaraderie among students and faculty alike. The Physics Club provides an opportunity to the students of being part of its student council and so polishing their skills for effective communication, conceptual thinking, inter-personal interaction, and leadership skills.**







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### Embracing Fresh Beginnings: Welcoming First Year Students

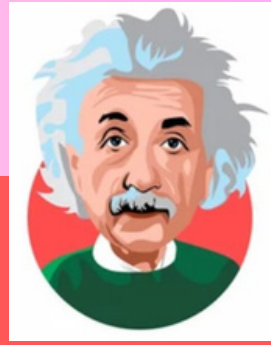
At Forman Christian College, it is a cherished tradition that senior students warmly welcome and support new students, ensuring their first day at college is memorable, through acts of kindness and respect. The Formanites Physics Club extended a heartfelt welcome to the first-year students at this esteemed institution. Here, the groundwork for a promising future was established with a strong emphasis on character, reflecting FCC's noble motto: "By Love, Serve One Another."







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### World Teachers' Day Teachers inspire minds and touch hearts

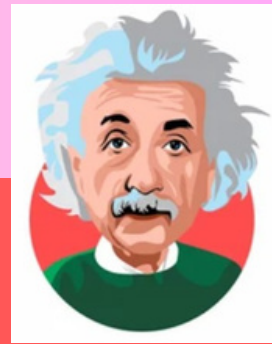
The Formanites Physics Club celebrated the World Teachers' Day by honoring teachers. The Student Council expressed their gratitude by presenting cards and chocolates, recognizing the profound impact of teachers on the minds and hearts of students.







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### Departmental Poster and Model Exhibition

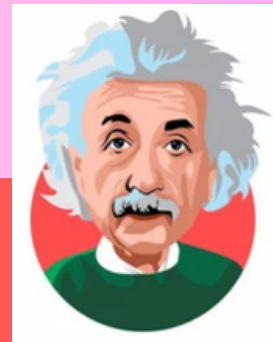
The Forman Einstein Physics Club organized a Poster and Model exhibition that gave physics enthusiast students a platform to display their creative and innovative models based on novel physics concepts. Participants delved into various topics, showcasing the relevance of physics in comprehending our surroundings. The visually captivating posters explored diverse subject areas, fostering the exchange of ideas and knowledge among peers. This event provided participants with an opportunity to exhibit their knowledge and enthusiasm for the subject, resulting in an enriching experience for everyone involved.







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### Seminar on Paper Presentation

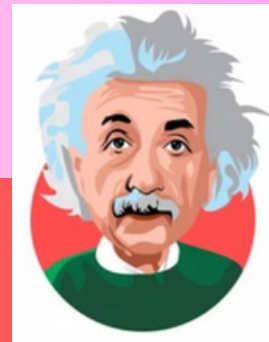
The Formanites Physics Club held a seminar on November 14, 2023, focusing on paper presentation skills with Mr. Arif Allah and Mr. Tanvir Ahmed as key speakers. Mr. Arif emphasized improvements in theoretical paper presentations, addressing common mistakes and offering valuable insights to maximize scores in BISE Examinations. Mr. Tanvir, on the other hand, discussed practical paper patterns, offering tips and examples. The seminar attracted a large audience of students eager to improve their presentation skills. Additionally, the event was live streamed on Facebook for students unable to attend in person. The seminar concluded with an interactive Questions & Answers session led by senior faculty members including Prof. Muhammad Iqbal (HOD), Prof. Syed Iftikhar Hussain Shah, Dr. Shahzaib Khurshid, and Mr. Shoukat Masih. Overall, the event proved to be highly successful for the Formanites Physics Club, providing a significant learning opportunity for attendees.







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### A Seminar on "Attosecond Pulses and their Applications - Nobel Prize 2023"

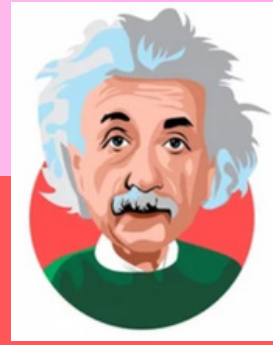
On November 16, the Formanites Physics Club hosted a seminar entitled "Attosecond Pulses and their Applications - Nobel Prize 2023", aimed at enriching students' understanding of cutting-edge research in Physics. The seminar featured Prof. Dr. Atif Shahbaz, from Government College University (GCU) Lahore as the guest speaker. The event attracted a significant turnout of both students and faculty members, showing widespread interest in the topic. The seminar, followed by an engaging Q & A session, provided attendees with valuable insights, and learning opportunities.







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### FCC'S 2nd Annual Science Fair, 2024

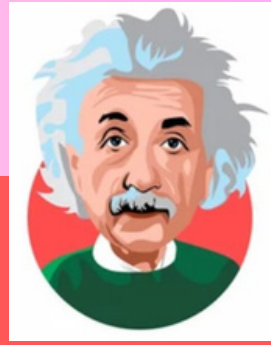
Formanites Physics Club participated in FC College's mega science event, 2nd Annual Science Fair, 2024. This event was mainly based on a poster and model competition in which students at FC College and other colleges of Punjab participated. Many students participated in the competition through the platform of Formanites Physics Club by bringing novel scientific ideas into physical models on the theme "innovation for humanity". The Formanites Physics Club secured 2nd Position in the Model Competition. The winning model "LASER HARP" was the center of attention at this event which was highly appreciated by the guests, students, faculty and staff.







# Formanites Physics Club



Formanites Physics Club is now

## FORMAN EINSTEINS

### Solar Observations

On November 15, 2023, the Formanites Physics Club, in partnership with the Lahore Astronomical Society, hosted an event focusing on Solar Observation. During the event, students were educated on the use of telescopes, which is an integral part of their Physics curriculum, and had the opportunity to observe live projections of sunspots. Through this hands-on experience, attendees gained insights into the formation of sunspots, driven by magnetic fields.

Following the observational session, Mr. Husnain Haider, representing the Lahore Astronomical Society, conducted a Q & A session. This allowed students to further explore and clarify concepts discussed during the event, enhancing their understanding, and making it a truly enriching learning experience.

