



**FORMAN
CHRISTIAN
COLLEGE**
(A CHARTERED UNIVERSITY)
Estd. 1864

College Physics Department Annual Newsletter, 2022-23

VOL # 03

Chief Editor: Muhammad Iqbal,

Editors: Muhammad Umer Chaudhry, Raheel Shamir Farhat



Message of the Head of the Department

Dear Readers,

The Physics Department (College Section) sends warm greetings to all members of the Forman family. We are pleased to present the third edition of our Departmental Annual Newsletter for the session 2022-23. The newsletter aims to showcase the department's achievements and the collaborative teamwork that drives our service.



The session went remarkably well, alongside regular teaching and student welfare services. The department organized various activities for capacity building throughout the year. The newsletter highlights some of the department's endeavors and achievements. The department also welcomed two new faculty members who have been working diligently to serve the students, the department, and the institution. The department is optimistic about their future contributions as well.

Furthermore, the Physics Department assures the readers that they have many more efforts underway to provide excellence in both academic results and the personal and professional lives of their students. They aim to instill the core values of FCC in their students alongside academic excellence."

Muhammad Iqbal,

Associate Professor and Head of the Department of Physics

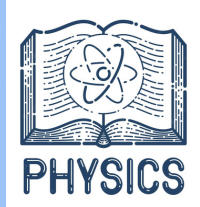
Forman Christian College, Lahore

The Department with the
honorable VR and CO, June 2023

Table of Contents

Message of the HOD	Pg 1
Introduction to the Department	Pg 2
Physics Laboratories	Pg 2
Departmental Projects and Assignments	Pg 3
Capacity Building Session	Pg 4
Physic Museum	Pg 5
News & Achievements	Pg 6
Community Service	Pg 11
The Team	Pg 12
Formanites Physics Society	Pg 14
High Achievers	Pg 17
Sessions and Luncheons	Pg 20, 21

An Introduction to the Physics Department



The College Physics Department at Forman Christian College, Lahore is the largest department in the college section in terms of the number of faculty members and academic support staff. Physics Department caters to the academics needs, related to the subject of Physics, of 26 FSc (Pre-Engineering) section, 22 FSc (Pre-Medical) sections and 13 ICS (Physics) sections.

The faculty and staff of the Physics department is always on the forefront when it comes to providing services to the institution. This includes teaching Character Building classes, Proctorial services, duties during College Admissions Campaign and Commencement, and serving in various departmental and college committees. Services are also provided to BISE, Lahore in various capacities.

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 optics experiment to the students

Lab Staff checking and setting up apparatus for experimentation



A student getting apparatus issued for performing his experiment



Departmental Projects and Capacity Building

Development and Compilation of Complete Physics Preparatory Notes on a Departmental Level

During the month of May and June, 2023, with a vision to best prepare the students for their Physics BISE examination, the Department of Physics, Forman Christian College worked diligently and committedly to prepare notes for the students. Under the guidance of the Head of Department the department systematically structured, organized and compiled the short answers, multiple choice questions, numerical and important long questions according to the BISE paper pattern.

Moreover, two committees were formulated to proofread these notes for both first year and second year, notes. These notes were then proofread using multimedia projectors by the whole department to minimize error and enhance the effectiveness of the notes.

Furthermore, the demonstrators were assigned duties to compile and arrange the practical notes that will be beneficial for the preparation, revision and completion of the practical copies.





Capacity Building Session "How to be a useful Employee at FCC"

A capacity building session, titled 'How to become a useful employee at FCC' was conducted by Mr. Muhammad Umer Chaudhry from the platform of the Physics Department in December, 2022. The session focused on various ways in which faculty and staff at FCC can serve and the offices, initiatives, committees and students clubs that provide such opportunities.



Benade Physics Museum

Forman Christian College, Lahore has a long history of quality experimental science education. We have a large collection of scientific equipment and apparatus that was used by faculty and students at FCC more than a hundred years ago. Under the vision of the College Vice Rector, Dr. Ivan Suneel, to protect and restore this treasure, a Physics Museum was formed by the department and was inaugurated in 2020 by the then Rector, Dr. James Tebbe.



Rev. Dr. Roger Dermody, Executive Director, 'Friends of Forman' visiting the Physics Museum with his team in April, 2023



Friends of Forman on a visit to College Physics Museum with the HOD, Mr. M. Iqbal



Mr. Tanvir Ahmed, convener of the committee formed by the HOD for restoration and cataloging of Museum items, 2020



Faculty and Staff examining antique equipment for cataloging, 2020

News and Achievements

Head of the Department,
Mr. Muhammad Iqbal
was awarded the
Outstanding Teacher
Award, 2023



Prof. Syed Iftikhar Hussain was
promoted to Professor from
Associate Professor

**Faculty Members
who joined Physics
Department in
2022**



**Mr. M. Waqas
Shabaz**



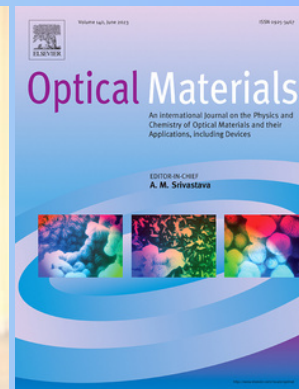
**Dr. Ayesha
Saleem Siddiqui**

News and Achievements

Research Publications and Certifications, 2022-23

“Enhancement in absorption spectrum by ITO coated, down converting glass and increasing the SILAR cycles of PbS/CdS quantum dots sensitized ZnO nano with deposition of MoO₃/Au/MoO₃ (MAM) as a solid-state solar cell.”

S. Khurshid, H. Latif
Optical Materials, May 2023



Certification in Artificial Intelligence Developer Program (Batch 35, Roll #PIAIC166737) at the Presidential Initiative for Artificial Intelligence and Computing (PIAIC) on January 30, 2023.



“Design of DMAP functionalized MoS₂-GO hybrid for targeted visual detection of Dopamine: A step towards chromogenic substrate free Point of Care testing.”

Accepted by the journal:
“Materials Today Chemistry 2023



Two-weeks certified course on
“Communication and Interpersonal Skills at Work”
with University of Leeds and Institute of Coding



“Speak English Professionally: In Person, Online & On the Phone”
Georgia Institute of Technology, Coursera



“Work Smarter with Microsoft Power Point”
Coursera

coursera

News and Achievements

Research Publications and Certifications, 2022-23

"A kinetic treatment of surface plasmon polaritons in the Voigt configuration"

G. Murtaza et al
American Institute of Physics (USA),
May 2023

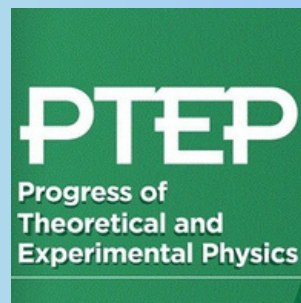


1st Position in presenting poster in poster competition, 17th national symposium from December 1st - 3rd, "Frontiers in Physics" jointly organized by GC University, Lahore and Pakistan Physics Society.



"Quasilinear approach to bump-on-tail instability using non-Maxwellian distributions".

Dr. Naila Noreen
"Progress of Theoretical and Experimental Physics"
2022



Certified Course, "Probability - The Science of Uncertainty and Data"
Harvard University, Massachusetts, USA (online)



Mr. Waqas got certifications on:

"Python for Data Science, AI & Development"
IBM, Coursera

"Intro to Python"
Coursera



News and Achievements

Mr. Sarosh Inayat was invited as a Jury Member and Chief Guest at the 9th SMDC All Pakistan Tri-Lingual Declamation Competition'23.



The Department of Physics being appreciated by the honorable Rector, Dr. Jonathan Addleton, for being highest contributing department towards the Advancement Office at the Annual Fundraising Appreciation Ceremony, 2022



"I have been working at FCC since 2017. Forman has provided me with the opportunity to excel both academically and professionally. The Department as a whole has always been very supportive and cooperative."

-Seemab Javed, Lab Assistant

"I have been working in the Physics Department since 2003, and I have had the most amazing experiences in the past two decades. Everyone has always been very supportive."

-Irfan Rehmat, Lab Assistant



News and Achievements

Character-Building Program and Competitions

In this session, faculty from the Physics Department took Character Building Classes of 13 sections of various programs. The faculty meets regularly to discuss and reflect on how the classes can be made more and more beneficial for the students. Students of Physics Department Faculty's CB classes also participated in the Character-Building Poster Competition.

The students of Ms. Ambreen Imran, Dr. Naila Noreen, Mr. Arif Allah Rakha, Mr. M. Bedar Bakht, and Mr. M. Ahmed Awan qualified for the final round of the CB poster presentation competition, while Mr. Muhammad Umer Chaudhry served as part of the feedback committee for the event.



Community Service

Armacost Coaching Classes and Pre-College Summer Coaching Classes- 2023

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.



Professional Development



Mr. Robin Inayat has started his M.Phil in Physics from Government College University, Lahore, this year



Mr. Raheel Shamir Farhat has completed the course work of his Ph.D in Physics at FCCU, Lahore



Dr. Ayesha S. Siddiqui has completed her Ph.D from COMSATS, Lahore Campus



Mr. M. Umer Chaudhry has defended his research thesis of Executive MBA at FCCU, Lahore

The Team

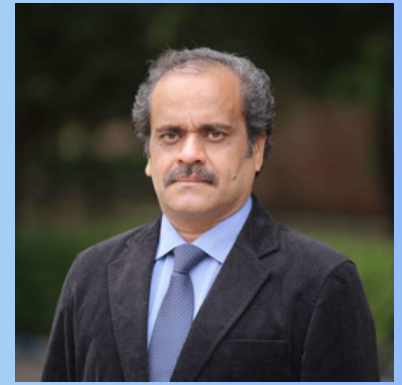
"The strength of the Team is each individual member. The strength of each member is the team."



**Syed M. Iftikhar Hussain,
Professor**



**Muhammad Iqbal,
Associate Professor and
Head of the Department**



**Tanvir Ahmad,
Associate Professor**



**Shazaib Khurshid,
Associate Professor**



**Dr. Naila Noreen,
Associate Professor**



**Shoukat Masih,
Assistant Professor**



**Arif Allah Rakha,
Assistant Professor**



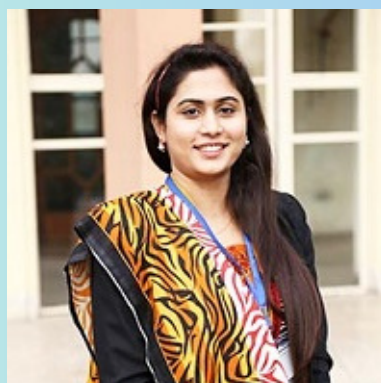
**M. Umer Chaudhry,
Assistant Professor**



**Raheel Shamir Farhat,
Assistant Professor**



**Ambreen Imran,
Assistant Professor**



**Komal Yousaf,
Assistant Professor**



**Bedar Bakht,
Lecturer**



**Ghulam Murtaza,
Lecturer**



**M. Usman Yousaf,
Lecturer**



**Sarosh Inayat,
Lecturer**



**Dr. Ayesha Saleem
Siddiqui,
Lecturer**



**M. Ahmed Awan,
Lecturer**



**M. Waqas Shahbaz,
Lecturer**



**Tooran Urooj,
Lab Demonstrator**



**Kabir Akbar,
Lab Demonstrator**



**Robin Inayat,
Lab Demonstrator**



**Seemab Javed,
Lab Attendant**



**Irfan Rehmat,
Lab Assistant**



**Badar Munir Gill,
Lab Assistant**



**Muhammad Danish,
Lab Technician**

"Not only is the Universe stranger than we think, it is stranger than we can think."

-Werner Heisenberg, German Physicist

Formanites Physics Society (FPS)

Advisor: Raheel Shamir Farhat,
Co-Advisor M. Usman Yousaf



Teachers' Day

Acknowledging the services of our respected faculty members, Formanites Physics Society presented a token of appreciation to our teachers on the occasion of Teacher's Day.



Formanites Physics Society (FPS)



Scientific Essay Writing Competition

Our students showcased their passion for physics and technology through their insightful essays at the scientific essay writing competition. With a wide range of topics explored, the event was a testament to the intellectual curiosity and creativity of our students.

Quiz Competition

Cognizant minds congregated to put their physics acumen to the test at the quiz competition event. Participants enthusiastically delved into a diverse range of topics, showcasing their grasp on fundamental principles of the universe. The event was a great success, providing an engaging and educational platform for those involved to push the boundaries of their knowledge.

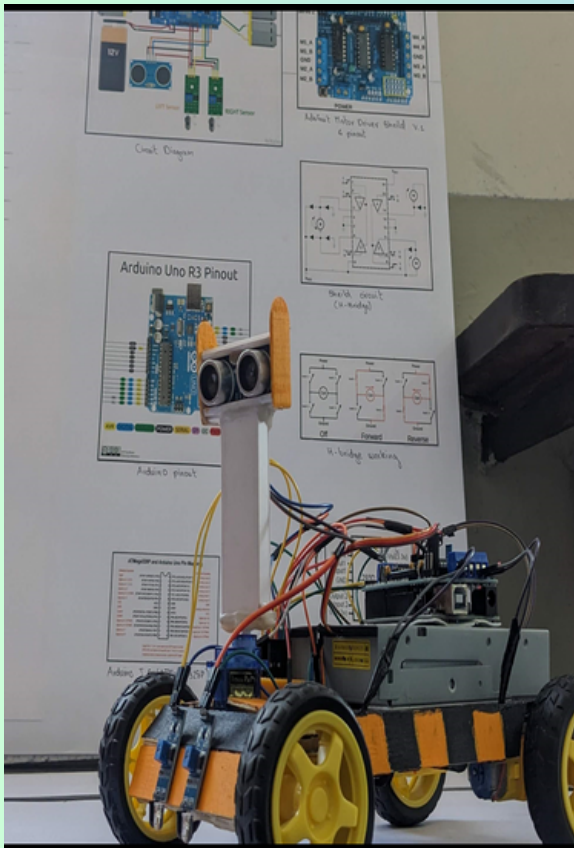
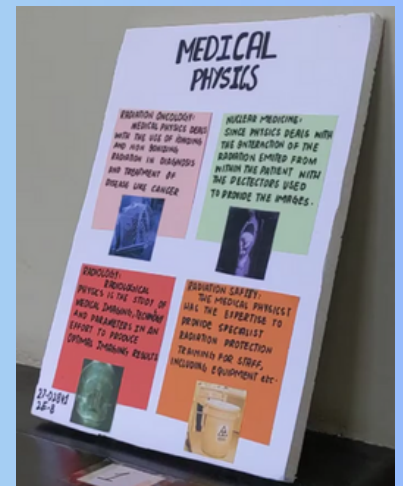


Formanites Physics Society (FPS)



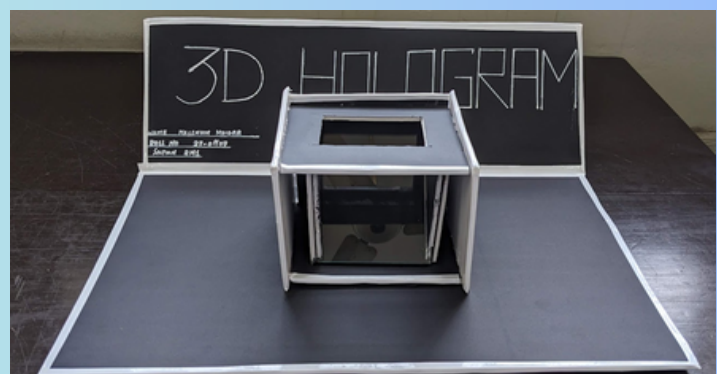
Poster Competition

Enthusiastic minds came together to present their insights at the dynamic poster competition event on general physics. The visually striking posters covered a range of topics and facilitated the exchange of ideas and information among peers. Participants were able to showcase their knowledge and passion for the subject, making it a great opportunity for all involved.



Science Model Competition

The model competition event brought together physics enthusiasts to showcase their creativity and ingenuity in developing models related to general physics. Participants explored a range of topics, from physical systems to electromagnetism, and demonstrated the importance of physics in understanding the world around us. It was an engaging and informative event for the participants and the attendees.



Formanites Physics Society (FPS)



Photography Competition

The photography competition event brought together participants to capture the beauty and wonder of general physics phenomenon in nature. The stunning photographs submitted showcased a range of phenomena, from the intricate patterns of fractals to the breathtaking spectacle of physical phenomena in nature. It was an inspiring event that highlighted the importance of physics in our understanding and appreciation of the natural world.



High Achievers!!



Our students Wali Umar (27-01208) of section M-2 and Shaban Maseeh (27-01834) of section M-8 got full Marks in Physics in their BISE 1st year Examinations, 2022. They were also students who were among those securing the highest marks overall.

Mr. Wali Umar was taught Physics by Mr. M. Usman Yousaf while Mr. Shaban Maseeh was taught Physics by Mr. M. Bedar Bakht.



"My experience at Physics department, FCC has been wonderful. It has been two years since I joined the department and I feel overwhelmed to have an opportunity to work with such an organized, encouraging, dedicating and highly skilled faculty of Physics department. The department's environment has been very constructive for me and makes me able to serve FCC more efficiently. I am fortunate to get a chance to work as a co-advisor of Formanite Physics Society which is another truly invigorating experience."

M. Usman Yousaf
Lecturer of Physics and Co-Advisor FPS

Formanites Physics Society (FPS)



Participation in SciCon 1.0, 2023



Participating in SciCon 1.0 was an exciting opportunity for our physics society to showcase our models and demonstrate the practical applications of physics principles.

The fair provided a platform for participants to engage with a diverse range of scientific topics and explore the intersection of physics with other disciplines. It was an enriching experience that left students with a greater appreciation for the impact of Interdisciplinary Science on the world around us.



Sci Con 1.0 Appreciation Ceremony

Mr. Raheel Shamir Farhat and Mr. Muhammad Umer Chaudhry were appreciated by the College Coordinator for the services rendered by them during the Sci Con 1.0 Science Fair, 2023.



"Since joining the Physics Department in 2014, I have had a remarkable experience. The two Heads of Department, whom I have worked with have mentored and supported me. As I also have been a student here, I find the environment at FCC inspiring. What excites me the most is the opportunity to interact with the young minds that join us each session, bringing fresh perspectives."

Arif Allah Rakha - Assistant Professor



"The Department of Physics at Forman Christian College has a history that has no parallel. The emphasis here on academic excellence and students' character building are one of the best things about FCC. The faculty and staff of the Physics Department are dedicated and cooperative. I am incredibly thankful to my HOD for his constructive feedback and genuine interest in my professional development."

M. Ahmed Awan - Lecturer





Christmas Lunch



To give everyone an opportunity to come together and celebrate the holiday season and enjoy each other's company, the Department of Physics arranged a Christmas Lunch. The honorable Vice Rector, Ma'am Coordinator and Expat Faculty members at the college section, Ms. Susan Baker and Ms. Seun Cho also joined us in the festivities.



"Over the course of my two decades working in the Physics Department, I have consistently witnessed both personal and professional growth. The department's environment fosters nurturing and motivation, providing ample support for development. As a result, I am confident in my ability to continue thriving and advancing within the Physics Department at FCC."

-Badar Gill, Lab Assistant



Presentation of the End-of-the-Session Physics Department Progress Report and Luncheon with honorable Vice Rector and Ma'am Coordinator

A detailed presentation about the projects undertaken by the Department of Physics in the session 2022-23, the efforts towards professional excellence, and the goals and strategies towards providing better BISE results and improved service in the next session, were shared. The honorable Vice Rector and Ma'am Coordinator appreciated the efforts of the department and joined the faculty and staff members for lunch.

