MoU Activities Conducted by the Department of Physics, Aquinas College, Edakochi with The Cochin College, Cochin



The collaborative activities under the MoU between the Department of Physics, Aquinas College, and The Cochin College have significantly enriched the academic environment at both institutions. These initiatives have provided students and faculty with valuable opportunities to expand their knowledge, develop new skills, and engage in meaningful scientific discourse. The successful execution of workshops, lecture series, and exchange programs underscores the commitment to academic excellence and mutual growth fostered by this partnership.

1. Workshop on Astronomy and Cosmology

- **Date:** 30-08-2022
- Venue: Conference Hall, Aquinas College
- Resource Persons:
 - Dr. Anand Narayanan, Indian Institute of Space Science and Technology (IIST), Trivandrum
 - o Dr. C. D. Ravikumar, Associate Professor, Calicut University
- **Description:** The Workshop on Astronomy and Cosmology provided an immersive experience into the realms of the universe's structure, origins, and dynamic phenomena. Dr. Anand Narayan and Dr. C. D. Ravikumar, esteemed experts in their fields, shared their latest research findings and insights. Topics covered included the

Big Bang theory, dark matter, black holes, and the life cycle of stars. Participants engaged in hands-on activities such as telescope observations and data analysis exercises, enriching their theoretical understanding with practical experience. Interactive Q&A sessions allowed attendees to delve deeper into complex astronomical concepts.











2. Nobel Lecture Series: Quantum Computing

- **Date:** 14-10-2022
- Venue: Aquinas College
- Resource Person: Dr. Dintomon Joy, Assistant Professor, St. Thomas College, Palai
- **Description:** The Nobel Lecture Series focused on the revolutionary field of Quantum Computing, a topic that has garnered significant attention in recent years. Dr. Dintomon Joy presented an enlightening lecture on the principles of quantum mechanics that underpin quantum computing. He discussed the achievements of recent Nobel laureates whose work has paved the way for advancements in this field. The lecture covered the fundamental concepts of qubits, superposition, and

entanglement, as well as practical applications in cryptography, optimization problems, and computational speedup. Dr. Joy's engaging delivery and detailed explanations made complex topics accessible, inspiring students and faculty alike to explore further into quantum technologies.







3. Faculty Exchange Programme

- Activity: Sharing expertise of teachers at Aquinas College and The Cochin College
- **Description:** The Faculty Exchange Programme was a collaborative initiative designed to enhance the academic experience for both institutions' postgraduate (PG) students. Faculty members from Aquinas College and The Cochin College conducted a series of specialized workshops aligned with the PG syllabus. These sessions covered advanced topics in physics, such as condensed matter physics, nuclear physics, and advanced electromagnetism. This program allowed students to benefit from a diverse range of teaching methodologies and expertise, fostering a comprehensive understanding of the subject matter. The exchange of ideas and pedagogical techniques also contributed to professional development and networking opportunities for the faculty involved.





4. Python Workshop

- Venue: Cochin College
- **Description:** The Python Workshop held at Cochin College aimed to equip students with vital programming skills, emphasizing applications in scientific research. The workshop curriculum included an introduction to Python programming, data structures, libraries such as NumPy and SciPy, and data visualization tools like Matplotlib. Participants learned to write efficient code for data analysis, simulations, and solving complex mathematical problems. The hands-on sessions provided practical experience in debugging and optimizing Python scripts, preparing students for computational tasks in their academic projects and future research endeavors.





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MEMORANDUM OF UNDERSTANDING BETWEEN

DEPARTMENT OF PHYSICS, THE COCHIN COLLEGE, KOCHI, KERALA, INDIA

AND

DEPARTMENT OF PHYSICS, AQUINAS COLLEGE, EDACOCHIN, KERALA, INDIA

This agreement made and entered on the 15th day of December 2021 between the Department of Physics, The Cochin College, Kochi, Kerala, Indiarepresented by its Head of the Department (HOD), as the first party and Department of Physics, Aquinas College, Edacochin, Kerala, India represented by its Head of Department (HOD, as the second party.

LI DR. JOSEPH JOHN M.Sc., B.Ed., M.Phil, Ph.D., NET ASSOCIATE PROFESSOR & HOD DEPARTMENT OF PHYSICS AQUINAS COLLEGE, EDACOCHIN

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H. Dr. Juseph John Edakochi

- 1.1.Cooperate in the exchange of information relating to their activities in teaching and research in fields of mutual interests; sharing best practices adopted by each party; sharing of e-content between the parties; access to library and repository services, if possible.
- 1.2.Participation in seminars and Department fests.
- 1.3.Exchange of academic materials, faculty expertise and other resources.
- 1.4. Any other relevant programme that are mutually agreed upon.

Outreach Programmes

- 2. Both parties agree to exchange their best services and efforts in order to conduct different public outreach programmes as a developmental activity which include but are not limited to:
 - 2.1. Science popularization events
 - 2.2.Sky watch
 - 2.3.Addressing social issues by community interactions

Costs

3. Each Party will be responsible for its own costs in connection with all matters relating to collaborations under this MoU. This agreement may subsequently be withdrawn in case of any financial liabilities. Where possible and appropriate, the Parties may also seek funding for collaborations from any research organization funding.

Confidentiality

4. The parties agree that there is no intention to share any confidential or proprietary information in any collaboration under this MoU. If either Party wishes to disclose information it considers confidential or proprietary to the other Party, the Party needs to take prior written consent of the other party.

Duration

5. This MoU is at-will and may be modified by mutual consent of authorized officials from either side. This MoU shall become effective upon signature by the authorized officials and will remain in effect until modified or terminated by any one of the authorized officials of the two institutions.

Signed by



Associate Professor & Head Department of Physics Aquinas College, Edacochin

Witness:

1. Dr. Therangli R. N. 2. Dr. Sinchn le. July

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Dr. Annieta Philip K Associate Professor & Head Department of Physics The Cochin College, Kochi