SCIENCE ACADEMIES’ LECTURE WORKSHOP ON “BASICS OF RELATIVISTIC QUANTUM MECHANICS AND FIELD THEORY”

conducted at

BISHOP MOORE COLLEGE, MAVELIKARA

Report

The Department of Physics hosted a three–days Lecture Workshop on "Basics of Relativistic Quantum Mechanics and Field Theory” for Post graduate Students and Teachers during 29 November to 1 December, 2016 at Bishop Moore College, Mavelikara (The sanctioned date of 28-30 November, 2016 was postponed by one day, with permission from the Academy, when one of the political parties in Kerala suddenly announced a Hartal on 28th November). The lecture workshop was specifically meant for the local/regional students as well as college teachers, with a view to make the students gain in-depth knowledge in Relativistic Quantum Mechanics and Field Theory. Out of 182 persons registered for the lecture workshop, 157 participants were from institutions other than Bishop Moore College.

Details of Participants

Immediately after the workshop was announced, there was a good response from the students and teachers from different academic institutions. With an expectation to gather simplified ideas on such a complex topic, a total number of 182 participants attended the workshop, though the sanctioned strength was 125 only. Among the 182 participants, 148 persons were the teachers and students from the following colleges:

1. S. N. College, Chengannur
2. Marthoma College Thiruvalla
3. T.K.M.M. College, Nangiarkulangara
4. D.B. College, Pampa
5. M.S.M. College, Kayamkulam
6. St. Cyril’s College, Adoor
7. S.D.College, Alappuzha
8. N.S. S. College, Pandalam
10. S.V.R.N.S.S College, Vazhoor
11. S.B.College Changanacherry
12. Kannur University College, Payyannoor
13. M.M.NSS College, Kottiym
14. St.Aloysius College, Edathua
13 students from 1\textsuperscript{st} year M.Sc and 13 students from Final year M.Sc of Bishop Moore College also attended the Lecture Workshop. Fifteen teachers from other institutions and eight teachers from Bishop Moore College were among the participants. The total numbers of participants were 182 including the four resource persons.

**Inaugural Session**

The workshop was formally inaugurated by Prof. M. Lakshmanan, Professor of Eminence, Centre for Nonlinear Dynamics & Dept. of Physics, Bharathidasan University. Dr. Sabu George, Principal of Bishop Moore College presided over the meeting. Dr. D.Sajan, Head of the Department of Physics welcomed the gathering and Dr. Ranjith Mathew Abraham, IQAC Convener of Bishop Moore College felicitated the occasion. Prof. Javeesh Alex, Local co-ordinator of the Lecture Workshop, proposed the vote of thanks.

**Lecture Sessions**

The lecture workshop consisted of 11 lecture sessions, covered by four resource persons. Prof. M. Lakshmanan, Centre for Nonlinear Dynamics & Dept. of Physics, Bharathidasan University, Prof. B. Sathiapalan, IMSc, Chennai, Prof. Ramesh Babu, CUSAT, Kochi and Prof. G Baskaran, IMsc, Chennai, were the four resource persons in the proposal accepted by the Science Academy.

But on the day before the commencement of the workshop, Prof. G Baskaran IMsc, Chennai informed his inconvenience to handle the lectures as he met with an accident and hence Prof. K.P. Satheesh Former Principal, Government Brennen College, Thalassery & Associate Professor of Physics, Govt. College Nattakom replaced him.

Prof. M. Lakshmanan delivered three lectures through which the basics of Quantum Mechanics and relativistic Schrodinger equation were presented. The lectures were helpful in founding a basic platform for understanding relativistic Quantum Mechanics among the participants. The three lecture sessions by Prof. B. Sathiapalan helped the participants to have a deep understanding about Dirac's relativistic wave equation. Dr. K P Satheesh delivered two lectures which discussed in detail about the origin, outlay and consequences of Dirac's relativistic wave equation and gave a foundation regarding the quantum field theory to the participants. Prof. Ramesh Babu could inculcate a detailed understanding of the quantum field theory in the participants through his three lecture sessions.
Valedictory Session

A test cum feedback cum thanksgiving session was arranged on the third day of the Lecture Workshop. These sessions reflected that the eleven lecture sessions were informative as well as interactive. The formal vote of thanks on behalf of the Department of Physics of Bishop Moore College was proposed by Prof. Merin George.

Conclusion

The Science Academies’ Lecture Workshop conducted at Bishop Moore College was beneficial to all the students and teachers who attended, especially the second year post graduate students. The topics covered were according to the second year M.Sc syllabus of the University of Kerala and the feedback from the participants reflected that they were equipped with a deep understanding of the topics covered.

Acknowledgement

The Department of Physics, Bishop Moore College, Mavelikara, is thankful to the Science Academies for organising the lecture workshop on "Basics of relativistic Quantum Mechanics and field theory" for the benefit of the M Sc Physics students and faculty of our College as well as neighbouring colleges. We are especially grateful for the timely consent and support provided to us by the Academy as well as the resource persons in postponing the date of the workshop by one day. We also acknowledge the invisible hands of God which helped us in the successful conduct of the lecture workshop.

Convener:
Prof. M. Lakshmanan
Professor of Eminence
Centre for Nonlinear Dynamics& Dept. of Physics
Bharathidasan University, Tiruchirapalli

Local Coordinator:
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