

Manosh Tharayilparambil Manoharan

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Current Position

- **Ph.D. Student**, Department of Physics, Cochin University of Science and Technology, (2019 – Present).
Supervisor: **Dr Titus K Mathew**, Professor, CUSAT.
Co – Supervisor: **Dr Ramesh Babu T**, Adjunct Faculty, CUSAT.

Research & Employment

- **Project Intern** at the Department of Physics, Panjab University, in Experimental Neutrino Physics.
Mentor: **Dr Vipin Bhatnagar**, Professor (November, 2019.)

Internship focused on accruing skill sets for experimental high energy physics research.

- **KSCSTE Project Fellow** at the Department of Physics, Cochin University of Science and Technology, in Theoretical Quantum Optics. Mentor: **Dr Ramesh Babu T.**, Emeritus Scientist (2017 – 2019.)

In this project we focused on analytic and numerical simulations of coupled cavity systems with qubits for quantum information processing, quantum state preservation and entanglement generation with non linear optical processes.

Education

- **M.Sc.Physics**, Maharajas College, Ernakulam, Mahatma Gandhi University, Kottayam, India. (June, 2016), 85.5%.
- **B.Sc.Physics**, Maharajas College, Ernakulam, Mahatma Gandhi University, Kottayam, India. (June, 2014), 93.2%.
- **Senior Secondary**, G. G. H. S. S. Thripunithura, Kerala Board, India. (June 2011).
- **Secondary School**, St. Rita's H. S., Ponnurunni, Kerala Board, India. (June 2009).

Awards & Scholarships

- **CSIR – JRF and NET** Government of India (2017).
- **KSCSTE, Emeritus Scientist Scheme project fellowship**, Government of Kerala (2017 – 2019).
- **Communicative English Trainer, ASAP** Kerala Government, British Council Aptis Test, CEFR level C.
- **Dr.Annie Joseph Vallamattom Memorial** Inter Collegiate Project Presentation, Winner (M.Sc Physics) for best project.
- **Maharaja's College OSA**, Outstanding performance in B.Sc. Physics.
- **Fanny Pallan Memorial Award** winner for 3 years in B.Sc. Physics
- **Hindi Merit Scholarship**, Government of Kerala (Since 2011 – 2013).
- **Student delegate** at the program “Igniting the aspirations”, chaired by the former Indian President, Dr. A. P. J Abdul Kalam, conducted by Swadeshi Science movement.

Publications and Thesis

Articles/preprints

2. Muhammed Ashefas C.H., **T. M. Manosh** and Ramesh Babu Thayyullathil, **Preservation of dynamics in coupled cavity system using second order nonlinearity**, arXiv:1903.11912 [quant-ph] (2019). Under Journal Review
1. **T. M. Manosh**, Muhammed Ashefas and Ramesh Babu Thayyullathil, **Effects of Kerr medium in coupled cavities on quantum state transfer**, Journal of Nonlinear Optical Physics & Materials Vol. **27**, No. **03**, 1850035 (2018).

M.Sc. Project

Loop Quantum Gravity, an Introduction, 2016, Supervisor **Dr N. Shaji**, Canonical quantization procedure on gravity based on Loop Quantum states.

B.Sc. Project

A Study on Comet ISON's Orbit, 2014, supervisor **Dr N. Shaji**, Astronomical data analysis on the trajectory of comet ISON.

Technical Skills

- OS : Fedora, Ubuntu and Windows
- Computation : Python (numpy, matplotlib, QuTiP etc.), Mathematica, C++.
- Other Software : \LaTeX .

Seminars and Conferences

- Speaker at “Annular Solar Eclipse Observation at CUSAT”, Aluva, December 26, 2019.
- Workshop on Neutrino Physics: Theory and Experiment, Banaras Hindu University, Varansi, 2019.
- International Workshop on Frontiers in High Energy Physics, FHEP, University of Hyderabad, 2019.
- Speaker at Aquinas College, on History and Physics of Space mission, 2019.
- Speaker at CUSAT, Workshop on Scientific Awareness, by IUCAA, IUCKLAM and KSSP 2019.
- Regional Astronomers Meet, CUSAT, IUCAA, 2019.
- Speaker at “National Seminar on Theoretical Physics”, St. Paul's College Aluva, 2018
- Speaker at Super – Blood – Blue moon watch, CUSAT, Aluva, 2018.
- Two day national symposium on “Frontier in physics”, St. Teresa's College, 2017
- Two day national seminar on “100 years of LASER”, Maharajas College, 2017
- Workshop on “Statistical analysis in Cosmology”, IUCAA, CUSAT, 2017
- Two day seminar on “Foundations on Theoretical Physics”, Maharajas College Ernakulam, 2016
- Workshop on “Solar Astrophysics”, IUCAA, MA College Kothamangalam, 2016
- Seminar on “Gravitational waves and Black hole entropy”, Aquinas College, Edacochin, July 2016
- ASAP Government of Kerala, CET program, UC College Aluva, 2016

- Advanced Workshop on Time Domain Astronomy and Cosmology, IRC, IUCAA St. Thomas College Kozhencherry at CMS Kottayam, 2015
- School on Gravitation and Cosmology, IRC Department of Physics CUSAT, 2015
- National Seminar on “GTR and Quantum Theory”, Maharaja’s College, 2015
- National Seminar on “Science and Society in Medieval Kerala”, Maharaja’s College, 2013

References

Dr Titus K Mathew
Professor
Department of Physics
CUSAT

Dr Ramesh Babu T.
Adjunct Professor
Department of Physics
CUSAT

Dr N. Shaji
Adjunct Professor
Department of Physics
CUSAT

Personal Profile

Born on October 25, 1993
Visual – Artist with an aptitude towards pencil-sketches and charcoal.
Fluent in English, Hindi and Malayalam
Resides in Kochi, Kerala.
Tharayilparambil House, Manu Nivas, LPS Road Palarivattom, Cochin-682025, India.