Adithya A Rao

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Research Interest

My interests lie in Theoretical High Energy Physics, Physics beyond Standard Model, Quantum Mechanics, Gravity; while I am intrigued by the unsolved problems like quantum gravity, matter-antimatter asymmetry etc.

Education

- ### 5 years Integrated M.Sc in Physics

  Sardar Vallabhbhai National Institute of Technology, Surat
  July 2019 - present
  CGPA upto 4th (previous) semester - 9.58

- ### 12th (Intermediate)

  Karnataka State Board of Pre University Education
  Jnanaganga PU College, Nellikatte Moodubelle, Udupi
  June 2017 - March 2019
  Percentage - 97.5%

- ### 10th (High School)

  CBSE
  St. Mary's English School, Kannarpady, Udupi
  March 2017
  CGPA - 10

Research Experience

- ### Neutrino Oscillations

  [June 2021 -] (Ongoing)

  Supervisor : Dr. Srubabati Goswami, Senior Professor,
  Physical Research Laboratory (PRL), Ahmedabad.

  Abstract: This project gives an understanding of the oscillation phenomenon in neutrinos and its connections to the solar neutrino problem, and also addressing the question of why charged leptons do not oscillate.

- **Statistical and Thermodynamic properties of Quark Gluon Plasma**
  [May 2021 - July 2021]

  Supervisor : Dr. Arvind Kumar, Assistant Professor,
  Department of Physics, NIT Jalandhar.

  Abstract : The project would give an understanding of the statistical properties of the quark gluon plasma and a crude determination of the phase boundaries, while also addressing the question of the possibility of producing quark gluon plasma in laboratory.

Relevent Coursework

- **University Offered Courses:**
  Classical Mechanics, Introductory Quantum mechanics, Kinetic theory and Thermodynamics, Electromagnetism,
  Partial Differentiation, Ordinary Differential Equations, Vector Calculus, Laplace transform, Fourier series, Fourier transform, Complex variables, Computational and numerical methods.
- **Self Studied Topics**
  Quantum mechanics, Special Relativity and Introductory General relativity, Statistical Mechanics, Basics of Particle Physics, Basics of Group theory, Linear Algebra.

Technical Skills

- **Programming Languages:**
  - Beginner: Fortran, Javascript, LabVIEW
  - Intermediate: C, C++, Python, Matlab
- **Softwares:** Wolfram Mathematica, LaTeX, Microsoft Office
- **Operating Systems:** Windows, Linux

Positions and Responsibilites

- **Member, Physics Club of NIT Surat**, a club actively conducting events to impart knowledge and inculcate the interest for physics.
- **Author, thehavok.com**, aiming at making science writing a more concise way to learn, even for a beginner to the world of science.

References

Can be provided on demand.