

Surya Jandhyala

📧 4th year Undergraduate Student

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🎓 Education

Vellore Institute of Technology, Vellore

Sep 2022 - Jun 2026 (Expected)

B.Sc. (Hons) in Physics

CGPA 8.11/10

Key Coursework:

• Classical Mechanics • Lagrangian and Hamiltonian Mechanics • Waves and Oscillations • Electrodynamics • Heat and Thermodynamics • Statistical Mechanics • Quantum Mechanics • Quantum Information theory • Optics and Spectroscopy • Solid State Physics • Mathematical Physics • Electronics

Rao Prahlad Singh School, Behror, Rajasthan

Apr 2020 - Jul 2022

Senior Secondary School

Subjects: Mathematics, Physics, Chemistry, Computer Science

🔧 Projects

Neural network reconstructions of modified theories of gravity under Dr. Soumya Chakrabarti, VIT

ongoing

◇ Application of ESGB Gravity to an FLRW Universe

Computational

- **Simulation of the Ising Model through the Metropolis Algorithm** *studied phase transitions in the Ising model with external magnetic field using Metropolis Algorithm* **Feb 2025**
- **Visualisation of Energy Flow in E-M systems through Poynting Vectors** *pynting vector field for static field systems and a closed circuit* **Mar 2025**
- **Large Angle Pendulum and its Time Period** *simulated the pendulum for large angles and obtained time period from both numeric integration and pure use of Euler's method* **Apr 2025**

Reading

- **General Relativity** Tutorial Sheets & Lectures of WE-Heraeus International Winter School on Gravity and Light - *F. Schüller (host)* **Jun 2025**
- **Quantum Field Theory** QFT: In a Nutshell - *Anthony Zee*; QFT - *David Tong* **Sep 2025**
- **Abstract Algebra** Visual Algebra - *Matthew Macauley* **ongoing**

👤 Profile

Technical Knowledge

- Tensor Calculations using xAct in Mathematica
- Python and IPython (SciPy, Pandas, Matplotlib, Qiskit); JAVA
- Miscellaneous: Webdev, Animation & VFX, ActionScript
- **Github Profile:** github.com/Celerynibble

Lab & Collaboration

- Operation of Digital Oscilloscopes, Function Generators, Spectrometers, Gratings and interferometers
- Chairperson of the college physics club (2025-26)
- Delivered oral presentations in internal departmental colloquia and seminars
- Part-time tutor

theceleryzone.neocities.org/physics

symphoniesoftheuniverse.substack.com

📖 References

Dr. Sathya Swaroop N.R., VIT

sathyaswaroop.n.r@vit.ac.in

Dr. Soumya Chakrabarti, VIT

soumya.chakrabarti@vit.ac.in