

Sai Lakshmi Vinay Raja Patnala
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Career Synopsis:

Results-driven professional with a solid foundation in Aerospace Engineering and an advanced academic background in Quantum Physics. Possesses a bachelor's degree in aerospace engineering, a master's degree in physics with a specialization in Quantum Physics and is currently immersed in doctoral research focused on Quantum Physics and Computation. A dedicated researcher and adept problem-solver with a keen interest in pushing the boundaries of quantum technologies.

Education Qualifications:

- PhD in Quantum Physics - University of Balearic Islands, Spain, (Currently pursuing).
- MSc in Physics - Queen Mary, University of London (2020-2022).
- B. Tech. in Aerospace Engineering - Hindustan University, India, (2015-2019).

Certifications:

- Certified in CAD and CATIA training programs.
- Certified in Drone designing.
- Certified - creative writer

Skills:

- Proficient in mathematical modelling and data analysis.
- Experienced in ANSYS, Mathematica and MATLAB software.
- Well versed written and oral communication skills.

Professional Experience:

Ideal Centre for Tuition
London, United Kingdom
A-level (Mathematics and Physics) Tutor

Aug 2021- Jun 2023

- Strong understanding of A-level mathematics and physics curriculum, including calculus, algebra, trigonometry, mechanics, and electromagnetism.
- Simplifying complex mathematical and physics concepts for students.
- Using problem-solving skills and ability to help students develop their own problem-solving strategies.
- Developing and delivering lesson plans and providing feedback on student performance.

Academic Experience:

**University of Balearic Islands
Palma, Spain**

2023- Currently Pursuing

Developing statistical models to understand and analyse quantum information transport – Doctoral Research

- Explored quantum information transport and non-equilibrium dynamics, focusing on the 2021 article 'A Kinetic Theory for Quantum Information Transport.'
- Developed a kinetic theory for quantum state evolution in closed and open configurations, integrating statistical mechanics to model non-equilibrium properties.
- Investigated quantum information propagation within the quantum state space, with a specific emphasis on quantum computers engaged in computation.
- Planned to derive generalized analytical models and enhance numerical techniques for larger quantum systems, contributing to the optimization of quantum technologies.

**Queen Mary, University of London
London, United Kingdom**

2021-2022

AdS/CFT and black holes – Graduate Research

- Conducted research on the AdS/CFT correspondence and its implications for the study of black holes.
- Utilised mathematical and computational tools to study the thermodynamics and quantum properties of black holes.
- Investigated the holographic principle and its connection to the AdS/CFT correspondence.
- Developed a strong understanding of the latest developments and open questions in the field of AdS/CFT and black holes.
- Contributed to the advancement of the field through novel research and insights.

**Hindustan University
Chennai, India**

2018-2019

Experimental CFD analysis of NACA 2421 aerofoil using ANSYS software - Undergraduate Research

- Conducted experimental CFD analysis of the NACA 2421 aerofoil using ANSYS Fluent.
- Utilised PIV, Hotwire and Pressure Sensors to measure the flow field and validate the simulation results.
- Created and optimised mesh for the complex geometry of the NACA 2421 aerofoil.
- Investigated the effect of different turbulence models and boundary conditions on the simulation results.

- Automated the CFD analysis process using scripting and programming.
- Contributed to designing and optimizing new aerofoil designs for improved performance.

Hindustan University
Chennai, India

Oct 2018

Designing a single-seater twin-engine turboprop supersonic fighter plane - Undergraduate Research

- Utilised computer-aided design (CAD) software to create 3D models and conduct simulations.
- Assisted in the creation of technical drawings and specifications for the aircraft.
- Participated in design reviews and provided feedback to other members of the team.
- Contributed to the advancement of the aircraft's design through novel ideas and solutions.

Experts Hub, Industry Skill Development Centre
Bangalore, India
Quadcopter Intern

Jun 2018

- Experience in the field of drone technology and quadcopters.
- Strong understanding of the principles of aerodynamics, propulsion, and control systems.
- Experience with computer-aided design (CAD) software and 3D modelling tools.
- Understanding and following technical specifications and design requirements.

Publications:

- A.Rajkumar¹, VijayAlagiri², Patnala Vinay Raja, "Fuzzy analysis on aircraft crashes after 2015 using fuzzy relational mapping", International Journal of Pure and Applied Mathematics, Volume 120, No. 6 2018, 1313-1322, ISSN: 1314-3395 <http://www.acadpubl.eu/hub/>
- Sai Lakshmi Vinay Raja Patnala, "A novel approach towards Gravitational and boundary conformal field theories", International Research Journal of Modernization in Engineering Technology and Science, Volume:05, No. 10 2023, ISSN: 2582-5208 <https://www.doi.org/10.56726/IRJMETS45067>.
- Sai Lakshmi Vinay Raja Patnala, "Exploring Conformal symmetry in Anti-de Sitter space: Quantum Chromodynamics in AdS/CFT correspondence "International Journal of Research Publication and Reviews, Vol 4, no 10 2023, pp 1095-1099, ISSN 2582-7421. <https://ijrpr.com/uploads/V4ISSUE10/IJRPR18196.pdf>.