

ANIRUDH YADAV

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Education

- **University of Wisconsin-Madison** Madison, WI, USA
Ph.D. Theoretical Physics (current GPA: 4/4) Sep, 2023
- **University of Wisconsin-Madison** Madison, WI, USA
M.S. Physics-Quantum Computing (GPA: 4/4) Sep, 2021 - Aug, 2023
- **Indian Institute of Technology (Indian School of Mines) Dhanbad** DHN, JH, IND
B.Tech. Computer Science & Engineering (OGPA: 8.45/10) July, 2016 - July, 2020
- **Delhi Public School** RNC, JH, IND
Higher Secondary Examination (Std. XII), Science & Computer Science (Aggregate: 93.4%) 2015
- **Delhi Public School** RNC, JH, IND
Senior Secondary Examination (Std. X) (GPA: 10/10) 2013

Publications

- Yadav, A., & Yavuz, D. D. (2025). Quantum statistics of single-mode radiation emitted by superradiant Dicke states. *Physical Review A*, 112(6), 063713.
- Gold, D. C., Saglam, U., Carpenter, S., Yadav, A., Beede, M., Walker, T. G., ... & Yavuz, D. D. (2025). Experimental observation of subabsorption. *Physical Review A*, 112(2), 023708.
- Yavuz, D., Yadav, A., Gold, D., Walker, T., & Saffman, M. (2024). Numerical study of the spatial coherence of light in collective spontaneous emission. *Physical Review A*, 110(4), 043705.
- Yadav, A., & Yavuz, D. (2024). Analytical and numerical study of subradiance-only collective decay from atomic ensembles. *Physical Review A*, 110(2), 023709.
- Yavuz, D. D., & Yadav, A. (2023). Simulation of quantum algorithms using classical probabilistic bits and circuits. *arXiv preprint arXiv:2307.14452*.
- Yavuz, D. D., & Yadav, A. (2023). Mapping of Quantum Systems to the Probability Simplex. *arXiv preprint arXiv:2301.06572*.
- A. Yadav, P. K. Jana, S. Tiwari and A. Gaur, "Clustering-Based Energy Efficient Task Offloading for Sustainable Fog Computing," in *IEEE Transactions on Sustainable Computing*, 2022, doi: 10.1109/TSUSC.2022.3186585.
- N. Kumari, A. Yadav, and P. K. Jana (2022). Task offloading in fog computing: A survey of algorithms and optimization techniques. *Computer Networks*, 214, 109137.

Awards

- **Robertson Leach Graduate Student Fund**
Awarded for 2024-25 academic year UW-Madison in the amount of \$5,000 Spring 2025

Skills

- **Teaching Assistantship Duties:**

- Applied Optics Lab, PHYS 325-LAB, Spring 2026.
- Masters in Physics Quantum Computing batch, Fall 2025.
- Applied Optics Lab, PHYS 325-LAB, Spring 2025.
- Masters in Physics Quantum Computing batch, Fall 2024.
- Applied Optics Lab, PHYS 325-LAB, Spring 2024.
- Masters in Physics Quantum Computing batch, Fall 2023.
- Applied Optics Lab, PHYS 325-LAB, Spring 2023.
- Modern Physics, PHYS 249, Fall 2022.

- **Programming Languages:** C/C++, Python, Mathematica, L^AT_EX, MySQL.

- **Tools & Libraries:** Spyder & Jupyter Notebook, Plot.ly, Matplotlib, Pygmo, Scipy, Numpy, Mpmath, Tikz-package, Diagrams.net (draw.io).

- **Lab Skills:**

Computer Science: Introduction to Lexical analysis using YACC for C++ in UNIX based platform, Introduction to CUDA parallel programming framework, Client - Server Socket programming, Network Simulator 3.0, Unified Modeling Language and Entity relationship diagrams using diagrams.net (draw.io).

Physics, Optics: Lens (Thin and Thick), Michelson Interferometer, Grating Spectrometer, Fabry-Perot, Optical Fibers, Fourier Image Processing, Acousto-Optical Modulators, Single-photon counting.

Internships & Additional Courses

- **Qubit by Qubit's 2020-21 Introduction to Quantum Computing course** Online
Launched by The Coding School (TCS), sponsored by IBM Quantum. Oct 2020 - May 2021

1. Introduction to the necessary preliminary mathematical tools and techniques in the first of the two terms.
2. Introduction to quantum circuit design and algorithms like Quantum key distribution, Deutsch-Jozsa and Grover's algorithm.
3. Practical sessions on IBM quantum lab and coding in the Qiskit platform.

- **Amdocs Development Center India LLP at, Amdocs Innovation Lab** Pune, India, IND
Building a future proof data visualization tool for big data analytics using open source technology May - July 2019

1. Development of plots for time series, continuous and discrete (and categorical) data fields from a tubular input which were stored as views and displayed as reports.
2. Adding external features for plots like change of perspective, 3D plots and plugins for customization like aggregate, group by, count etc.
3. Integration of python backend with MySQL using MySQL connector and generation of view after extracting the required data for report generation.

Certifications

- *Introduction to Quantum Computing Course* Awarded by the Coding School under the Qubit by Qubit's program, sponsored by IBM Quantum. *May, 2021*
- *Cloud Based Innovation Lab, 3.0.* Awarded by Amdocs Development Center India LLP. *July, 2019*
- *English Speaking skill summer training.* Awarded by British Council for ten days summer intensive training in English speaking skills. *May, 2017*
- *Problem Solving Assessment - Performance Certificate* Awarded by the Central Board of Secondary Education, Delhi *March 28, 2014*
- *Certificate of felicitation* Awarded by Delhi Public School for securing 10/10 CGPA in Class X, Board Examination. *June 29, 2013*