

EESH GUPTA

Undergraduate Student in Physics
Rutgers University, New Brunswick NJ

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RESEARCH INTERESTS

Quantum Computing & Many Body Theory:
Electronic structure, variational algorithms, quantum error mitigation

EDUCATION

Rutgers University	2019 - Present
B.S. in Physics	
B.A. in Computer Science	
Societies: Society of Physics Students, Rutgers Concert Band	

RESEARCH EXPERIENCE

Undergraduate Research Assistant, Rutgers University-New Brunswick	2019 - Present
Supervisor: Stephen Schnetzer, Ph.D.	
Topic: Quantum computations of molecular ground states; investigating Variational Quantum Eigensolver (VQE) in computing ground state energy of the Hydrogen molecule; comparing noise amplification techniques in Zero Noise Extrapolation (ZNE), error mitigation technique; performed statistical analysis of Polynomial and Richardson Extrapolation.	
Research Programming Intern, University of Nebraska-Lincoln	Summer 2018
Supervisor: Ashu Guru, Ph.D.	
Topic: Agricultural Education; front-end programming on “Agpocalypse 2050” project; investigated criteria for effective, educational video games.	

PRESENTATIONS

E. Gupta, S. Schnetzer, R. Gambhir. Error Mitigating Quantum Computation of Molecular Ground States.

- Poster Presentation by E.Gupta at 2020 Virtual Summer Science Poster Session, Aresty Research Center for Undergraduates, July 2020.

E. Gupta. Quantum Computing Electronic Structure.

- Talk by E. Gupta to Professor Richard Remsing's chemical physics group, Rutgers University, May 2020.
- Talk by E. Gupta to Stephen Schnetzer's Vector Like Quarks (VLQ) group, Rutgers University, May 2020.
- Talk by E. Gupta at NJAAPT Workshop on Quantum Computing for High School Teachers, June 2020.
- Virtual Workshop by E. Gupta at Governor's School of New Jersey, July 2020.

HONORS AND AWARDS

Aresty Summer Science Research Fellowship

Summer 2020

\$3,000, Aresty Research Center for Undergraduates, Rutgers University

IBM Qiskit Advocate Certification

2020

Recognized for code contributions and community outreach by Qiskit, IBM's quantum computing community

Dean's List

2019- Present

Rutgers University