

Jeremiah Isu

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PHSC 916, University of Oklahoma, 73019, Norman, OK

EDUCATION

• Doctor of Philosophy, Mathematics

University of Oklahoma

In progress

Norman, Oklahoma

- Advisor: Dr. Javier Chavez-Dominguez

- Research area: Quantum Information Theory

• Master of Arts, Mathematics

University of Oklahoma

May 2024

Norman, Oklahoma

• Bachelor of Science, Mathematics

University of Port Harcourt

June 2018

Port Harcourt, Nigeria

RESEARCH

My research interest is in quantum information theory. Currently, I am working on advancing the theory of quantum channels. I am also interested in quantum computation and its applications.

Papers in Preparation:

1. *Phase Retrievability of Quantum Channels on States of Higher Rank*
2. *On the Stability of Phase Retrieval of Quantum Channels*

CERTIFICATIONS

Basics of Quantum Information

Certificate was issued by IBM

June 2025

Python Data Structures

University of Michigan

April 2021

Programming for Everybody (Getting Started with Python)

University of Michigan

March 2021

PROFESSIONAL EXPERIENCE

• Graduate Teaching Assistant

University of Oklahoma

August 2021 - Present

Norman, Oklahoma

Courses taught as instructor of record:

- MATH 1005 - Mathematical Reasoning (Fall 2025)
- MATH 2924 - Differential and Integral Calculus II (Summer 2025)
- MATH 1743 - Calculus I for Business, Life and Social Sciences (Spring 2025)
- MATH 1643 - Functions and Modeling for Business, Life and Social Sciences (Fall '24 & '23, Summer '24)
- MATH 1503 - College Algebra (Fall 2022)

Discussion sections led:

- MATH 1823 - Calculus and Analytic Geometry I (Spring 2022)
- MATH 2924 - Differential and Integral Calculus II (Spring 2024)

Courses graded:

- MATH 3333 - Linear Algebra (Fall 2021)
- MATH 4193/5103 - Introductory Mathematical Modeling/Mathematical Models (Spring 2025)

• Directed Reading Program Mentor

Department of Mathematics, University of Oklahoma (OU)

October 2025-Present

Norman Oklahoma

Undergraduate students I currently mentor:

1. Jiawen Li - Learning Quantum Information Theory and Quantum Computation
2. John Hernandez - Learning Functional Analysis

TALKS & PRESENTATIONS

- **A Gentle Introduction to Quantum Channels and Quantum Measurements II** October 2025
Student Analysis Seminar, Department of Mathematics OU
- **A Gentle Introduction to Quantum Channels and Quantum Measurements I** September 2025
Student Analysis Seminar, Department of Mathematics OU
- **Phase-retrievability of Quantum Channels** July 2025
SIAM Summer School at IBM Yorktown
- **Symmetry Groups of a Finite Frame** September 2024
Frames Theory Seminar, Department of Mathematics OU
- **Discrete Dynamical Systems: A Gentle Introduction** May 2024
Student Analysis Seminar, Department of Mathematics OU

CONFERENCES AND SCHOOLS ATTENDED

- **Principled Scientific Discovery with Formal Methods** July 2025
SIAM Summer School 2025 at IBM Yorktown, New York
- **Sums of Squares Method in Geometry, Combinatorics and Optimization** August 2022
MSRI/BIRS Graduate Summer School at University of British Columbia, Okanagan, Canada
- **Texas-Oklahoma Representations and Automorphic(TORA) forms XI** April 2022
TOA at Oklahoma State University

AWARDS & SCHOLARSHIPS

- **Harold Huneke Endowed Scholarship for the 2025-2026 academic year** May 2025
Department of Mathematics, OU
- **Harold Huneke Endowed Scholarship for the 2024-2025 academic year** April 2024
Department of Mathematics, OU
- **Nancy Scofield Hester Mathematics Scholarship for the 2023-2024 academic year** April 2023
Department of Mathematics, OU

SERVICE

- **Member, Directed Reading Program Committee** September 2025 - Present
Department of Mathematics, OU
- **Organizer, Student Analysis Seminar** February 2025-Present
Department of Mathematics, OU
- **Vice President Math Graduate Students Association** August 2024- May 2025
Department of Mathematics, OU
- **First Year Representative in the Graduate Advocacy Committee** August 2021-May 2022
Department of Mathematics, OU