Olumide Oni (Ph.D)

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# EDUCATION

**University of North Carolina at Greensboro** May 2023 Greensboro, NC

### PhD in Nanoscience

Dissertation Topic: Analysis of Periodic Oscillations of APDs in Reaction Diffusion Waves with Nonlinear Diffusion in Tissues with Peripheral Nerve Injury (PNI)

**North Carolina Central University** May 2017 Durham, NC

### Master of Science in Physics; 3.66/4.0 GPA

**Relevant Coursework:** Quantum Mechanics, Classical Mechanics, Computational Physics, Solid State Physics, Electricity and Magnetism, Statistical Mechanics

**University of Lagos** January 2008 Lagos Nigeria

### Bachelor of Science in Physics

**Relevant Coursework:** Quantum Mechanics, Classical Mechanics, Solid State Physics, Electricity and Magnetism, Digital Electronics

# SKILLS AND SOFTWARE PROFICIENCIES

• Knowledge of FTIR, SEM, Optical Microscope, Raman • Python (Libraries: NumPy, SciPy, Pandas, Seaborn, MatplotLib) • MATLAB • Full stack development: Frontend development using HTML & CSS, Angular 4, Bootstrap, Javascript, Jquery; Backend using DJANGO • POSTGRE DB for database management •

**Certifications**

• Product Manager Certification: Certificate Number 68410004, Product School

•AWS Solutions Architect: Validation Number EXBEXR3KV1VE1L3Z

# Research Interests

• Nonlinear Dynamics • Reaction-Diffusion Systems • Applied Mathematics • Artificial Intelligence • Machine Learning

# WORK & LEADERSHIP EXPERIENCE

Aug 2018 till May 2023 **The Joint School of Nanoscience and Nanoengineering** Greensboro, NC

***Research Assistant***

A position with a computational research group investigating the entrainment and optimization of action potential propagation in damaged neurons. Responsibilities included:

* Conducting relevant literature reviews.
* Developing mathematical/numerical models to simulate various mechanism in healthy and injured nerves.
* Develop computer programs and applications using python and appropriate libraries to generate experimental results.
* Collect and analyze computational data using MATLAB and Python
* Visualization of data using Matplotlib

Jan 2016 till May 2017 **North Carolina Central University** Durham, NC

***Research Assistant***

A position with a research group investigating carrier mobilities in Organic PhotoVoltaics using Time-Resolved Millimeter wave Spectroscopy. This unique research was the only one of its kind in the world at the time. Roles included:

* Conduct literature reviews
* Collect and analyze spectroscopy data using MATLAB and Python
* Troubleshooting experiment

Jan 2014 – Jan 2016 **North Carolina Central University** Durham, NC

***Teaching Assistant***

Position involved tutoring students in the following courses:

* **PHYS 2110 - General Physics I** which covered topics such as Kinematics, Vectors, Particle Dynamics, Energy, Motion, Fluids, Sounds and Waves
* **PHYS 2120 - General Physics II** with topics such as electricity and magnetism, heat and thermodynamics covered
* **MATH 1100 - College Algebra and Trigonometry I** included fractional expressions, exponents and radicals, equations and inequalities of linear and quadratic types, functions and graphs, exponential and logarithmic functions, and the binomial theorem.
* **MATH 1200 - College Algebra and Trigonometry II** topics tutored includessimultaneous equations, graphical solution of systems of inequalities, polynomial equations and functions, sequences and series, trigonometric functions, analytical trigonometry, right angle trigonometry, and the laws of sines and cosines.

# Honors and Awards

* Certificate of recognition Materials Research Society (MRS)
* Certificate of Excellence
* First elected president or the Materials Research Society (MRS)

# Publications

* **Oni, O. T**., Starobin, J. M., 2023. Propagation of neuronal signals in intact and injured peripheral nerves: The role of nonlinear diffusion of transmembrane potential. *Informatics in Medicine Unlocked*, *39*, 101279. <https://doi.org/10.1016/j.imu.2023.101279>
* Roy, B., Tsui, A., **Oni, O.,** Vlahovic, B., 2018. Inter-Relation between Laser Induced Photoconductance and MillimeterWave Absorption Using C-Si Intrinsic Resistivity. Journal of Lasers, Optics & Photonics, Vol 5, Issue1, pp.1-7.

# Volunteer Experience

* Physics/Maths Tutor: Deeper Life Bible Church, Raleigh, NC (Aug 2018 till date)
* President, Materials Research Society, Joint School of Nanoscience and Nanoengineering, Student Chapter (2021 - 2022)

# Professional Associations

• Materials Research Society

# REFERENCES

They will be provided on request.