Stanford

Wesley Williams

Postdoctoral Scholar, Radiology

Curriculum Vitae available Online

Bio

BIO

Hey there, I'm Wes! I am currently a postdoc in the Levin Lab in the School of Medicine's Department of Radiology researching methods to boost resolution of PET reconstruction algorithms via energy-based scatter estimation from GATE. In addition, I hope to add drug/radiotracer synthesis and discovery via experimental and AI methods.

My previous research involves computational reconciliation in identifying microplastic particles in terrestrial environments, my masters research was primarily concerned with broad-based COVID-19 nanovaccine formulations, and my undergraduate research consisted of protein nanoparticle synthesis for solid/liquid cancers.

PROFESSIONAL EDUCATION

- Bachelor of Science, University of Texas Arlington (2019)
- Doctor of Philosophy, North Carolina A & T State Univ (2024)
- Master of Science, University of South Florida (2021)
- B.S., The University of Texas at Arlington , University Studies (Area III: Engineering, mathematics, and life sciences) (2019)
- M.S., University of South Florida , Pharmaceutical Nanotechnology (2021)
- Ph.D., North Carolina Agricultural and Technical State University , Nanoengineering (2024)

STANFORD ADVISORS

- Craig Levin, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn Profile: https://www.linkedin.com/in/wesley-allen-williams-1a971615a/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Firstly, a goal of mine is to fashion a novel scatter-based parameter for PET reconstruction algorithms to improve image resolution via determining a more detailed scatter/true ratio estimate via binning the photons that have scattered once, twice, and perhaps, many more times.

Secondly, AI drug discovery application towards radiotracers may quicken experimentation by determining the formulations worth trying. Moreover, it may be able to characterize efficacy (biodistribution) (self-update).

Teaching

COURSES

2025-26

- Physics and Engineering of Radionuclide-based Medical Imaging: BIOE 221, BMP 221, RAD 221 (Win)

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Stanford Molecular Imaging Scholars Program (SMIS) (Fellowship Program)

Publications

PUBLICATIONS

- **Micro-Nanoparticle Characterization: Establishing Underpinnings for Proper Identification and Nanotechnology-Enabled Remediation** *POLYMERS*
  Williams, W., Aravamudhan, S.
  2024; 16 (19)