

JAMES ARMO

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PROFILE STATEMENT

Dedicated diagnostic radiographer and emerging neuroimaging researcher with strong interest in precision psychiatry, multi modal MRI applications, neuroimaging and medical imaging. Experience includes MRI safety screening, participant support, use of SPSS, SPM, and FSL, structural MRI analysis, and research collaboration with top psychosis research faculty at King's College London and the University of Oxford.

PUBLICATION

Armo J. Ergonomic risk and musculoskeletal disorders among imaging professionals practicing in Ghana. Journal of Medical Imaging and Radiation Sciences. November 2025. DOI:10.1016/j.jmir.2025.102164

Armo J. Advancing Psychosis Diagnosis in LMICs through Functional MRI Techniques. 2025 ISMRM & ISMRT Annual Meeting and Exhibition. <https://doi.org/10.58530/2025/5324> (Conference Paper)

RESEARCH EXPERIENCE

Principal Investigator, Psychosis MRI Project - King's College London (June,2025-October,2025)

Title: Volumetric T1-weighted MRI Measures Differentiate Schizophrenia from Other Diagnoses in First-Episode Psychosis (FEP).

Supervisors: Professor Paul Allen, Professor Matthew Kempton, Dr. Mariana Zurita Soler, Professor Steve Williams.

- Conducted statistical analyses on MRI volumetric data using SPSS (v26), including independent t-tests and univariate analysis.
- Analyzed subcortical and total grey-matter volumes with significant emphasis on the putamen.
- Worked with preprocessed and segmented T1-weighted MRI data to evaluate structural biomarkers.
- Drafted complete scientific abstract submitted to ISMRM 2026 Annual Meeting (South Africa).
- Strengthened expertise in psychosis biomarker research and radiology–neuroscience integration.

Visiting Research Assistant - Centre for Neuroimaging Sciences, King's College London (June,2025-October,2025)

- Observed and participated in MRI-based psychiatry research including fMRI, DTI, and MRS workflows.
- Assisted radiographers with MRI safety screening, participant preparation, and workflow management
- Participated in multidisciplinary MRI-based brain imaging research, including low-field MRI for neurodevelopmental, neurodegenerative and psychiatry.
- Attended multiple SPM statistical modelling workshops to build practical skills in fMRI data analysis and statistical modeling
- Developed understanding of psychosis neuroimaging markers and patient handling in psychiatricMRI.

Visiting Researcher - Oxford University Centre for Integrative Neuroimaging (August,2025)

- Trained in fMRI and DTI analysis using FSL.
- Observed research using 3T/7T MRI scanners in psychosis studies.
- Participated in MRS sessions measuring lactate in psychiatry-oriented MRI research.

Visiting Researcher - Cardiff University Brain Imaging Centre (September,2025)

- Observed how the Connectom 3T (300 mT/m gradients) enables ultra-precise cardiac muscle assessment and high-resolution connectome mapping.
- Experienced MEG scanning at the Psychosis Hub, gaining insights into its role in psychiatric research.
- Explored the potential of low-field MRI in widening access to imaging.
- Discovered the role of the Hyperfine Swoop 64 mT portable MRI in democratizing MRI access, especially in LMICs.
- Learned the value of mock MRI scanners in reducing patient anxiety and improving scan efficiency.

GROUP LEADERSHIP & MACHINE LEARNING Group Leader - SPARK Brain Tumor Segmentation Challenge (August,2024-May,2025)

- Led hybrid deep-learning segmentation using BraTS21 Swin UNETR + BraTS23 enhanced augmentation.
- Strengthened coding, neuroimaging analysis, and multimodal data pipeline skills.

RESEARCH & TEACHING EXPERIENCE Research Assistant - Klintapps College of Health and Allied Sciences (2024-2025)

- Assisted in research documentation, ethics protocols, participant scheduling, and data management.
- Conducted literature searches and prepared academic materials for dissemination.

Teaching Assistant - Klintapps College (2024-2025)

- Delivered tutorials, demonstrations, and practicals in radiographic techniques and anatomy.
- Supported student learning and assessment preparation.

Undergraduate Research Principal Investigator - UHAS (2023)

Assessing the Prevalence and Awareness of Musculoskeletal Disorders among Radiographers and Sonographers in Ghana.

- Designed study tools, validated questionnaire, performed statistical analysis, and submitted full thesis.

EDUCATION

Bachelor's Diagnostic Imaging - University of Health and Allied Sciences (2023)

High School General Science - St. Mary's Boys SHS (2018)

HONOURS & AWARDS

- Global Ambassador Award, driving equitable MRI access in Africa (2026)
- ISMRM-Gates Foundation Neuroimaging Research Fellow at King's College London (2025)
- Selected ISMRT USA conference Travel Grant Recipient (2025)
- UK Imaging and Oncology Conference 2024 Full Sponsorship for abstract presenters in Liverpool (2024)
- BMGF UNITY Ultra-low field MRI Sponsorship in Singapore (2024)
- Dean's List, Best Medical Imaging Student Level 200 (2021)

SKILLS AND COMPETENCIES

- Scientific writing: manuscript preparation, publication, peer review, and ethics compliance
- MRI scanning support: structural MRI, fMRI, DTI, low-field MRI
- MRI safety screening aligned with UK guidelines
- Research protocol adherence, participant management, and governance
- Clinical radiography: MRI, CT, digital X-ray, theatre and mobile imaging
- Health data analysis: SPSS and Microsoft Excel; basic Python and MATLAB
- Neuroimaging tools exposure: SPM, FreeSurfer, FSL
- Quality assurance, radiation safety, patient-centred care, and effective communication • Analytical skills, Teamwork, working independently, Problem solving, Adaptability

PROFESSIONAL EXPERIENCE (CLINICAL)

Radiographer (NSS) - Komfo Anokye Teaching Hospital (November,2023-November,2024)

- Performed X-ray, CT, MRI, dental imaging, mobile NICU imaging, and theatre C-Arm procedures.
- Utilized CAD4TB AI tool for tuberculosis detection.
- Managed patient screening, cannulation, scheduling, and clinical workflow.

Student Radiographer - 37 Military Teaching Hospital (2023)

- Performed diverse radiographic examinations and preliminary reporting.

Student Radiographer - Effia Nkwanta Regional Hospital (2021-2022)

- Delivered patient-centred radiographic services and imaging optimisation.

CERTIFICATIONS

• SPM Workshop • MRI Safety (UK Guidelines) • fMRI Training • Advanced Computational Neuroscience • CT Cardiac Angiography • Ultrasound Workshop • Neuroimaging Courses (Radiopaedia, RAB, ISMRM, JHU, KCL) • Data Protection and Information Security Training (King's College London)
Neuroimaging and Alzheimer's Care: European perspective

PROFESSIONAL AFFILIATIONS

- ISMRM • ISMRT • International Society for Tractography • ESR
- Radiopaedia • SCMR Committees • ESMRMB • ISRRT

COMMUNITY & LEADERSHIP

- Fundraising volunteer - Cancer Research UK (CRUK)
- Fundraising volunteer - Blood Cancer UK
- ISMRT AMPC Volunteer - Cardiac Section
- SCMR Advocacy, Education & Outreach Committees
- Health outreach education in Ghana communities
- University halls representatives President

ACHIEVEMENTS

- Global ambassador awardee for my outstanding contribution towards advancing MRI science and research in Africa in 2025
- Served as an abstract reviewer (Neuroimaging) for the 2025 ISMRM Annual Meeting in Hawaii, USA
- Selected to be part of the organizing committee of ISMRM-AMPC contributing to the organization of the same meeting
- Published paper in medical imaging shortlisted for Research Excellence Award
- Served as an abstract reviewer (Biomarkers > Neuroimaging) by the scientific committee of Alzheimer's Association for the AAIC'26, London.
- Selected as the only Ghanaian radiographer and one of just six recipients worldwide of the highly competitive prestigious ISMRM-GATES Fellowship. Visited University of Oxford Center for Integrative Neuroimaging, Centre for Neuroimaging Sciences, King's College London, and Cardiff University Brain Imaging Centre

LANGUAGES

English (Native) • French (Beginner)

REFERENCES

Available upon request.