CURRICULUM VITAE

Yusuf Qwareeq

PhD Candidate in Electrical Engineering, Temple University

yusuf@qwareeq.com qwareeq.com ORCID Google Scholar GitHub LinkedIn

Last updated July 2026.

RESEARCH PROFILE

PhD candidate in Electrical Engineering working on neuroimaging and electrophysiology methods for surgical planning. My research covers seizure onset zone localization from interictal intracranial EEG, multi-modal MRI of chronic spinal cord injury, and MR sequence development with offline non-Cartesian reconstruction. I build the reproducible pipelines and the desktop software this work runs on.

EDUCATION

August 2022 to present

PhD, Electrical Engineering

Temple University

Advisor: Iyad Obeid. Research conducted in Mahdi Alizadeh's laboratory at Thomas Jefferson University. Passed the preliminary examination in summer 2025. Doctoral committee: Iyad Obeid and Joseph Picone, with Mahdi Alizadeh as an external advisory member. Entered the doctoral program in Computer and Information Sciences in 2022 and transferred to Electrical and Computer Engineering in 2023.

May 2025

MS, Electrical Engineering

Temple University

Earned along the way to the PhD on the project track. Master's project: an offline decoding pipeline for two-dimensional center-out reaching data from the Cortimo intracortical brain-computer interface study, covering epoching, feature extraction, and Kalman and linear decoder training and evaluation, built in Iyad Obeid's Neural Instrumentation Laboratory. Coursework in machine learning and pattern recognition, distributed systems, algorithm design, engineering optimization, high-performance computing with GPU architectures, and advanced processor systems.

September 2021

BS, Electrical Engineering

The University of Jordan

Graduated salutatorian. Senior design: an indoor positioning system combining Wi-Fi signal strength, inertial measurement, and a recurrent neural network.

RESEARCH AND PROFESSIONAL APPOINTMENTS

June 2025 to present

Graduate Research Assistant

Center for Precision Neuroimaging in Neurosurgery, Thomas Jefferson University

- Build the lab's desktop tooling for intracranial electrode localization and for structural MRI processing in spinal cord injury studies.
- Run MRI sessions on the scanner, including language-task and resting-state fMRI.
- Run electrode reconstruction and resection-contact labeling for a 29-subject SEEG cohort.
- Write native pulse sequences in the Siemens IDEA environment, most recently a 3D center-out radial UTE that is built, simulated, and deployed.
- Reconstruct non-Cartesian data offline in Python, gridding onto a measured gradient trajectory rather than the nominal one.
- Process the lab's data for a multi-site structural MRI meta-analysis in spinal cord injury.

August 2022 to present

Graduate Research and Teaching Assistant
Temple University

- Hold a departmental assistantship, first in Computer and Information Sciences and, since 2023, in Electrical and Computer Engineering.
- Built the offline neural decoding pipeline for the Cortimo intracortical brain-computer interface study in the Neural Instrumentation Laboratory.

August 2021 to July 2022

Software Developer
Globitel, Amman, Jordan

- Designed a real-time monitoring service for audio, video, and screen activity using REST APIs, WebRTC, multithreading, and WebSockets.
- Implemented cryptographic utilities, including Base32 encoding, cipher libraries, and a licensing framework.

PEER-REVIEWED PUBLICATIONS

2024

Yusuf Qwareeq, Abdalaziz Sawwan, and Jie Wu

Maximum elastic scheduling of virtual machines in general graph cloud data center networks

Cyber-Physical Systems, volume 10, issue 3, pages 283 to 301, 2024.
doi.org/10.1080/23335777.2023.2301106

MANUSCRIPTS UNDER REVIEW

2026

Sara Naghizadehkashani*, Sahar Darabi Monadi*, Omid Shoraka, Spandana Tammiraju, Zahra Sadeghi Adl, **Yusuf Qwareeq**, Feroze Mohamed, Kiran Talekar, Scott Faro, Scott Edmonds, Elizabeth Affel, Robert Rosenwasser, Robert Sergott, Tsao-Wei Liang, Chengyuan Wu, and Mahdi Alizadeh

Altered static and dynamic brain functional connectivity associated with visual disturbances and hallucinations in Parkinson's disease

Movement Disorders, submitted March 2026. *These authors contributed equally.

CONFERENCE ABSTRACTS

2026

Yusuf Qwareeq, Michael Kogan, Caio Matias, Michael Sperling, Ashwini Sharan, Chengyuan Wu, Kevin Hines, and Mahdi Alizadeh

Regime-gated neural fragility for interictal seizure onset zone localization: guardrails against near-singular inflation

Digital poster, American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Cleveland, Ohio, 2026.

2026

Yusuf Qwareeq, Michael Kogan, Caio Matias, Michael Sperling, Ashwini Sharan, Chengyuan Wu, Kevin Hines, and Mahdi Alizadeh

State-robust temporal lobe network phenotype in interictal SEEG across awake and sleep

Printed poster, American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Cleveland, Ohio, 2026.

2026

Jack Hennen, Shaghayegh Poursabbagh, Luke Musser, Kristin Gustafson, **Yusuf Qwareeq**, Rupesh Chikara, Kristofer Feeko, David Leong, Joseph Ifrach, Arbaz Momin, Stephanie Serva, Scott Faro, Islam Fayed, Caio Matias, Feroze Mohamed, James Harrop, Laura Krisa, and Mahdi Alizadeh

Volumetric morphometry demonstrates regional atrophy patterns and structure-function relationships in chronic spinal cord injury

American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Cleveland, Ohio, 2026.

2026 Jack Hennen, Shaghayegh Poursabbagh, Luke Musser, Kristin Gustafson, **Yusuf Qwareeq**, Rupesh Chikara, Kristofer Feeko, David Leong, Joseph Ifrach, Arbaz Momin, Stephanie Serva, Scott Faro, Islam Fayed, Caio Matias, Feroze Mohamed, James Harrop, Laura Krisa, and Mahdi Alizadeh

Diffusion tensor imaging reveals spatially specific structure-function relationships in chronic spinal cord injury

American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Cleveland, Ohio, 2026.

2026 Rupesh Kumar Chikara, Shaghayegh Poursabbagh, Luke Musser, Kristin Gustafson, **Yusuf Qwareeq**, Kristofer Feeko, David Leong, Arbaz Momin, Stephanie Serva, Scott Faro, Andrew Newberg, Caio Matias, Feroze Mohamed, James Harrop, Laura Krisa, and Mahdi Alizadeh

Spatiotemporal changes in metabolic activity assessed by dynamic PET in chronic spinal cord injury using graph-based functional network

American Society for Stereotactic and Functional Neurosurgery Biennial Meeting, Cleveland, Ohio, 2026.

TEACHING EXPERIENCE

Spring 2025 **Teaching Assistant**
ENGR 1102, Introduction to Engineering Problem Solving, Temple University

Spring 2025 **Teaching Assistant**
ECE 2113, Electrical Devices and Systems I Lab, Temple University

Spring 2025 **Teaching Assistant**
ECE 3824, Engineering Computation III, Temple University

Spring 2024 **Teaching Assistant**
ECE 3822, Engineering Computation II, Temple University

2022 to 2023 **Teaching Assistant**
CIS 2107, Computer Systems and Low-Level Programming, Temple University

OUTREACH AND ACADEMIC SERVICE

2026 **Camp Director, PY-STEM**
College of Engineering, Temple University
- The materials for this middle school summer camp are published at campnotebook.org.

2025 **Camp Co-director, PY-STEM**
College of Engineering, Temple University

2024 **Camp Counselor and Curriculum Developer, PY-STEM**
College of Engineering, Temple University

2022 **Editorial Assistant**
IEEE Transactions on Services Computing

PROFESSIONAL AFFILIATIONS

2023 to present **IEEE Eta Kappa Nu, Iota Sigma chapter**
Member

TECHNICAL AND METHODOLOGICAL SKILLS

NEUROIMAGING FreeSurfer, SPM, SimpleITK, NiBabel, BIDS.

METHODS Network and graph analysis, functional and structural connectivity, MR sequence design and non-Cartesian reconstruction, statistical inference.

SOFTWARE Python, C and C++, MATLAB, TypeScript, Electron, React, SQL, LaTeX, PyTorch, NumPy, SciPy, pandas.

RESEARCH PRACTICE Reproducible pipelines, automated testing, Git, Linux, Docker.