GEORGE K GYAN, PhD CANDIDATE

Department of Natural Resources Management,
Texas Tech University
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EDUCATION

Texas Tech University Ph.D. Wildlife, Aquatic, and Wildland Science and Management   2021 - present
Dissertation: "*The influence of aspen-riparian forest restoration on water quality and wildfire hazard mitigation in Lincoln National Forest, New Mexico*".
Funded by the Bridge Adventure Program and Distinguished Graduate Student Assistantship (DGSA), Texas Tech University for doctoral research.
Advisor: Dr. Nathan S Gill

Sumy State University MS Economics of Environment and Natural Resources Management   2013 - 2014
Thesis: "*Saving natural resources through the improvement of solid waste management within the Subin Sub Metro, Kumasi Metropolis, Ghana*".
Advisor: Dr. Oleksadr Kubatko.

Kwame Nkrumah University of Science and Technology BS, Geomatic Engineering   2004 - 2008
Thesis: "*Using geographic information system (G.I.S) as a tool to help combat fire-outbreak within the Subin Sub Metro, Kumasi Metropolis, Ghana*".
Advisor: Dr. Edward Matthew Osei Jnr.

PUBLICATIONS

2025   Lechnar, Catherine V., **George K Gyan,** Robert Puckett, Robert D. Cox, Blake A. Grisham, and Nathan S Gill. Post-fire herbicide application reduces Macartney rose in Attwater's prairie-chicken habitat. Rangeland Ecology and Management, 98:237-245.
DOI:10.1016/j.rama.2024.06.017

MANUSCRIPTS IN PREPARATION

Gyan, G. K, Gill, N. S., Assessing the impacts of artificial beaver dam analogs on water quality and streambed sediment after mining and wildfires in Lincoln National Forest, New Mexico. A meta-review. Target journal: Soil and Sediments.

Gyan, G. K, Gill, N. S., Validating LiDAR-derived canopy structure using in situ measurements for effective forest management in an aspen-riparian ecosystem, Lincoln National Forest, New Mexico. A meta-review. Target journal: Remote Sensing of Environment, Forest Ecology and Management, Journal of Forestry.

PRESENTATIONS

2025   **George K Gyan** (Virtual Presentation). Assessing the impacts of artificial beaver dam analogs (BDAs) on water quality and streambed sediments after mining and wildfires. 2025 American Association of Geographers (AAG) Annual Meeting held in Detroit, Michigan.

| 2024 | **George K Gyan** (Poster). Assessing the impacts of artificial beaver dam analogs (BDAs) on water quality and streambed sediments after mining and wildfires. Natural Resource Management Day, Texas Tech University. |

2023   **George K Gyan,** Badri Ghimire, and Dr. Nathan S Gill (Poster). Using an Additional Composite Burn Index (CBI) Rating to Represent High Severity Wildfires in Northern Colorado. American Association of Geographers (AAG) Annual Meeting, Denver, Colorado.

George K Gyan, and Dr. Nathan S Gill (Poster). Using geographic information systems (G.I.S) as a tool to help combat fire-outbreak within the Subin Sub Metro, Kumasi Metropolis, Ghana. American Association of Geographers (AAG) Annual Meeting, Denver, Colorado.

2014   **George K Gyan,** and Dr. Oleksandr Kubatko (Oral Presentation). Using saving natural resources in the context of sustainable development in the Ghanaian economy. International Student Conference, Sumy Oblast, Ukraine.

2008   **George K Gyan,** Kojo Sabah Baisi-Ainoo, and Dr. Edward Mathew Osei Jnr. (Oral Presentation). Using geographic information systems (G.I.S) as a tool to help combat fire-outbreak within the Subin Sub Metro, Kumasi Metropolis, Ghana. Ghana Institute of Surveyors (GhIS), Annual Land Surveyors Seminar, Accra, Ghana.

HONORS AND AWARDS

2024   Recipient of the conference registration award waiver and travel scholarship for the 4th Southwest Fire Ecology Conference, awarded by the Association for Fire Ecology (AFE).

2021   Awarded $12,500 annually from the Distinguished Graduate Student Assistantship (DGSA), Texas Tech University to support scientific research at the Department of Natural Resources Management under the mentorship of Dr. Nathan S Gill.

Recipient of $12,500 annually from the Bridge Adventure Program, Texas Tech University to support scientific research in Landscape Ecology and Fire (LEAF) lab under the mentorship of Dr. Nathan S Gill.

2008   Department of Geomatic Engineering award finalist for best thesis "Using geographic information system (G.I.S) as a tool to help combat fire-outbreak within Kumasi Metro, Ghana"

CERTIFICATIONS

2024 - Present   Wilderness First Aid Certificate, Standard/Adult CPR- AED

2023 - Present   Remote Pilot – Certified Small Unmanned Aircraft Drone Pilot

PEER-REVIEWED PAPERS (with Dr. Nathan Gill)

2024   Forest Ecology and Management

Ecological Monographs

2023   Journal of Vegetation Science

2022   Remote Sensing

PROFESSIONAL EXPERIENCE

2012 - 2013   **Geomatic Engineer**. Cymain Ghana Limited, Kumasi, Ghana.
Leveling existing roads
Setting out center line, horizontal and vertical alignments using Tremble Total Station
Assisting quantity surveyors on earthwork computations and certificate preparation
Technical advisor to subcontractors, crafts people, and operatives

2011 - 2012   **Land Surveyor.** LandPro Consulting Limited, & Keegan Resources, Accra, Ghana.
Mining surveys using NOMAD and GPS for land access
Crop enumeration and valuation for compensation purposes

2011 - 2011   **Geomatic Engineer.** Merrett Surveys, Odebrecht & Vale BSGR, Guinea-Liberia Railway Line
Setting out of ground control points (GCP) using Leica GPS 500/1200
Leveling 300 Km railway project (Vale's Zogota Mines, Southern Guinea to Buchanan, Liberia)
Creating a geoidal model (comparing ellipsoidal and spirit level heights)
Static and Kinematic surveys

2010 - 2011   **Land Surveyor.** Geodata Consulting Limited, Accra, Ghana.
Surveying land parcels using digital plain table (DTP)
Land titling registration, Osu, Accra, Ghana
Data collection and creating database system

2008 - 2009   **National Service Personnel**. Regional Survey Department, Sunyani, Ghana.
Preparing base maps for Town and Country Planners
Setting out using Sokkia Total Station
Land surveys and site plan preparation
Land demarcation and solving land disputes issues

TEACHING EXPERIENCE

2023 - 2024   **Teaching Assistant**. Texas Tech University, Lubbock, Texas.
NRM 4304: Fire Ecology and Management (graduates; 3 credits).

2022 - 2023   **Teaching Assistant**. Texas Tech University, Lubbock, Texas.
NRM 3323: Prescribed Burning (graduates/undergraduates; 3 credits).

    Teaching Assistant. Texas Tech University, Lubbock, Texas.
NRM 5304: Fire Behavior and Ecology (graduates; 3 credits).

2021 - 2022   **Teaching Assistant**. Texas Tech University, Lubbock, Texas.
NRM 1300: Environmental Science as a Social Pursuit (undergraduates; 3 credits).

2002 - 2003   **Pupil Teacher**. Fountain International School, Techiman Bono East, Ghana.
Mathematics (Junior High School Subject).

FELLOWSHIP

2021 - 2026   Distinguished Graduates Student Assistantship (DGSA) for Doctoral Research, Texas Tech University ($125,000).

GRANTS AND AWARDS

2025   Doctoral Dissertation Completion Fellowship, Texas Tech University, Lubbock ($20,830).

2024   Student Association for Fire Ecology (SAFE) Grant. Texas Tech University, Lubbock ($700). (Led proposal writing with support from Badri Ghimire, Maria Anastacio and Catherine Castagnet)

PROFESSIONAL AFFILIATIONS

2022 - Present Association for Fire Ecology (AFE)

2021 - Present American Association of Geographers (specialty groups: Geographic Information Science & Systems, Remote Sensing, Spatial Analysis and Modeling, Hazards, Risks, and Disasters)

VOLUNTEER AND SERVICE

2023   Beaver Dam Analogs Service Trip, Lincoln National Forest, New Mexico.

    Bridge Adventure Service Trip, Maintenance of trails in forests reserves, Buffalo National River, Arkansas.

    Prescribed Burn Service Learning.

2022   Bridge Adventure Service Trip, Assisted in World Hunger Relief Inc. project on organic farming activities, Waco, Texas. River, Arkansas.

    Prescribed Burn Service Learning.

2021 - Present Treasurer. Student Association for Fire Ecology (SAFE), Texas Tech University Chapter, Lubbock.

    Officer. Student Association for Fire Ecology (SAFE), Texas Tech University, Lubbock.

CONFERENCES ATTENDED

2024   Fourth Great Plains Fire Summit, Canyon, Texas.
(Attendee)

    4TH Southwest Fire Ecology Conference, Santa Fe, New Mexico.
(Volunteer)

2023   International Fire Ecology and Management Congress, Monterey, California.
(Volunteer)

    American Association of Geographers, Annual Meeting, Denver, Colorado.
(Poster)

LANGUAGES

English, Deutsch/German, Russian, Ukrainian

TECHNICAL SKILLS

ArcGIS Pro	Geospatial Analysis
QGIS Desktop	FlamMap
R Program	Python
LiDAR point cloud data processing	AutoCAD
Processing GPS data using Leica Geo Office	Google Earth Engine (GEE)

REFERENCES

Available upon request.