

## Kenneth Okechukwu Ekpetera

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[LinkedIn](#), [Twitter](#), [Personal Website](#)

### Education

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#### **PhD Geography**

Aug. 2021 - Present

University of Kansas. Lawrence, KS.

**Thesis:** *Parametrization and Modeling of Probable Maximum Flood using IMERG.*

#### **Master of Science in Geography**

Aug. 2019 - July 2021

University of Kansas, Lawrence, KS.

**Thesis:** *Estimating Probable Maximum Precipitation Using IMERG Precipitation Dataset.*

CGPA: **4.00/4.00**

#### **Certification in GIS**

Aug. 2019 - Dec. 2020

University of Kansas, Lawrence, KS

#### **B.Sc. Geography and Environmental Management**

Feb 2012 - Jan 2017

University of Abuja. Abuja – Nigeria.

**Thesis:** *Mapping the Rate of Land Use Land and Cover Changes In Gwagwalada Abuja, Nigeria.*

CGPA: **4.56 /5.00 (First Class Honors)**

Class Rank: 1<sup>st</sup> (Best Graduating student in the University 2017)

### Internship Experiences

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NOAA-CUAHSI |National Water Center, Alabama.

June 2022- July 2022

**Position:** *Summer Intern & Research Fellow*

Kansas Water Office |Kansas Biological Survey.

May- August: 2020, 2021, 2022

**Position:** *Summer Intern & Research Associate*

### Major Projects

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- Development of "[the Rapid Image Viewer](#)".

Jan 2022- June 2022

**Funding Source:** *Kansas Water Office (KWO)*

- Development of "[The Probable Maximum Precipitation Calculator](#)".

May 2020- June 2022

**Funding Source:** *Kansas Applied Remote Sensing (KARS)*

### Journals Under Review

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- **Kenneth O. Ekpetera**, J. Coll, X. Li, J. Kastens, D. B. Mechem (2022), Possibilities and Limitations of IMERG Precipitation Dataset for Estimating Probable Maximum Precipitation. **Water Resource Research – American Geophysical Union.**

- **Kenneth O. Ekpetera**, and Diana L. Restrepo-Osorio (2022), Clinton Reservoir Parameter Fluctuations Through Time: The role of Landcover.

## **Selected Conferences and Workshops**

- **Kenneth. O. Ekpetera**, Xingong Li, & Jude Kastens (March 2022), Specific Area PMP Estimation Using IMERG Gridded Probable Maximum Precipitation Datasets. American Society for Photogrammetry and Remote Sensing (ASPRS), 2022 Annual Conference Program. (March 21 – 25, 2021). See full conference [program guide](#).
- **Kenneth. O. Ekpetera** & Xingong Li (June 2021), Possibilities and Limitations of IMERG Datasets for Estimating Probable Maximum Precipitation Across Contiguous USA Under Varying Precipitation Conditions. University Consortium for Geographic Information Science ([UCGIS](#)) Symposium 2021. (June 7- June 11, 2021). See schedule of paper presented under [Smart & Resilient Cities](#).
- **Kenneth. O. Ekpetera** & Xingong Li (March 2021), Possibilities and Limitations of Estimating Probable Maximum Precipitation in Kansas USA, using IMERG Datasets. American Society for Photogrammetry and Remote Sensing (ASPRS) 2021 Annual Conference Program. (March 29 – April 4, 2021). See full conference [proceedings](#) and [abstract](#).
- **Kenneth. O. Ekpetera** (2021), Estimating Probable Maximum Precipitation Over the African Regions Using IMERG Satellite Datasets. 10<sup>th</sup> annual Graduate Research Workshop, Kansas African Studies Center (KASC) University of Kansas (Feb 19, 2021). See full workshop [proceedings](#) and [abstract](#).

## **Research Experience**

- **[Flood Reconnaissance Mapping and Image Viewer Tool Development](#) (GEE Cloud-Computing).**  
Kansas Biological Survey, KU. Spring 2022
- **[Enhancing Kansas Flood Mapping Tool](#) (Characterizing 100-year water surface profile using LIDAR ).**  
Kansas Biological Survey, KU. Summer 20/21
- **Estimating and validating PMP from IMERG precipitation datasets across rain gauges in Kansas**  
Department of Geography, KU. August 2019 – July 2021
- **Gentrification Mapping across Cities and States in contiguous USA.**  
Department of Educational Leadership and Policy Studies, KU. Winter 20/ Summer 21
- **Prairies -native plant restoration (Precipitation-control experiment, Biomass extraction, & Meta-analysis).**  
Kansas Biological Survey (KBS), KU – James Bever research group. Summer 2020
- **Mapping Encroachment disparities in sub-urban communities.**  
Geography and Environmental Management, UNIBUJA. January 2017 – May 2019

## **Positions**

Cloud-based Geospatial App Developer & GIS Analyst for Kansas Water Office.	August 2020- Present
Graduate Research Assistant (GRA) for Kansas Biological Survey.	August 2020- Present
Chapters Committee Chair – ASPRS (SAC)	April 2021- Present
Graduate Student Representative- Faculty Meeting Rep (GAS, KU)	August 2020- July 2021

## **Professional Membership**

- Association of American Geographers (**AAG**) – August 2020 – present.
- Kansas Association of Mappers (**KAM**) – August 2020 - present.
- American Society for Photogrammetry and Remote Sensing (**ASPRS**) – Feb 2021 - present.
- University Consortium for Geographic Information Science (**UCGIS**) – Jan 2021 - present.

## **Employment/Teaching Responsibilities**

- Geo-visualization and Cartography (GEOG 311) – KU (**Lead Instructor**) Fall 2021
- Intro to Geographic Information Systems (GEOG 358) - KU Spring 2021
- Mapping our changing world (GEOG 111) - KU Spring 2021
- Geo-visualization and Cartography (Geography 311) - KU Fall 2020
- Physical Geography (Geography 105) - KU Spring 2020
- Human Geography (Geography 201) - KU Fall 2019
- Hydrology (Geography 312) - UNIBUJA Spring 2019
- Elementary Land Surveying (Geography 207) - UNIBUJA Fall 2018
- Geography of the FCT (Geography 107) - UNIBUJA Summer 2018
- Map Analysis (Geography 105) - UNIBUJA Spring 2018
- Intro to Physical Geography (Geography 101) - UNIBUJA Fall 2017

## **Research Interest**

- Remote Sensing, GIS, Spatial Programming, Flood Risk Mapping, Flood Modeling, Extreme events, PMPs, Watershed Analysis, Geography, USA, Africa.

## **Programming Skills**

Python, R-Language, Google Earth Engine (Java API)

## **Technical Skills/Research Tools**

Google Earth Engine (GEE), Python, Jupyter-Lab, R-Language, ArcGIS-Pro, ArcMap, ArcGIS Online, ESRI Field Mapping, ArcGIS Collector, ERDAS Imagine, Microsoft Office (Word, Excel, and PowerPoint).

## **Certifications**

- **ESRI**- Python Scripting for Geoprocessing Workflows March 2020
- **ESRI**- Building Models for GIS Analysis Using ArcGIS March 2020
- **Direction Mag**- Integrating ArcGIS and Jupyter for Geospatial Data science Dec. 2020

## **Selected Class projects**

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- Application of Earth Engine in estimating PMPs from gauges Fall 2020  
**Tools:** Python, Java, GEE, & R-Programming.
- Generating Unit Hydrograph using Spatial Analyst tools in Makurdi Watershed, Nigeria. Spring 2020  
**Tools:** ArcMap, ArcGIS Pro, Excel.
- Proximity Assessment of Douglas County Census Blocks to Watersheds and Road networks, KS, USA.  
**Tools:** Postgres-Spatial Query Language- using Jupyter Fall 2019
- Machine Learning: Supervised and Unsupervised Classification using ERDAS IMAGINE Fall 2019

## **Selected Articles**

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- **Kenneth O. Ekpeteri**, F. O. Ekeh & N.M. Ofodum (2019), Impact of abattoir wastes on ground water quality in the FCT, Abuja-Nigeria: A case study of Gwagwalada satellite town. **IISTE-Journal of Environment and Earth Science**. Vol-9, No-4 Page 90-104. **ISSN: 2224-3216(paper) 2225-0948(online)**. Received 17<sup>th</sup> April 2019, Accepted April 27<sup>th</sup>, 2019. DOI: 10.7176/JEES.
- **Kenneth O. Ekpeteri**, F. O. Ekeh & M. N. Eziechi (2019), Housing conditions in the FCT, Abuja-Nigeria: A case study of Gwagwalada satellite town. **IISTE-Journal of Environment and Earth Science**. Vol-9, No-4 Page 105-118. **ISSN: 2224-3216(paper) 2225-0948(online)**. Received 17<sup>th</sup> April 2019, Accepted April 27<sup>th</sup>, 2019. DOI: 10.7176/JEES.

## **Supervisor**

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Xingong Li (Professor). **Email:** [lix@ku.edu](mailto:lix@ku.edu)

**Research Focus:** Spatial Programming, GIS, Remote Sensing, Water Resources (Hydrology & Flood Mapping)

## **References**

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- Available upon request