



# Curriculum Vitae

## Issahaku Sontaa Jakalia

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*DOB: 28<sup>th</sup> February 1987*

*Nationality: Ghanaian*

**AREAS OF EXPERTISE OR PROFESSIONAL SKILLS:** Geophysical Surveys and Data analysis, Terahertz imaging, Synthetic Aperture radar applications, Remote Sensing, Machine Learning, Project monitoring and evaluation.

### PROFESSIONAL QUALIFICATION(S):

<i>Awarding Institution</i>	<i>Qualification</i>	<i>Period</i>
University of Education, Winneba (ITECPD)	PGDTLHE	December, 2021 – October, 2022
Jiangsu University (China) (School of Electrical and Information Engineering)	Ph.D. Control Science and Engineering	October, 2020 – To Date
Kwame Nkrumah University of Science and Technology (KNUST)	MPhil. Geophysics	September 2012 – November, 2014
University of Ghana - Legon	BSc. Physics & Computer Science	September, 2007 – May, 2011

## **PROFESSIONAL RESPONSIBILITIES**

<i>Position</i>	<i>Office/Location</i>	<i>Period</i>
Lecturer	Department of Physics Education, University of Education –Winneba	August, 2021 – To Date
Academic Counsellor (L100)	Department of Physics Education, University of Education –Winneba	January, 2022 – To Date

## **EDUCATION**

<i>Qualification/Certificate obtained</i>	<i>Awarding Institution</i>	<i>Date</i>
PGDTLHE	University of Education, Winneba (ITECPD)	Dec., 2021 – Oct., 2022
MPhil. Geophysics	Kwame Nkrumah University of Science and Technology (KNUST)	Sept., 2012 – Nov., 2014
BSc. Physics & Computer Science	University of Ghana – Legon	Sept., 2007 – May, 2011
W.A.S.S.C.E (General Science)	Winneba Senior High School, Winneba	Sept., 2003 – May, 2006
B.E.C.E	University Practice JHS, South Campus – Winneba	Sept., 2001 – 2003

## CAREER HISTORY

<i>Position/Title</i>	<i>Name of Institution</i>	<i>Date</i>	<i>Responsibilities</i>
Lecturer	Department of Physics Education, University of Education-Winneba	Aug, 2021 – To Date	<ol style="list-style-type: none"><li>1. Teaching (Mechanics &amp; Properties of Matter III, Measurement in Physics, Calculus II, Geometry and Trigonometry, Oil, Gas and Mineral Exploration, Ordinary Partial Differential Equations)</li><li>2. Curriculum Development</li><li>3. Setting and marking of assignments and exams scripts</li><li>4. Supervision of student's projects</li><li>5. Research Work and Community Service</li></ol>
Deputy Director	Youth Employment Agency, HQ, Accra	April, 2016 – August, 2021	<ol style="list-style-type: none"><li>1. Monitoring and Evaluation of Agency modules</li><li>2. Assisting in setting of monitoring frameworks for the Agency</li><li>3. Providing careers support and advice Agency beneficiaries</li></ol>
Graduate Assistant	Kwame Nkrumah University of Science and Technology, Kumasi, Physics Department	August, 2013 – Sept, 2014	<ol style="list-style-type: none"><li>1. Assisting lecturers in teaching (Geophysical Techniques, Petroleum geology)</li><li>2. Participating in geophysical fieldwork, data collection and analysis for postgraduate students.</li><li>3. Helping students in project works</li></ol>
Teaching Assistant	University of Ghana – Legon, Physics Department [NSS]	August 2011 – September 2012	<ol style="list-style-type: none"><li>1. Teaching and researching into courses in practical physics I and II for undergraduate students</li></ol>

**PUBLICATIONS, RESEARCH/PROJECTS CONDUCTED OR UNDERTAKEN, CREATIVE WORKS/PRODUCTIONS PRODUCED:**

- [1] Yuoni, A. B., **Jakalia, I.S.**, Antwi, V., Acquah, I. K. & Jebuni-Adamu, C. Exploring the factors influencing undergraduate students' decision to pursue physics at the University of Education, Winneba. **(Accepted for publication)** *Research in Science & Technological Education*
- [2] Sedoawu, O., Preko, K., **Jakalia, I.S.**, Obeng-Manu, C., Ablordeppey, W.K., Vorleto, R.Y. & Oware, S.A. Assessment of Soil Pollution in Kumasi, Ghana by Vehicular Emissions Using Magnetic Mapping Method **(Under review)** *Environment and Socio-economic Studies*
- [3] Sedoawu, K., Preko, K., **Jakalia, I.S.**, Obeng-Manu, C., Ablordeppey, W.K., Vorleto, R.Y. & Oware, S.A. Estimation of groundwater depths in KNUST campus, Kumasi, using the ground penetrating radar. **(Under review)** *Water Science and Engineering*
- [4] Yao, P., Xu, L., Chen, C., Ni, L. Chen, Z. & **Jakalia, I.S.**. Real-time identification system for ripe strawberries based on FPGA hardware acceleration. **(Under review)** *Ecological Informatics*
- [5] Jebuni-Adanu, C., Antwi, V., Acquah, I.K., Appiah, D., Gyan, M., Addo Wuver, F., **Jakalia, I.S.** & Sarkyi, B. (2023). Utilizing Physics Education Technology (PhET) for Improving Students' Understanding of Energy Conversion and Conservation in a Senior High Technical School. *Journal of Education and Practice*. 14(8), 45 – 49
- [6] **Jakalia, I.S.**, Aning, A.A., Preko, K., Sackey, N. and Danuor, S.K. (2015). Implications of soil resistivity measurement using the electrical resistivity method: A case study of a maize farm under different soil preparation modes at KNUST Agricultural Research Station, Kumasi, *International Journal of Scientific & Technological Research*, 4(1), 9-18
- [7] Aning, A. A., Sackey, N., **Jakalia, I. S.**, Sedoawu, O., Tetteh, E. H., Hinson, G., Akorlie, R. K., Appiah, D., & Quaye, E. K. (2014). Electrical Resistivity as a Geophysical Mapping Tool; A Case Study of the New Art Department, KNUST – Ghana. *International Journal of Scientific and Research Publications*, 4(1), 1-7

## **SEMINAR AND WORKSHOPS**

<i>Course Title</i>	<i>Location</i>	<i>Period</i>
Faculty Retreat	Elmina Beach Resort	27 <sup>th</sup> – 28 <sup>th</sup> Aug., 2021
Training on the use of Photonic Explorer kits	UEW, Physics Laboratory	14 <sup>th</sup> Sept., 2021
3 <sup>rd</sup> African Youth Nuclear Summit (AYNS)	Virtual, International Conference Centre, Accra - Ghana	25 <sup>th</sup> – 29 <sup>th</sup> Oct., 2021
Education and social sciences Research Association of Kenya 2 <sup>nd</sup> Virtual International Research Conference	Virtual, Zetech University	25 <sup>th</sup> Nov., 2021
2022 JSU Online “Chinese Bridge” Program of Jiangsu University	Virtual	10 <sup>th</sup> – 21 <sup>st</sup> Jan., 2022
Proposal Writing Seminar for Senior Members	North Campus Assembly Hall, UEW.	1 <sup>st</sup> Feb., 2022
3 <sup>rd</sup> Early Career Seminar	J. Anamuah Mensah Auditorium, North Campus, UEW	11 <sup>th</sup> April, 2022
Geo-training: Agricultural Remote Sensing	Virtual	4 <sup>th</sup> – 5 <sup>th</sup> July, 2022
Promoting staff development through collaborative research and quality teaching in education	J. Anamuah-Mensah Conference Centre, UEW	17 <sup>th</sup> – 19 <sup>th</sup> Jan. 2023
Unmasking Chemistry in Indigenous Activities	Gyahaadze - Winneba	24 <sup>th</sup> Nov., 2022
Online Academic Data Analysis Bootcamp Using Open-Access Program R	Virtual	26 <sup>th</sup> Jan., 2022 - 2 <sup>nd</sup> March, 2023
Ocean Remote Sensing	Virtual	17 <sup>th</sup> – 25 <sup>th</sup> Nov. 2022
WHO Public Health Laboratories knowledge sharing webinar series: Risk Communication for Laboratory Leaders	Virtual	14 <sup>th</sup> Sept. 2022
A day’s workshop for Senior High School Physics Tutors in the Central Region “Innovative Teaching Strategies to Address Students Misconceptions in Physics”.	LT2, UEW	12 <sup>th</sup> July, 2023
Seminar on Energy and the Developing World & Climate Change	Amu Theatre, UEW	19 <sup>th</sup> July, 2023

## **COURSES TAUGHT AT THE UNDERGRADUATE LEVEL**

1. PHY 363: Mechanics & Properties of Matter III
2. PHY 112: Measurement in Physics
3. MATP 112: Calculus I
4. MATP 231: Calculus II
5. MATP 121: Geometry & Trigonometry
6. PHYS 233: Atmosphere, Climate and Earth Movement
7. PHYS 114: Atmosphere, Climate and Earth Movement
8. ENVS 244: Oil, Gas and Mineral Exploration
9. EHS 112: Physics of the Environment

## **MEMBERSHIP OF PROFESSIONAL ASSOCIATION(S):**

<i>Name of Association</i>	<i>Position held</i>	<i>Period</i>
University Teachers Association of Ghana (UTAG)	Member	Dec., 2021 - To Date
Ghana Science Association (GSA-UEW)	Member	Dec., 2021 - To Date
Photonics Ghana	Member	Feb., 2022 - To Date
OneQuantum Ghana	Member	Nov., 2021 - To Date
International Literacy Association	Member	Oct., 2017 - To Date
Society of Exploration Geophysicists	Vice President	Aug., 2012 - To Date

## **COMMUNITY SERVICE:**

<i>Name of Institution/Organisation</i>	<i>Position(s) held</i>	<i>Period</i>
Photonics Project	Member	February, 2022- To Date
Department of Physics Education, UEW	Academic Counsellor	January, 2022- To Date
WAEC Ghana	Assistant Examiner	October, 2022 - To Date
Khuddam-ul Ahmadiyya, Ahmadiyya Muslim Mission	Regional Secretary	September, 2023 - To Date
Ahmadiyya Muslim Mission	Gomoa East Zonal President	May, 2024 – To Date

## **PROFESSIONAL SERVICE OR CONSULTANCY OUTSIDE THE UNIVERSITY:**

<i>Name of institution/client</i>	<i>Period of service</i>	<i>Office/position held</i>
Meta-Tera Geoservices	Nov, 2022 – To Date	GPR Surveys Consultant

## **GRANTS, HONOURS, AWARDS, PRIZES OR PROFESSIONAL RECOGNITION AND OTHER KEY ACCOMPLISHMENTS**

<i>Name/Type of Award</i>	<i>Awarding Institution or Organisation</i>	<i>Period</i>
Chinese Government Scholarship (CSC) For 4yr PhD Program	CSC, China	October, 2020 – To Date
GETFund Scholarship for 2yr MPhil Program	Scholarship Secretariat, Ghana	September, 2012 – August, 2014

## **REFEREES**

### **Prof. Kwasi Preko**

Department of Physics  
Kwame Nkrumah University of Science and  
Technology, Kumasi  
PMB  
Kumasi - Ghana  
Email: kpreko@yahoo.com  
Tel: 0242026899

### **Prof. Victor Antwi**

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### **Prof. Akwasi Acheampong Aning**

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### **Dr. Gloria Armah**

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