

# **KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI**

## **PERSONAL DETAILS**

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NAME : Van-Dycke Sarpong Asare  
DATE OF BIRTH: June 6, 1966  
PLACE OF BIRTH: Koforidua E/R, Ghana  
MARITAL STATUS: Married  
Number of Children: One  
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Telephone: 233244895283

## **SCHOOLS ATTENDED WITH DATES AND QUALIFICATIONS**

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1985 – 1987 Ghana National College, Cape Coast, Cape Coast; G.C.E. A – Level

1980 – 1985 Pope John Secondary and Junior Seminary, Koforidua; G.C.E O – Level

## **UNIVERSITIES ATTENDED AND ACADEMIC QUALIFICATIONS EARNED**

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1995 – 1999

Kwame Nkrumah University of Science and Technology, Kumasi (MSc Physics)

1989 – 1992

Kwame Nkrumah University of Science and Technology, Kumasi (BSc Physics)

PhD Programme: Ongoing at Department of Physics, KNUST

## **MEMBERSHIP OF PROFESSIONAL BODIES/ASSOCIATIONS**

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1. Member, Ghana Science Association (GSA) 2001 to Date
2. Member, European Association of Geoscientists and Engineers (EAGE) 2011 to Date
3. Associate Member, Society of Exploration Geophysicists (SEG). 2004 – 2011
4. Active Member, Society of Exploration Geophysicists (SEG). 2012 to Date

## UNIVERSITY TEACHING AND RESEARCH EXPERIENCE

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### Academic Ranks held and Subjects taught

#### 2001 to Date

Lecturer at the Department of Physics, Kwame Nkrumah University of Science and Technology, Kumasi.

I have taught the following Courses:

#### UNDERGRADUATE

##### *Department of Physics:*

Classical Mechanics, Electromagnetic Theory, Thermodynamics, Numerical Methods and Statistics, Electrical and Electromagnetic Prospecting Methods, Geometrical Optics and Waves, Optics, Experimental Physics, Basic Instrumentation.

##### *Department of Sports and Exercise Science*

Sports Aerodynamics, Biomechanics of Throws, Biomechanics of Jumps, Biomechanics of Human Motion, Biomechanical Analysis of Techniques, Biomechanics of the Skeletal System. Principles of Biomechanics

##### *Department of Sonography*

Basic Physics

##### *Centre Disability and Rehabilitations*

Biomechanics

#### POSTGRADUATE

##### *Department of Physics*

Electrical and Electromagnetic Prospecting Methods, Gravity and Magnetic Methods. Geophysics Laboratory and Field Work.

##### *Centre Disability and Rehabilitations*

Biomechanics

## DETAILS OF RESEARCH

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### *Research Conducted*

I have been involved in research in the following areas:

- i. Exploration for groundwater using Surface Geophysical Methods
- ii. Subsurface fracture studies using seismic and electromagnetic methods
- iii. Site characterization, site response and pavement systems analysis using Surface Waves,
- iv. Near Surface Geophysical Applications in the mapping of contaminant plume near landfills

### ***Some Publications***

1. Boateng C. D., Danuor, S. K., and **Asare, V.S.**, 2012. "Mapping the Subsurface Structure of the Bosumtwi Impact Crater using the Ground Penetrating Radar (GPR) Equipment" *International Journal of Scientific Research and Application*, Volume 1 – 2012, Issue 2, pg. 47-61.
  2. Bart-Plange A., Addo A., Ofori H. and **Asare V.**, 2012. Thermal Properties of Gros Michel Banana grown in Ghana. *ARPJ Journal of Engineering and Applied Sciences*. Vol. 7, No. 4, April 2012.
  3. **Asare, V.S.**, 2013. "GPR detection of buried steel gas cylinder; a study conducted in a sandbox" *International Journal of Basic and Applied Sciences*, 2 (1) (2013) 64-72
  4. **Asare, V.S.**, Menyeh, A., 2013. "Geo-Electrical Investigation of Groundwater Resources and Aquifer Characteristics in Some Small Communities in the Gushiegu and Karaga Districts of Northern Ghana" *International Journal of Scientific & Technology Research Volume 2, Issue 3, March 2013*
  5. Boateng E., **Asare, V.S.**, Danuor S.K., 2013. "Detection and Delineation of Contaminant Migration using the Terrain Conductivity Technique outside the Perimeters of the Dompoo Landfill Facility in Kumasi – Ghana" *Journal of Environment and Earth Science* Vol. 3, No.2, 2013
  6. **Asare, V.S.**, Gyasi, B., Okyere, B.F., 2015, Azimuthal Resistivity Sounding with the Symmetric Schlumberger and the Alpha Wenner Arrays to study subsurface electrical anisotropy variation with depth. *International Journal of Scientific and Research Publications*, Volume 5, Issue 5, May 2015.
  7. Addai, E., **Asare, V.S.**, Aning, A.A., 2016. Application of Shallow Seismic Refraction and 2D Electrical Resistivity Imaging to Site Investigations. *International Journal of Scientific and Research Publications*, Volume 6, Issue 5, May 2016.
  8. Agyekum, W. A., Duah, A. A., Mainoo, P. A., Okrah, C., and **Asare, V. S.**, 2016. Improving Access to Potable Water Supply using Integrated Geophysical Approach in a Rural Setting of Eastern Ghana. *Elixir International Journal. Elixir Environment & Forestry* 95 (2016) 40714-40719
  9. Quaye, E.K., Preko, K., **Asare, V. S.** 2016. Estimation of water table depths and the saturation profile using the ground penetrating radar. *Journal of Advances in Science and Technology Research (JASTER)*, Volume 3, No.1, March 2016, pp32-39
  10. Mapping the subsurface structure of the suevite deposit in the north of the Bosumtwi impact crater using electrical resistivity and seismic refraction tomographies  
C Emmanuel, Aning, Vandycke, Sylvester. *Annals of geophysics* 63 (2)
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## **CONFERENCES/SEMINARS AND WORKSHOPS ATTENDED**

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1. Van-Dycke S. Asare (2007) Recovering the Geo-electrical section from vertical electrical sounding (VES) using the cumulative resistivity inversion method. Ghana Science Association 25<sup>TH</sup> Biennial conference, August 2007.
2. Van-Dycke S. Asare (2008) Geophysical exploration for groundwater using the direct current vertical electrical soundings in a sedimentary basement environment. College of Science, KNUST. 2<sup>ND</sup> Biennial Research Conference.
3. Van-Dycke S. Asare (2008) Determination of source parameters of Isolated Gravity Fields from sources with simple geometry using Linearised Least-Squares Method. College of Science, KNUST. 2<sup>ND</sup> Biennial Research Conference.
4. Van-Dycke S. Asare (2009) Laboratory studies of an in situ geophysical signature of groundwater aquifers. 6<sup>TH</sup> International Symposium on Geophysics, University of Tanta, Tanta, Egypt. 10<sup>TH</sup> – 11<sup>Th</sup> November, 2009.
5. Schlumberger Training Programme in Geophysical Software. 26 – 30 July, 2010. University of Ghana, Legon.
6. Bartington Magnetic Susceptibility Meter Training Seminar, London UK October 11 – 12, 2010. Training covered theory and applications of the Bartington Susceptibility Meter.
7. ABEM Instrument Training Seminar, Stockholm, Sweden October 13 – 19, 2010. Seminar covered the following methods and hardware training: Seismics, Geoelectrics, Electromagnetics, Instrument Operations, Field and Work procedures, data management, Utility software and initial processing.
8. Ground Penetrating Radar (GPR) Training Seminar on Applied GPR Theory and Practice, October 21 – 22, 2010, Mala Sweden. Training covered aspects of GPR theory and concepts, data processing and interpretation and reporting techniques.
9. Advanced Conference on Seismic Risk Mitigation and Sustainable Development. 10 – 14 May, 2010, Abdus Salam Centre for Theoretical Physics (ICTP), Miramare, Trieste – Italy.
10. AfricaArray International Geophysics Field School. June 27 – July 18, 2015, University of Witwatersrand, Johannesburg, South Africa.
11. Workshop on Entrepreneurship for Scientists and Engineers from Developing Countries. 30 March – April 5, 2016. Abdus Salam Centre for Theoretical Physics (ICTP), Miramare, Trieste – Italy
12. MultiChannel Analysis of Surface Waves and SurfSeis Workshop. Nov. 30 – Dec. 1, 2017. Kansas Geological Survey in Lawrence, Kansas, USA.

## RECORD OF SERVICE

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Academic Tutor, Department of Physics, KNUST (2003 – Date)
Departmental Examination Officer, Department of Physics, KNUST (2003 – 2007)
Faculty of Science Cognate Member, BIRD Management Board, KNUST (2004)
Department of Physics Representative, Faculty of Physical Sciences Board. (2007 – 2008)
Faculty Advisor, KNUST Chapter, Society of Exploration Geophysicists
Local Organizing Committee Member, 27 <sup>th</sup> Biennial Conference, Ghana Science Association, 2011
Scientific Article Reviewer, Ghana Science Association, GSA, 2012
Member, Editorial Board, Journal of Geosciences and Geomatics of SciEP
Scientific Article Reviewer, Kuwaiti Journal of Science (KJS)
Sky Journal of Soil Science and Environmental Management
The Society of Exploration Geophysicists (SEG). Committee on University and Student Programs (CUSP) 2015 to 2018