Petroleum Engineer | Senior Lecturer | University of Energy and Natural Resources | Department of Petroleum and Natural Gas Engineering | P. O. Box 214, Sunyani, Ghana | Nationality: Ghanaian | Phone: +233 (0) 24 465 3795 | Email: yaw.boakye-ansah@uenr.edu.gh | yaw.akyampon@gmail.com

YAW AKYAMPON BOAKYE-ANSAH, Ph.D.

OBJECTIVE

To be a leading researcher and authority in energy and engineering.

To advance research in reservoir engineering, groundwater flow and foam drainage.

To help mitigate global energy concerns through research (pollution, energy availability, CCS).

EDUCATION

University of Strathclyde, U.K., PhD in Chemical and Process Engineering Department, 2021.

Supervisor: Dr Paul Grassia. Thesis: "Comparative Study of Drainage in Soils and Foams: Early-time and Late-time Solutions".

Researcher Development Programme, University of Strathclyde, 2021 Certificate.

University of Aberdeen, U.K., M.Sc. Oil and Gas Engineering, 2013, Distinction.

Supervisor: Dr Peter Hicks. Dissertation: "Infiltration of an Oil Spillage into Dry Porous Media"

Kwame Nkrumah University of Science and Technology, Ghana, B.Sc. Petroleum Engineering, 2009, Second Class Upper.

Training in general engineering and core Petroleum Engineering disciplines.

PROJECTS

Committee Member. CNG For Transportation.

National Petroleum Authority. 2025.

Consulting Editor.

Building a Sustainable and Equitable Future: Green Solutions for Climate Resilience in Ghana. Africa Centre for Energy Policy (2024)

Gas Processing at Atuabo.

Consulting Engineer with Ghana National Gas Company (2022-2024)

Consultant.

Rich Van-J Engineering Consultancy. (2022-date)

Groundwater Flow and Foam Drainage.

Doctoral researcher at University of Strathclyde (2017-2021)

Jubilee Field Development.

LWD Engineer with Baker Hughes Ghana Limited (2009-2010)

Field Engineer (Well Testing) with Expro Gulf Company (2010-2011)

PUBLICATIONS

Grassia, P., Tang, Y., Rieder, D., Ricker, M., Torres-Ulloa, C. A., & Boakye-Ansah, Y. A. **Assessing the effect of capillary suction in foam front displacement within porous media** *Transp Porous Med* **152**, 114 (2025).

Mohammed, S., & Boakye-Ansah, Y. A. (2024). **Gas Reserve Estimation and Performance Prediction of a Fracture-Dominated Unconventional Reservoir Using Weibull Model**. In *SPE Nigeria Annual International Conference and Exhibition* (p. D032S029R010). SPE.

Boakye-Ansah, Y.A., Grassia, P. **Sensitivity of Travelling Wave Solution to Richards Equation to Soil Material Property Functions**. *Transp Porous Med**145**,* 789–812 (2022). https://doi.org/10.1007/s11242-022-01878-1

Mohammed, S., Boakye-Ansah, Y. A., Gyamfi-Yeboah, E., Duartey, K. O., & Nyamekye, W. I. **A Multi-Fractured Well Performance Model for Unconventional Reservoirs.** *Heliyon*. (2022) Volume 8, Issue 10, 2022, **e10827**, https://doi.org/10.1016/j.heliyon.2022.e10827

Boakye-Ansah, Y.A., Grassia, P. **Similarity solutions for early-time constant boundary flux imbibition in foams and soils**. *Eur. Phys. J. E* **44**, 111 (2021). https://doi.org/10.1140/epje/s10189-021-00112-y

Boakye-Ansah, Y.A., Grassia, P. **Comparing and Contrasting Travelling Wave Behaviour for Groundwater Flow and Foam Drainage**. *Transp Porous Med* **137**, 255–280 (2021). https://doi.org/10.1007/s11242-021-01562-w

Antwi, M., Appiahene, P., & Boakye-Ansah, Y. A. **Promoting Afforestation for Sustainable Communities through Gamification.** *Journal of Energy and Natural Resource Management (JENRM)*, 1, 2 (2019). https://doi.org/10.26796/jenrm.v1i2.130

CONFERENCES AND SEMINARS

SPE Ghana Section. Biennial International Summit and Exhibition **2026**.

Papers submitted:

1. Improving Efficiency of Gas Dehydration Process at the Atuabo GPP.
2. Design and Optimisation of a Community-Embedded LPG Distribution System under Ghana's Cylinder Recirculation Model: A Data-Driven Study of Greater Sunyani
3. Using Active Control Mitigation Methods to Eliminate Slugging in the Jubilee Field
4. Life Cycle Analysis of Electricity Generation from Natural Gas in Ghana.

Petroleum Commission. Local Content Conference and Exhibition 2025.

Panellist.

BMC/BAMC 2021. March 2021. Virtual Conference**. "Similarity solutions for early-time infiltration in foams and soils"**

EUFOAM 2020 Conference, July 2020**.** Virtual Conference, Aberystwyth University. Poster Presentation. "**Similarity solutions for early-time infiltration in foams and soils**".

DSMS 2020. May 2020**.** Oral Presentation. "**Sensitivity of Travelling Wave Solutions to Richards' Equation to Soil Material Property Functions"**

Researcher Celebration Event 2019. Chemical and Process Engineering Department, University of Strathclyde. September 2019. Oral Presentation. "**Comparing and contrasting travelling wave behaviour for groundwater flow and foam drainage**."

Researcher Celebration Event 2018. Chemical and Process Engineering Department, University of Strathclyde. September 2018. Poster Presentation. "**Groundwater Flow, Oil Recovery and Foam Drainage."**

EUFOAM 2018, 9-12 July 2018. Liege, Belgium. Oral Presentation. "Groundwater Flows, Foam Drainage and Oil Recovery".

WORK HISTORY

CONSULTING ENGINEER, GHANA NATIONAL GAS COMPANY, ACCRA, 2022-2024

Operations and Technical services and Organisation of Gas School with GNGC Team

Flow Assurance, Pipeline Engineering, Gas Processing, etc.

Review and research on technical operations and engineering support

UNIVERSITY OF ENERGY AND NATURAL RESOURCES, SUNYANI,

Senior Lecturer (March 2024-date)

Lecturer (March 2017-March 2024)

Assistant Lecturer (December 2014- March 2017)

Senior Lecturer in Department of Petroleum and Natural Gas Engineering.

Developed BSc in Petroleum Engineering and BSc Oil and Gas Operations Engineering curricula.

Developed MSc/MPhil in Natural Gas Engineering and Management.

Teaching first-year through fourth-year undergraduate level courses aimed at training personnel for petroleum and energy industry.

Consistently received very good to excellent student assessment (ranging from 4.4 to 4.8 on a 5-point scale) for courses taught.

Supervised third- and fourth-year projects in Renewable Energy and Petroleum Engineering.

Service:

Head of Department, Petroleum and Natural Gas Engineering Department (2024-date)

Ag. Head of Department, Petroleum and Natural Gas Engineering Department (2022-2024).

Faculty Advisor, SPE UENR Student Chapter (2022-date)

Board Secretary (Energy and Environmental Engineering Department, 2015-2016).

Examinations Officer (Energy and Environmental Engineering Department, 2016 –2017).

Secretary, Student-Staff Liaison Committee (DEEE, 2015-2017)

Board Member, School of Engineering (2015-2017, 2022-date (Cognate)).

Board Member, International Relations Office (2021-date)

Board Member, Central Undergraduate Admission Board (2025-date)

Secretary & Member, Electoral Commission for University Teachers Association of Ghana (UTAG) UENR Local Chapter (2015-2017, 2021-date).

Member, GREENA FM Board (2015-2017).

TUTOR, UNIVERSITY OF STRATHCLYDE, GLASGOW, U.K., January 2018- December 2020

Tutor for Petroleum Engineering, Applied Maths and Problem Solving, Fluid Dynamics, Lab (MATLAB, Excel), Mass Transfer, and Process Safety.

Marked and graded student coursework (Petroleum Engineering, Mass Transfer, Process Safety).

FIELD ENGINEER, EXPRO GULF LIMITED, TAKORADI, 2010 - 2011

Repair and maintenance of surface Well Testing equipment.

Pressure-testing pipes and surface testing equipment (surface tank, choke-manifold, separator).

Worked offshore on Jubilee Drill Stem Testing projects.

LWD ENGINEER 1, BAKER HUGHES GHANA LIMITED, TAKORADI, 2009 –2010

Repair and maintenance of Coring equipment.

Repair and maintenance of LWD/MWD equipment and mud motors for international projects.

Repair and maintenance of Well Logging and Reservoir Characterisation Instruments.

Loading and packing and unloading of Drilling, Logging and Coring equipment.

INTERN, GHANA NATIONAL PETROLEUM CORPORATION, TEMA, June– July 2007

Trained in core processing and analysis.

Trained in general petroleum engineering and business.

CURRICULUM DEVELOPMENT

Chairperson - Committee to develop postgraduate curriculum for Land Degradation Neutrality (LDN). Sept. 2021.

Spearheading design of other engineering programmes.

Developed a *Framework For Postgraduate Students Training* at the Department of Energy and Petroleum Engineering. October 2021.

External Programme Reviewer for Ghana Tertiary Education Commission

PROFESSIONAL ACHIEVEMENTS

UNIVERSITY OF ENERGY AND NATURAL RESOURCES (UENR)

Head of Department, Petroleum and Natural Gas Engineering. Feb 2022-date

Senior Lecturer in Petroleum Engineering at UENR.

Set up a computer Simulation Laboratory for teaching and research.

Developed multiple postgraduate programmes curricula.

Spearheaded acquisition of education software

a. Innova-drilling software
b. Petroleum Experts worth **GBP 1.4M,**
c. KAPPA Engineering, and
d. GEOSOFT.

Reviewed and enhanced Petroleum Engineering programme curriculum content.

Facilitating Petroleum Engineering Laboratory set up.

Organised successful Career Fairs (2022-26).

PROFESSIONAL ASSOCIATION

Professional Member. Society of Petroleum Engineers. (#4504256)

Section Officer for **SPE** Ghana Section.

Scholarship Chair. (2023-date).

Deputy Academic Faculty Representative. (2022-23).

Led UENR team to win its maiden SPE Ghana Section PetroBowl contest. (2022).

Winner, Maiden Society of Petroleum Engineers (SPE) Young Professionals (YP) Europe PetroLeague 2013 (Member of winning KAMA team of University of Aberdeen).

FIELD ENGINEER, EXPRO

Installed Emergency Shutdown (ESD) system on the Deepwater Millennium Drillship for drilling operations off West Cape Three Points, Ghana in 2011.

High job performance rating from the operator on the SSDR Eirik Raude (Tullow Operations at the Jubilee Field, Ghana, March 2011).

Repaired and maintained Well Testing equipment for operations in Ghana and Cote D'Ivoire.

CURRICULUM DEVELOPMENT

Developed MSc/MPhil Natural Gas Engineering and Management (DPNGE, 2022).

Developed MSc/MPhil/PhD Petroleum and Energy Enterprise Management (DPNGE, 2022).

Developed BSc Oil and Gas Operations Engineering (DPNGE, 2023).

Developed PhD in Petroleum and Natural Gas Engineering (DPNGE, 2023).

External Assessor for Promotion of Faculty at Kwame Nkrumah University of Science and Technology, College of Engineering (2024, 2026).

Department **External Examiner** (Kumasi Technical University, 2024-date).

Conference **Session Chair** by Africa Centre for Energy Policy (ACEP) at maiden Climate Action Conference, (2024).

MEMBERSHIPS

AAU Writing Scholarship

Member, Society of Petroleum Engineers (2008-2014, 2016-date)

SCHOLARSHIPS AND AWARDS

Spearheaded the funding of **15 undergraduate UENR students. Rosemary Atakora Memorial STEM Scholarship.** Worth over **GHS120,000.00** annually**. August 2025**

Secured **65 slots** for students to attend **AOW Energy Conference 2026.** Worth over **$292,500.**

GNPC Foundation Scholarship for PhD, 2017-2021 (estimated at over **GBP 100,000**).

Ghana Education Trust Fund (GETFund) Scholarship for Masters in Oil and Gas Engineering, 2012-2013 (estimated at **GBP 30000**).

Winner, Maiden SPE YP Europe PetroLeague 2013. Cash prize of **GBP 2000**.

SKILLS

Teaching skills. Lecturing graduate and undergraduate degree programmes.

Leadership skills. Head of Department. Acting Dean of School of Energy. Representative for programme on School of Energy Board and School of Engineering Board.

Effective communication. Verbal and written. Published articles in journals.

Good computing skills. Microsoft Suite. MATLAB. ECRIN, PIPESIM.

Machine and **hand tools operation skills.** Field engineer at Baker Hughes, Expro, Ghana Gas.

General laboratory skills.

COMMITTEES AND SERVICE

Board Member, School of Energy (2022-date).

Board Member, School Appointment and Promotions Committee (2022-date).

Board Member, International Relations Office (2021-date).

Chief Invigilator, End of Second Semester Examination (2020/21).

Board Member, Greena FM (2015-2017).

Board Member, School of Engineering (2015-2017, 2021-2022).

Cognate Board Member, School of Engineering (2022-date).

Member. International Conference on Energy and Engineering committee. (2024-date)

Member, School of Energy Quality Assurance Committee (2022-date).

Member, Electoral Commission UTAG-UENR, (2015-2017, 2021-date).

Member, Committee to Organise 10th Anniversary Quiz Competition (2022).

Member, Committee to propose formation of School of Energy (2021).

Member, School of Engineering Quality Assurance Committee (2021-2022).

Secretary, Committee for moderating end of semester exams (DEPE, 2021).

Chairman, National Energy Quiz Committee (2021).

Chairman, The Gas Challenge (Organised by Ghana National Gas Company), 2021.

Academic Tutor/Counsellor. DEEE/DEPE/DPNGE (2015-2017, 2021-date).

Member, Committee, Guideline for Undergraduate Dissertation requirements (DEEE, 2015).

Judge and Discussant, 9th Public Lecture and Inaugural Academic Symposium, UCC (Dec 2022).

Member of team that trained UENR students for the 3rd **Gas Challenge** (2022).

Panel Member (ACT Africa, 2022 Energy Transition Conference).

Organised maiden **Career Fair** for the Department. Generated over GHS200,000 through sponsorship for the Fair. Got internship and national service places for over 30 students through this event.

Led UENR SPE Team to its maiden **SPE Ghana Section PetroBowl** win (2022).

Reviewed draft policy for Accommodation of International students. (2022).

Member of team that trained UENR students for the 2nd **Gas Challenge** (2021).

Bootcamp for selection of postgraduate students for EEMA and SEEMA programmes (2021).

Member of committee to propose Bui Campus for Energy training for RCEES (2021).

Led UENR team at **7th Renewable Energy Fair** at Accra International Conference Centre (2021).

Speaker at final year student's Guidelines for Writing Dissertation for Undergraduate Research seminar (2020/21, 2021/22, 2024/25).

Chairperson, Annual Departmental Freshmen Orientation (2022-date)

National Level Service

National Petroleum Authority (NPA) CNG for Transportation Committee. (2025)

Invited to contribute to amendment of Act 919 by the Minister of Energy and Green Transition.

STUDENT DEVELOPMENT

Secured 65 slots for **AOW Energy Conference** for students. The Vice Chancellor will speak at the conference to showcase UENR.

Organised 6 successive career fair events with aptitude tests to secure internship and NSS opportunities for students.

Secured scholarship funding for 15 students. 2025/26

Secured three scholarships for SPE Ghana Section Students. 2025/26

Secured full fee funding for one final year student through PESA alumni. 2025/26

Training Coordination. Collaborating to provide training in Oil Spill Response E-course for further certification of students (2021/22-date) with Oil Spill Response Limited (OSRL) Ghana.

SPE Student Award. Awarded *Best Student Chapter Award*. Encouraged student to apply and win SPE Most Outstanding Students award for 2023 at SPE Africa Annual Student Congress.

SPE PetroBowl. Led UENR students to win SPE Ghana Section PetroBowl 2022. Subsequently, they represented Africa at the 2022 ATCE in Texas.

Career Fair organisation. Organised four career fairs in three years as Head of Department.

The Gas Challenge 2022. Led students to third-place finish.

Patron. Resource Governance Campus Hub.

REFERENCES **Available on request**.