

# Quosay Awad Ahmed

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*Dr. Quosay Awad Ahmed is Assistant Professor at the Faculty of Engineering – UofK . He has held various positions in both public and private sectors. Besides lecturing, he serves as researcher and projects supervisor. Dr. Ahmed has studied and worked in different countries. He works also as national and international consultant for different institution, NGOs and firms. He is UNFCCC certified reviewer for GHG inventory reports, member of the editorial board of the Emission Factor Database and short-lived climate forcers of the Intergovernmental Panel for Climate Change (IPCC). His areas of interest and expertise are Energy, Transport, Climate Change, R&D - IOR/EOR, Decision and sensitivity analysis, Business planning and Environmental impacts and risk assessment.*

## Work Experience

### University of Khartoum ([www.uofk.edu](http://www.uofk.edu))

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|---|--|----------------|
| ▪ <b>Lecturer and Assistant Professor</b>   | Faculty of Engineering                               | 2008 – Present |
| ▪ <b>Managing Director</b>  | University of Khartoum Consultancy Corp.             | 2019 – 2022    |
| ▪ Managing and supervising multi-disciplinary teams for > 30 projects annually.   | <a href="http://www.ukcc-sd.com">www.ukcc-sd.com</a> |                |
| ▪ <b>Head of Department</b>   | Petroleum and Natural Gas Engineering                | 2013- 2019     |
| ▪ <b>Other positions at the University of Khartoum:</b>   |  |                |
| ▪ Lecturer for under and post graduate levels for reservoir and production engineering courses, such as: Natural Gas Engineering, Production Engineering I, Production Engineering II, Reservoir fluids properties, Thermal Oil recovery methods, Surface production facilities, Multi phase flow in pipes and others |  |                |
| ▪ Petroleum engineering Master program coordinator  |  |                |
| ▪ Business Development - TECHNOPOLE UNIT for Business incubation – University of Khartoum   |  |                |
| ▪ Principal investigator or research supervisor   |  |                |
| ▪ Project coordinator for different studies and research projects   |  |                |
| ▪ Head/Member of different committees and boards  |  |                |

### **Consultant:-** UNDP, UKCC, UNIDO, UNEP, HCENR, Ministry of Petroleum & Gas, Different Operating Co. s, Service Co.s, ...etc

- 1- *Environment and Climate Change:*
  - *Inventory of GHG emissions - Energy Sector Specialist*
  - *Modeling of GHG mitigation measures*
  - *Nationally Appropriate Mitigation Actions*
  - *Capacity Building and MRV*
  - *Environmental and Social Impacts Assessment*
- 2- *Energy and Petroleum:*
  - *Renewable Energy - Planning and Modeling*
  - *Petroleum production technology*
  - *IOR/EOR*
  - *Modeling – simulation*
  - *Energy Audit*
  - *Transport*
- **Projects and studies:**
  - 1- **National Consultant** for Capacity Building in CBIT Sudan project, HCENR (2022)
  - 2- **Team member:** upstream assets evaluation for Sharif Petroleum Operating Co. project, UKCC (2022)
  - 3- **National Consultant:** Terminal Evaluation of the Solar Water Pump Project, UNDP (2022)
  - 4- **Energy Consultant:** " Resilience of agropastoral populations in eastern Sudan", UNIDO (2022)
  - 5- **Team member:** "Technical Assistance to Ministry of Finance and Economic Planning – Modeling and capacity building for Climate Change Impact, Mitigation and adaption " WRI & NDC Partnership – UKCC, (2021-2022)

- 6- **Consultant:** “MRV System for Energy and Transport Sectors- Initiative Climate Change Transparency” UNEP-CCC, (2021-2022)
- 7- **Team member:** “Revision of the Pre- Feasibility Study for Saudi Poly-Chem Project” Esnad-elrwad Co. Ltd., (2021)
- 8- **National Consultant:** “Sudan’s Capacity Building Initiative for Transparency” project proposal preparation according to GEF-UNDP template (2021)
- 9- **Supervisor:** Assets register and management for Khartoum Refinery Co. , UKCC (2021)
- 10- **Team Leader:** Sudan National Greenhouse Gases (GHG) Inventory Report (2020-2021)
- 11- **National Consultant:** Preparation of Joint Program Document for “Solar Revolution for Transforming Lives in the White Nile and Kassala states of Sudan through a National Solar Fund Scheme” SDG Fund, UNDP Sudan- (2020)
- 12- **Project Supervisor:** ESIA for Alternative fuel source (SRF) , AL Shamal Cement Factory, UKCC, 2021
- 13- **Project Supervisor:** Environmental Exit Assessment – Greater Nile Petroleum Operating Company , UKCC 2019-202
- 14- **Team Leader:** Research project in GHG emissions baseline from road transport sector in Sudan – estimation of country specific emission factor, funded by Higher Council of Environment and Natural Resources (HCENR) -3<sup>rd</sup> National Communication Project (2019- 2021)
- 15- **Project Supervisor:** Capacity building needs assessment for Ministry of Justice – Republic of Sudan, DT Global- UKCC, 2020
- 16- **Project Supervisor:** Environmental exit assessment for Greater Nile Petroleum Operating Co. ; UKCC - 2020
- 17- **Consultant:** Green Climate Fund (GCF) - Concept Note for “Community based waste management system” – Sudanese Environmental Protection Society, 2019-2020.
- 18- **Technical team Leader:** Integrated Management Approach for Fuel Shortage in Sudan (Transport Sector)- research project – Ministry of Higher Education- Sudan, (2019).
- 19- **Consultant:** Technical and Economic Feasibility for the Replacement of Diesel Water Pumps with Solar Water Pumps in Different States in Sudan – Solar Water Pump project- MWREI (2019).
- 20- **National Consultant:** National circumstances and institutional arrangements for the national communication and biennial update report of Sudan, HCENR/UNDP- 2019
- 21- **Technical Team Leader :** Environmental and Social Impact Assessment for “Red Sea LNG Floating Solution Facilities and Port Sudan NG Pipeline” – SUNAGAS - UKCC (2018- 2019)
- 22- **Project Manager:** technical study of “ provision of diesel fuel unit (DFU) crude assay analysis for feasibility study” – 2B OPCO operating company (2018)
- 23- **National Consultant:** “Building institutional and technical capacity of Sudan’s for transparency related activities under the UNFCCC and the Paris Agreement” – PIF GEF, HCENR/UNDP (2017-2018)
- 24- **National Consultant :** “Development of feed in tariff NAMA policy for a Utility Scale Power Generation from Wind Energy” – Ministry of Water Resources, Irrigation and Electricity, Khartoum, Sudan (2017-2019)
- 25- **Resource Person – National Expert of IPCC Inventory Software 2006:** “Sudan’s GHG inventory for the third national communication – Energy Sector” , HCENR (2016-2019)
- 26- **Project Manager:** “Seepage study for **PetroEnergy E&P** evaporation ponds in Central Processing Facilities and number of Field Processing Facilities – UofK (April- Dec. 2017)
- 27- **Chief Consultant:** Well stimulation – matrix acidizing for **GNPOC** (Laboratory analysis, candidate selection, modeling and field trail) – National Upstream Solutions Co. (2017- 2018)
- 28- **Co- Principal Investigator:** Guar and Arabic Gums Properties Improvement for Potential Use in EOR & Sand Control in Sudanese Oil Fields, Energy Research Center-UofK and **Ministry of Petroleum and Gas**- Sudan, (2015 to 2018)
- 29- **Consultant –Losses and emissions estimation from venting and flaring:** Energy Auditing and Benchmarking Study for **El-obayid Refinery**, Energy Research Center-UofK and Ministry of Petroleum & Gas, (2015)
- 30- **Consultant – Emissions estimation from venting and flaring:** Energy Auditing and Benchmarking Study for Khartoum Refinery, Ministry of Petroleum and Gas, Khartoum, (2014)
- 31- **Team member:** Promoting Low Carbon Development Project: Nationally Appropriate Mitigation Actions (Energy Sector), HCENR (2013 to 2014).
- 32- **Team member:** Impacts of climate change on Sudanese Oil and Gas industry, Ministry of Petroleum, PetroEnergy E&P and UofK, Khartoum –Sudan (2013)
- 33- **Researcher:** Monte Carlo Simulation for Hydraulic fracturing design in shale gas –, Krakow, Poland (2012 to 2013)

- 34- **Consultant:** Modeling of Sudan's energy situation and forecast using LEAP software, Sudan's Second National Communication Project, HCENR (2010 to 2012)
- 35- **Co- Principal Investigator:** Laboratory evaluation of x-linked polymer for sand consolidation-, UofK, Sudan (2009 to 2011)
- 36- **Researcher:** Rheological modeling for Nile Blend laboratory testing data in the research project of: Restartability of GNPOC pipeline (2008-2010)

**Academic Supervisor:** Graduation projects, research papers and master thesis – University of Khartoum, Sudan University of Science and Technology (2008- present)

#### Other positions:

- Consultant UNIDO Sudan, 2022
- Consultant UNDP-Sudan Sudan, 2020 - present
- Founder and Director Estidama Center for Energy and Mining Studies Sudan, 2012- 2019  
[www.estidamatc.net](http://www.estidamatc.net)
- Director PetroEdge Service Co. Ltd.
- Business Development Manager SDE Energy
- Project Manager Sustainable Development Enterprise Sudan/South Sudan, 2009-2012
- Simulation Engineer (Water Shutoff specialist) IOR Chemco AS Norway, 2007-2008
- Process Engineer- Internship STATOIL AS Norway, 2006
- Interpreter and administrator Sudanese Embassy China, 2004-2005
- Sales Engineer DAL Engineering [www.dalgroup.com](http://www.dalgroup.com) Sudan, 2003-2004
- Co founder for many SMEs: PE Solutions, NORLYS for Trading and Contracting, OMAC for Integrated Services, SDE Market Research Unit, TRS Co. Ltd., Mosaic for Technology and Innovations and HEED Co. Ltd.

#### Education and professional qualifications

- 1- **Degrees:** PhD, MSc and BSc. Petroleum Engineering
  - *BS.c. China University of Petroleum- Beijing, China;*
  - *MS.c University of Stavanger- Norway;*
  - *PhD University of Khartoum- Sudan-Research Fellowship, AGH University of Science and Technology-Poland;*
- 2- **Diplomas**
  - *Chinese language proficiency Test (HSK)- Beijing, China (1998-1999)*
  - *Certificate of proficiency in translation (English/Arabic)- Africa International University (2002-2003)*
  - *Diplomas from GHG Management Institute:*
    - *UNFCCC Basic Course for the Review of Annex I Party Greenhouse Gas Inventories*
    - *Review of energy sector in GHG inventory report: Fuel combustion and fugitive's emissions*
    - *Application of Adjustment*
    - *National Systems for GHG inventory*
    - *Review of National Registries and information on Assigned Amounts*
    - *General and cross-cutting aspects of review of national communications and BR*
    - *Technical review of greenhouse gas emissions, emission trends, projections and the total effect of policies and measures*
  - *Fine Art student in Khartoum Art Center (Dec.2016 to Sep.2019)*

#### 3- Training, Workshops and Conferences

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|--|------------|---------------------------------------|
| The 20 <sup>th</sup> Editorial Board Meeting for the IPCC Emission factor database – Energy Sector | IPCC       | Bilbao, Spain<br>July. 2022           |
| From vision to GCF concept   | CTCN       | Khartoum, Sudan<br>May-June, 2021     |
| Reducing Methane Emissions from the Oil and Gas Sector   | OfD – UNEP | Webinar Series<br>May-Dec, 2020       |
| The 17 <sup>th</sup> Editorial Board Meeting for the IPCC Emission factor database – Energy Sector | IPCC       | Osaka, Japan<br>Nov. 2019             |
| Validation workshop of NAMA – FiT for wind energy project  | MWRIE      | Khartoum, Sudan<br>Feb. 2019          |
| Capacity building workshops for Green Climate Fund (GCF) – Readiness Project                       | HCENR      | Elgadarif & Madni, Sudan<br>Dec. 2018 |

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| 5 <sup>th</sup> International Conference on Oil&Gas Eng. and Technology (ICOGET 2018)                                      | Universiti Teknologi PETRONAS            | Kuala Lumpur, Malaysia<br>Aug.2018  |
| Mitigation of Climate Change- IPCC Outreach event  | MoHE & IPCC                              | Khartoum, Sudan<br>Aug., 2018       |
| Symposium of national scientific research outcomes- utilization of indigenous gums in EOR and Sand Control                 | Ministry of Higher Education             | Khartoum, Sudan<br>July, 2018       |
| Experts Meeting for Short-lived Climate Forcers  | IPCC- WMO                                | Geneva, Switzerland<br>May,2018     |
| Final workshop of the joint research project of Guar and Arabic Gum properties improvement and use in EOR and sand control | Ministry of Petroleum and Gas            | Khartoum, Sudan<br>March, 2018      |
| Africa Regional Workshop on Air Emissions and Climate Change Issues in the Oil and Gas Sector                              | Oil for Development and UNEP             | Nairobi, Kenya<br>Dec.2017          |
| Abu Dhabi International Petroleum Exhibition & Conference  | SPE, MoPG                                | AbuDhabi, UAE<br>Dec.2017           |
| Measurement and Evaluation training course   | UofK Centre for Advanced Training        | Khartoum, Sudan<br>Nov.2017         |
| Academic Counselling training course   | UofK Centre for Advanced Training        | Khartoum, Sudan<br>Oct. 2017        |
| Hands-on training workshop on the preparation and reporting of mitigation actions for the Africa Region                    | UNEP/UNFCCC                              | Pretoria, South Africa<br>Aug. 2017 |
| Principles of Geographical Information System (GIS)  | UofK                                     | Khartoum, Sudan,<br>May,2017        |
| IPCC 2006 GHG Inventory guidelines and software  | UNFCCC                                   | Swakopmund, Namibia, April, 2017    |
| Sudan's Third National Communications- Uncertainty Analysis in GHG inventory   | HCENR                                    | Khartoum, Sudan,<br>Jan. 2017       |
| Entrepreneurship Development & Incubation Management Systems   | UNIDO- UofK                              | Khartoum, Sudan,<br>Oct.2016        |
| Stress Management Training Course  | University of Khartoum                   | Khartoum, Sudan,<br>April, 2016     |
| Centralized review of second biennial report of developed country parties  | UNFCCC                                   | Bonn, Germany,<br>March 2016        |
| Decision Making Techniques in Petroleum Industry   | Energy Research Centre                   | UofK, Sudan,<br>Feb, 2016           |
| Africa Regional Workshop on the Building of Sustainable National Greenhouse Gas Inventory Management Systems               | UNFCCC                                   | Windhoek, Namibia,<br>Oct. 2015     |
| Technical Workshop on INDCs for Anglophone & Lusophone African Countries   | UNDP and International Partnership       | Entebbe, Uganda,<br>Sep. 2015       |
| NAMA framework workshop  | HCENR and Perspectives Climate Change    | Khartoum, Sudan,<br>Jan. 2015       |
| Expert review of GHG Inventory Submission for Annex I countries  | UNFCCC                                   | Bonn, Germany,<br>Nov. 2014         |
| Climate Change Diplomacy and Negotiation   | UNEP and HCENR                           | Khartoum, Sudan,<br>May 2014        |
| Hands-on training workshop for the Africa region on the use of the non-Annex I GHG inventory software                      | UNFCCC                                   | Libreville, Gabon,<br>March 2014    |
| HSE in Mining Activities – Case Studies  | Ministry of Minerals and ESTIDAMA        | Khartoum, Sudan,<br>Feb. 2014       |
| Low Carbon Development Strategy Workshop   | Ministry of Environment- HCENR and UNDP  | Khartoum, Sudan,<br>Jan. 2014       |
| Basics of Scientific Research Training Course  | University of Khartoum                   | Khartoum, Sudan,<br>Oct. 2013       |
| UNESCO-AGH Chair Workshop on Innovation and Technology Transfer to Emerging Countries                                      | UNESCO                                   | Krakow, Poland<br>January 2013      |
| 26th Scientific Conference on Trends in the Development of Heavy Duty Machines   | AGH University of Science and Technology | Zakopane, Poland,<br>Jan. 2013      |

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| Australia-Africa MRV expert's dialogue                                       | Australian Dept. of Climate Change                        | Canberra, <i>Australia</i><br>Dec. 2012  |
| UNESCO Interregional Engineering Conference in Technology and Education      | UNESCO and AGH University                                 | Krakow, <i>Poland</i><br>Dec. 2012       |
| Hands-on training workshop for Africa region on GHG Mitigation Assessment    | UNFCCC  | Accra, <i>Ghana</i> ,<br>Sep. 2012       |
| Sudan's Energy Situation Workshop  | National Congress   | Khartoum, <i>Sudan</i> ,<br>April 2012   |
| Second National Communication Project, Final Workshop                        | Higher Council for Environment & Natural Resources(HCENR) | Khartoum, <i>Sudan</i> ,<br>April 2012   |
| North Africa Technical Conference  | Society of Petroleum Engineers (SPE)                      | Cairo, <i>Egypt</i> ,<br>Jan. 2012       |
| Advance Microsoft Excel training course                                      | University of Khartoum                                    | Khartoum, <i>Sudan</i> ,<br>Oct. 2011    |
| Accreditation and Self-evaluation in Engineering Education                   | University of Khartoum                                    | Khartoum, <i>Sudan</i> ,<br>Jan. 2011    |
| Training workshop on using LEAP for Climate Change Mitigation Assessment     | NCSP, UNDP and SEI  | Cotonou, <i>Benin</i> ,<br>Sep. 2010     |
| Greenhouse Gases Mitigation Measures   | UNDP & HCENR  | Khartoum, <i>Sudan</i> ,<br>Mar. 2010    |
| SPE North Africa Technical Conference  | Society of Petroleum Engineers (SPE)                      | Cairo, <i>Egypt</i> ,<br>Feb. 2010       |
| Oilfield produced water shut off workshop                                    | Society of Petroleum Engineers (SPE)                      | Pointe Noire, <i>Congo</i><br>June, 2008 |
| Advanced Parallel Thinking Training  | STATOIL   | Stavanger, <i>Norway</i> ,<br>July 2006  |
| Compaction and Paving Technologies   | DYNAPAC Int. High Comp Centre                             | Karlskrona, <i>Sweden</i><br>Sep. 2004   |
| Automotive Sales Skills  | Cambridge International training                          | Khartoum, <i>Sudan</i><br>July 2004      |
| Caterpillar Diesel Engine, Transmission system and Machines Hydraulic System | DAL GROUP- Caterpillar                                    | Wadmadani, <i>Sudan</i><br>June 2004     |
| The Motivational Selling Workshop  | International Brain Power Institute                       | Khartoum, <i>Sudan</i> ,<br>Feb. 2003    |
| Oilfield Training  | Zhong Yuan Oilfield                                       | BoYang, <i>China</i> ,<br>Aug. 2001      |

## **Publications:**

- 1- **Quosay A. Ahmed**, Amr Nasradin, Yassir Fadul, "Projection of Sudan Energy Mix" International New Energy and Energy Conservation Technology Conference, 2022
- 2- **Quosay A.A.** and D. Knez, "Sensitivity Analysis on Fracturing Pressure Using Monte Carlo Simulation Technique" Reservoir Engineering - OIL GAS European Magazine, 0179-3187/16/ ©2016 EID EnergieInformationsdienst GmbH
- 3- **Quosay Awad Ahmed**, SPE, University of Khartoum, "Chemical Injection in Multilayered Reservoir that have Different Rock Properties and Pore Pressures" presented in the SPE North Africa Technical Conference and Exhibition held in Cairo, Egypt, 2012, SPE-149965.
- 4- **Quosay Awad**; Haridi, Mohamed G.; Yousif, Yousif Ibrahim; Babiker, Almuez B. "A Mathematical Model to Predict Hydraulic Fracture Geometry in Shale Gas Formation", Presented in the Annual Conference -Basic Sciences and Engineering – University of Khartoum Engineering Journal Vol7-No2,ISSN: 1858-6333.
- 5- **Quosay A. Ahmed** and ChabilalDhital, "Decision Making Strategies for Engineering Design, Energy Consumption and Emission Mitigation –Hybrid Vehicle Versus Ice Vehicles" presented in the 26th Scientific Conference on Trends in the Development of Heavy Duty Machines, January 27-31. 2013, Zakopane, Poland
- 6- **Quosay A. Ahmed**, DariuszKnez, Jan Ziaja "Hydraulic fracturing: New uncertainty based modeling approach for process design using Monte Carlo simulation technique" PLOS ONE 15(7): e0236726, 2020
- 7- **Quosay Awad**, Abdelhalim Ibrahim, Ramzi Salah and Ahmed Bakheet "Risk Analysis And Decision Making In Relative Permeability Modifier Water Shut-Off Treatment", SPE North Africa Technical Conference and Exhibition, Cairo, Egypt, 14–17 February 2010, SPE 126845.

- 8- Ali A. Rabah, Hassan B. Nimir, K. R. Dout and **Quosay A. Ahmed** "Modelling of Sudan's Energy Supply, Transformation, and Demand" Energy Research Center, University of Khartoum; Journal of Energy Volume (2016), Article ID 5082678, 14 pages
- 9- Mawahib Ahmed, Asia Adlan Mohamed and **Quosay Ahmed** "Proposed scenarios for reduction of household energy consumption as a sustainable way forward in the Gulf region" 2019 Gulf Research Meeting, University of Cambridge, July- 2019
- 10- Hassan B. Nimir and **Quosay A. Ahmed**, Dept. of Petroleum Engineering, UofK, "STUDY OF RESTARTABILITY OF GNPOC CRUDE OIL PIPELINE – RHEOLOGY ANALYSIS" Graduate Studies & Scientific Research Conference April, 2010 and ICIPE-KL Malaysia
- 11- **Quosay A. Ahmed** and Kjell Markman, IOR Chemco AS "Emulsified blocking gel Water Shut off Treatment: screening & design" SPE Produced Water Management Workshop, Pointe Noire, Congo June, 2008
- 12- Ali A. Rabah, H. B. Nimir, Kamal R. Dout and **Quosay A. Ahmed** "Forecasting and Mitigation Measures of Gasoline Demand in Sudan" Energy Research Center, University of Khartoum; ICATOR Journal of Engineering Vol. 9, No.3 (2016) 171 -183
- 13- Hassan B. Nimir and **Quosay A. Ahmed**, Faculty of Engineering – UofK "Scientific Research in Oil & Gas Industry: Produced Water Management", Presented in Summit of Innovation and Scientific Research-Friendship hall, Khartoum, 2008.
- 14- Hassan B. Nimir and **Quosay A. Ahmed**, "Sand Consolidation by crosslinked Guar-gum "Sudan Oil and Gas magazine, issue no.3, Khartoum, Sudan Dec. 2011
- 15- Mohammed Ayoub, Goh Shien, DiabDiab and **Quosay Ahmed** "Modeling of Drilling Rate of Penetration using Adaptive Neuro-Fuzzy Inference System" International Journal of Applied Engineering Research ISSN 0973-4562 Volume 12, Number 22 (2017) pp. 12880-12891.
- 16- **Quosay A. Ahmed**, et al "Application of Variance Based Sensitivity Analysis in Modeling Oil Well Productivity and Injectivity" Journal of Petroleum Exploration and Production Technology, 2019.
- 17- **Quosay A. Ahmed**, et al. "Evaluation of Seepage from Evaporation Ponds of Produced Water in Some Sudanese Oilfields" Paper no. 131 - CCE2018 conference, Khartoum, Sudan
- 18- Rana M., Shimma A. Mustafa and **Quosay A. Ahmed** "Fuel Consumption and Greenhouse Gas Emissions from Sudan's Road Transport" has been accepted for the Future Energy Africa 2018 – Centres of Technical Excellence Seminar (COTES)-South Africa.
- 19- Motaz Saeed, **Quosay A. Ahmed** and Prashant Jadhawar "Mechanistic Modelling of Sand Consolidation Treatment in a Heavy Oil Sudanese Field Using an Innovative Guar Gum Gel Recipe" DEVEX 2019, SPE Aberdeen - UK
- 20- M. A. Ayoub, Mysara Eissa Mohyaldinn, Alexy ManaloAnas. M. Hassan, **Quosay A. Ahmed** "A New Model for Predicting Minimum Miscibility Pressure (MMP) in Reservoir-Oil/Injection Gas Mixtures Using Adaptive Neuro Fuzzy Inference System" Advances in Material Sciences and Engineering pp 527-54, 2019 Springer, ISBN 978-981-13-8297-0
- 21- Mysara E. Mohyaldinn, Wai Lin, Ola Gawi, M. Che Ismail, **Quosay A. Ahmed**, Mohammed A. Ayoub, Anas Hasan "Experimental Investigation of a New Derived Oleochemical Corrosion Inhibitor", Key Engineering Materials, Vol. 796, pp. 112-120, 2019
- 22- Mysara E. Mohydin, Azmin S., **Quosay A. Ahmed**, Dinesh K. "Numerical Investigation of Sand Deposition in Storage Tank During Flow Sand- Entrained Slurry" 20IPTC-(19968)-MS, 2020
- 23- Mohammed A. Ayoub, Siti Nornajwa Zainal, Mysara E. Elhaj, Ku Esyra Hani Ku Ishak and **Quosay Ahmed** "Revisiting the Coefficient of Isothermal Oil Compressibility Below Bubble Point Pressure and Formulation of a New Model using Adaptive Neuro-Fuzzy Inference System Technique" International Petroleum Technology Conference, KSA 2020.
- 24- Ali A. Rabaha, Dina M. Belal, **Quosay A. Ahmed**, Mohamed Osman "Transportation Demand Management (Case study: Khartoum, Sudan)" University of Khartoum Engineering Journal – under reviewing, 2020.
- 25- Khaled Elraies, Ahmed Fatah-Alrahman, Jalal Foroozesh, Mohammed Ayoub, Gamal Gaafar, Abdullah Almansour, **Quosay Ahmed** "Investigation of Silica Dissolution during ASP Flooding: The Implications on Formation Porosity and Permeability (a case study with Bereasandstone)" under publication

### **Technical reports:**

- 26- Feed-in Tariff for Renewable Energy in Sudan – Nationally Appropriate Mitigation Action, Wind Energy Project MWREI and UNDP- GEF project, Feb. 2019
- 27- Prediction of diesel fraction in Heglig CPF crude oil, 2BOPCO Co. Ltd. Khartoum- Sudan, July 2018
- 28- Contamination assessment of groundwater from evaporation ponds of the oilfield produced water- five oilfields in block 6 operated by PetroEnergy E&P Co. Ltd. Khartoum, Aug. 2017
- 29- "Report of the technical review of the second biennial report of Estonia" UNFCCC, FCCC/TRR.2/EST, GE.16-09128(E); June (2016)
- 30- Energy Auditing and Benchmarking Study for El-obayid Refinery, Energy Research Center-UofK and Ministry of Petroleum & Gas, (Dec. 2015)

- 31- Sudan's Intended National Contributions towards GHG mitigation and climate change adaptation, HCENR- UNFCCC, (Nov. 2015)
- 32- Energy Auditing and Benchmarking Study for Khartoum Refinery Company (KRC), Ministry of Petroleum and Gas, Khartoum, (2014)
- 33- Project Identification Format (PIF) to Sudan's third national communication, Higher Council for Environment and Natural Resources – Ministry of Environment and Physical Planning, Khartoum, (Oct 2014)
- 34- Promoting Low Carbon Development Project -Nationally Appropriate Mitigation Actions (NAMA-Sudan) (March, 2015)
- 35- Sudan's Second National Communication under the United Nations Framework Convention on Climate Change. Volume I and II. HCENR (Jan. 2013)
- 36- Laboratory evaluation of x-linked polymer for sand consolidation, University of Khartoum, - Ministry of Higher Education Research Projects, Sudan (2011)
- 37- Quosay A. Ahmed "Chemical Water Shutoff Process Modeling" Master Thesis- University of Stavanger, Norway (June, 2007)
- 38- Quosay A. Ahmed, MaritSandmoe and Anders Lauvdal "Zero Emission Steam Production for Extra Heavy Oil Recovery and Power Generation", STATOIL, presented in Statoil summer projects Symposium - Stavanger, Norway (Aug. 2006)
- 39- Quosay A. Ahmed "Computational software for Cyclic Steam Stimulation Process" Graduation Design – Department of Petroleum Engineering, China University of Petroleum, (June, 2002)

## Membership and Other Experiences

- UNFCCC certified reviewer for energy sector in GHG inventory reports by Annex-I Countries
- Member of the IPCC – Short Lived Climate Forcers (SLCF) board.
- Member of the board of Creative Solutions Co. Ltd.
- Member of Energy Research Center – University of Khartoum
- Member of Society of Petroleum Engineers (SPE) since 2005 with SPE # 3226068,
- Member of board of directors of SPE Sudan Section
- Technical Advisor of the SPE-Student Chapter at the University of Khartoum
- Member of Editorial Board (Energy Sector) of the Emission Factor Database (EFDB)- IPCC
- Member of technical working group of GHG inventory, mitigation, adaptation, capacity building and climate finance in the Ministry of Environment, Natural Resources and Physical Development- Sudan
- Member of High Level Consultative Committee for Implementation of Paris Agreement-Ministry of Environment, Natural Resources and Physical Development- Sudan.
- Member of technical team to evaluate study program (Bachelor of Petroleum Engineering) for the Sudanese Engineering Council
- Member of projects and researches evaluation committee (Energy Sector) for the National Innovation Prize
- Business development manager of the Techno-pole unit (Business Incubator) at the University of Khartoum
- Instructor of training sessions and workshops; includes: Production Enhancement, Thermal oil recovery, Artificial lift methods, Petroleum Business management, Oilfield evaluation, Energy market, LEAP software, Natural Gas Production, Fugitives emissions from Oil and Gas facilities, IPCC Inventory Software, Climate Change Finance and many others
- Participation in managing multi-disciplinary projects in South Sudan
  - Mechanized farming schemes in South Sudan- 2008-2011
  - Construction of river port in South Sudan- 2009-2011
  - Creation of investment map for South Sudan- 2010
- Businesses Development Role in different areas:
  - Mining and minerals exploration services, Construction and contracting, Capacity building and training center, Facilities management services, Engineering consultancy business
- Software
  - Petroleum Expert package, HYSYS, Crystalball, Pipesim, Microsoft projects, Microsoft office package, Mathcad, Matlab, LEAP, IPCC 2006 Inventory Software.
  - Familiar with: Visual Basic, Eclipse 100, RMS, Palisade Decision Tools ( @risk); Pipe flow calculations, Goldmind and many others
  - I developed a lot of computer programs, templates, and models for different purposes

## Awards

- CNPC scholarship, 1998-2002
- The Best Graduation Project prize, China University of Petroleum, 2002
- UiS Industrial Scholarship, 2005-2007
- UNESCO Fellowship, 2012-2013
- DAAD Scholarship 2013-2015, and others