



SEGH 2024

39TH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL GEOCHEMISTRY AND HEALTH

Co-Organisers



Supported by



Mon. 1st - Thur. 4th July, 2024

ABUJA, NIGERIA

'ABUJA 2024' Conference Programme

Opening Ceremony

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| 7:00-8:30 | Arrival of participants and Continuation of Registration |
| 8:30-8:50 | Participants are Seated and the Protocol is Established |
| 8:50-9:00 | Introduction of the Plenary 1 Speaker |
| 9:00-9:30 | Plenary 1 Presentation |
| 9:30-9:45 | Q & A on Plenary 1 |
| 9:45-10:00 | Health Break |
| 10:00-10:15 | Introduction of VIPs and Dignitaries |
| 10:15-10:20 | Nigerian National Anthem |
| 10:20-10:30 | Welcome Address by the Conference Chair and the NMGS President |
| 10:30-10:30 | Address by the IMGA-Nigeria Chair |
| 10:40-10:50 | Address by the SEGH President |
| 10:50-11:15 | Goodwill Addresses |
| 11:15-11:45 | Keynote Address on the <i>linkage between human wellness and the quality of the environment</i> |
| 11:45-11:50 | National Anthem |
| 11:50-12:00 | Group photographs |

| 39th International Conference for Environmental Geochemistry and Health 'ABUJA 2024' Conference Programme | | | |
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| Day & Date | Time | Events | Venue/Authors |
| Monday 1 July 2024 | 08:00-16:00 | Pre-Conference Workshop | Rockview Hotel |
| | 08:00-16:00 | Arrival of Participants & Collection of Conference Materials | Rockview Hotel |
| | 18:00 - 20:00 | Ice Breaker/Welcome Cocktail | Rockview Hotel |
| Tuesday 2 July 2024 | 08:00-09:00 | Conference Registration Continues | Rockview Hotel |
| | 09:00-10:00 | Conference Plenary Presentation 1: <i>'Addressing impact of Unregulated Mining on the Quality of Livelihood of Rural Communities'</i> Dr Joy Agene Task Team Leader, ACReSAL, World Bank Project, Nigeria | |
| | 10:00-12:00 | Official Conference Opening Ceremony | |
| | 12:00-13:00 | Lunch Break | |
| | 13:00-15:30 | Technical Session 1 | |
| | 13:00-13:15 | DELINEATION OF HEALTH RISK POTENTIAL ZONES USING HYDROCHEMICAL ANALYSIS AND GROUNDWATER MAPPING OF SOME LOCATIONS WITHIN BARKIN LADI, NORTH-CENTRAL NIGERIA | J. A. Ramadan & A.I. Haruna |
| | 13:15-13:30 | ARTIFICIAL INTELLIGENCE APPROACH TO CRUDE-OIL EXPLOITATION AND ENVIRONMENTAL ISSUES IN COASTAL AREAS OF NIGERIA | O. M. Orogbemi; O. A. Ehinola; A. O. Adetunmbi & M. O. Orogbemi |
| | 13:30-13:45 | TRACE ELEMENT CONCENTRATIONS IN SURFACE WATER, AND ITS POTENTIAL HEALTH IMPLICATIONS: A CASE STUDY OF ISHIAGU, SOUTHEASTERN NIGERIA | J. N. Okonji-Ojeh & V.U. Ukaegbu |
| 13:45-14:00 | DIETARY EXPOSURE TO AFLATOXIN IN SOME CEREALS AND ANIMAL FEEDS IN BOMET COUNTY, KENYA | E.K. Kemoi, F.O. Onyangore, & Bii. C.C. | |

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| 14:00-14:15 | CHARACTERISATION OF FOUR NIGERIAN CLAYS USING X-RAY AND MICROSCOPIC TECHNIQUES AND THEIR APPLICATION IN REMOVAL OF CHROMIUM AND LEAD FROM WATER | A. I. Umarein & C. M. Davidson |
| 14:15-14:30 | COMPOSITION AND HEALTH RISK ASSESSMENT OF TRONA CONSUMED IN URBAN AREAS IN NIGERIA: COMPARATIVE STUDY OF OSOGBO AND IBADAN METROPOLISES | J. Olajide-Kayode & O. Olisa |
| 14:30-14:45 | ADSORPTION CAPACITY OF POLYETHYLENE, POLYETHYLENE TEREPHTHALATE, POLYPROPYLENE AND POLYVINYL CHLORIDE FOR ARSENIC, CADMIUM, CHROMIUM AND LEAD IN FRESHWATER SYSTEM | B. W. Osungbemiro; C. M Davidson & J. J. Liggat |
| 14:45-15:00 | WORKPLACE EXPOSURE TO POTENTIALLY TOXIC ELEMENTS AMONG MANUAL STONE-CRUSHING WORKERS IN NORTH CENTRAL NIGERIA | Simon G. Mafulul; Elizabeth O. Okoh; Kiri H. Jaryum; Jonathan D. Dabak; Samuel Y. Gazuwa; Jane-Rose I. Oche; Samson I. Wuti; Oladele F. Anjorin; Raymond I. Daspan; Isaac Shola Laka & Mariam D. Solomon |
| 15:00-15:15 | GEOCHEMICAL CHARACTERISTICS OF SOILS IN PARTS OF ILORIN SHEET 223 NORTH CENTRAL NIGERIA | Omorinoye Omolayo Ajoke; Eso Kehinde Samuel; Bamigboye Olufemi Sijuade; & Alebiosu Mercy Titilayo |
| 15:15-15:30 | ASSESSMENT OF SOME HEAVY METALS DISTRIBUTION AND CONTAMINATION IN FAYA AND ENVIRONS, MIDDLE BENUE TROUGH, CENTRAL NIGERIA | Piwuna, Raulatu. M and & Daku, Sunday. S |
| 15:30-16:00 | Health Break | |
| 16:00-18:00 | Technical Session 2 | |
| 16:00-16:15 | HEAVY METALS CONCENTRATION IN SOME EDIBLE PLANTS GROWING NEAR MANUAL STONE CRUSHING SITES IN NORTH CENTRAL NIGERIA | Simon G. Mafulul; Elizabeth O. Okoh; Kiri H. Jaryum; Samuel Y. Gazuwa; Jane-Rose I. Oche; Samson I. Wuti; Oladele F. Anjorin; Raymond I. Daspan; Isaac Shola Laka; Mariam D. Solomon & Jonathan D. Dabak |

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| 16:15-16:30 | STRUCTURAL FE(II)-INDUCED GENERATION OF REACTIVE OXYGEN SPECIES ON MAGNETITE SURFACE FOR AQUEOUS AS(III) OXIDATION DURING OXYGEN ACTIVATION | Fangyuan Meng; Fei Wu & Chengshuai Liu |
| 16:30-16:45 | CONTAMINATIONS IN THE MEGA-CITY OF LAGOS AND ITS HEALTH IMPLICATIONS, SOUTHWESTERN NIGERIA | Olubukola O. Afolabi & Akinade S. Olatunji |
| 16:45-17:00 | LEVEL OF HEAVY METAL IN SOIL, DOWN STREAM WATER, AND Solanum tuberosum FROM A TIN MINE AREA, MANGUNA DISTRICT, BOKKOS LGA, PLATEAU STATE, NIGERIA | Anjack.L. Augustine; Adams. U. Itodo; & Raymond .A. Wuana |
| 17:00-17:15 | ELEVATED CONCENTRATION OF NITRATES IN SHALLOW GROUNDWATER OF THE COASTAL AQUIFERS AND ITS IMPLICATION ON PUBLIC HEALTH; A CASE STUDY OF EASTERN DAHOMEY BASIN, SOUTHWESTERN NIGERIA | J. A. Aladejana; I. Hassan; U. R. Eze & M. N. Tijani |
| 17:15-17:30 | HYDROGEOCHEMICAL EVALUATION OF SHALLOW AND DEEP-GROUNDWATER QUALITY IN APATA-NNPC: A PETROCHEMICAL PRODUCTS STORAGE FACILITY HOSTING AREA IN IBADAN, SOUTHWEST NIGERIA | F. F. Ajayi & O. Ishola |
| 17:30-17:45 | BEYOND THE SURFACE: EXPLORING HIDDEN HEALTH RISKS IN LAGOS SLUMS | P.O. Falae; O.M. Oladepo & O.O Afolabi |
| FLASH PRESENTATIONS | | |
| 17:45-17:50 | INFLUENCE OF SEED PELLETING ON SEED QUALITY OF SPIDER PLANT (Cleome gynandra L.) DURING STORAGE | M. Muga; J.O. Ochuodho & V. Anjichi |
| 17:50-18:55 | ESSENTIAL ELEMENTS HETEROGENEITY IN SOIL AND UPTAKE BY CROPS-ITS IMPLICATION FOR INCREASED NUTRIENT AVAILABILITY IN HUMAN AND ANIMAL FOODS | Ogunlade-Anibasa, G.O., Gideon, G. Otteh, E.I. and Musa, S. |
| 17:55-18:00 | WATER QUALITY ASSESSMENT IN KIFISSOS RIVER, GREECE | E. Anastasiadou, O. Cavoura |

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| | 18:00-18:05 | HEAVY METAL CONCENTRATION AND DISTRIBUTION IN SOILS AROUND ARTISANAL WORKSHOPS IN AGO-IWOYE, SOUTHWESTERN NIGERIA | O. G. Olisa, O. T. Olatunji, O.M. Keyede and O.A. Ajayi |
| | 18:05-18:10 | A GLOBAL REVIEW OF LEVEL OF LAMBDA CYHALOTHRIN IN AQUATIC SYSTEMS AND ALONG THE FOOD CHAIN | F. O. Onyangore and E. K Kemoi |
| Wednesday 3 July 2024 | 09:00-10:00 | Conference Plenary Presentation 2: 'Strategic plan for Coastal Environmental Sustainability in Nigeria' Prof. O. A. Ehinola <i>Aret Adams Professorial Chair in Geological Studies, University of Ibadan</i> | |
| | 10:00-12:30 | Technical Session 3 | |
| | 10:00-10:15 | IN SEARCH OF A CONSENSUS METHOD FOR THE ISOLATION OF MICROPLASTICS FROM FRESHWATER SEDIMENTS | D. E. Enenche & C. M. Davidson |
| | 10:15-10:30 | HEALTH RISK ASSESSMENT OF HEAVY METALS IN WATER IN THE VICINITY OF MANUAL STONE CRUSHING SITES IN NORTH-CENTRAL NIGERIA | Simon G. Mafulul; Elizabeth O. Okoh; Jonathan D. Dabak; Samuel Y. Gazuwa; Jane-Rose I. Oche; Samson I. Wuti; Oladele F. Anjorin; Raymond I. Daspan; Isaac Shola Laka; Mariam D. Solomon & Kiri H. Jaryum |
| | 10:30-10:45 | THE INTERPLAY OF URBANIZATION AND ENVIRONMENTAL QUALITY: TRENDS, CHALLENGES, AND OPPORTUNITIES | P.O. Falae |
| | 10:45-11:00 | HEALTH IMPACT OF HEAVY METAL CONTAMINATION IN SOILS AND GROUNDWATER AROUND CEMENT FACTORY IN SAGAMU | Ajibade O.M; Faleye B.R; Akinsanya F. M; Babatunde O.E & Oketogun B. G |
| | 11:00-11:45 | GEOCHEMICAL ENRICHMENT AND HEALTH RISKS OF THALLIUM IN WEATHERED GRANITE SOILS OF SOUTH CHINA | Tangfu Xiao; Shuxin Pan; Ying He & Enzong Xiao |
| | 11:45-12:00 | THALLIUM IN GEOLOGICAL MEDIA AROUND MINING SITES IN NIGERIA: ARE THERE POTENTIAL ECOLOGICAL AND HEALTH RISKS INVOLVED? | O.J. Popoola, T.A. Laniyan ² , T. Xiao ³ |

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| | 12:00-12:15 | GEO-ENVIRONMENTAL INFLUENCE ON GROUNDWATER QUALITY IN NDELE, SOUTHERN NIGERIA. | J. N. Okonji-Ojeh & M. M. Kekwaru |
| | 12:15-12:30 | GEOCHEMICAL ANOMALIES AND SECONDARY MINERALISATION AS POTENTIAL INSTIGATORS OF NATURAL HEALTH HAZARDS: PERSPECTIVE FOR A REGIONAL APPRAISAL IN NIGERIA | O. A. Okunlola |
| | 12:30-13:30 | Lunch Break | |
| | 13:30-16:00 | Technical Session 4 | |
| | 13:30-13:45 | POTENTIALLY TOXIC METAL POLLUTION PREVENTION AND ENVIRONMENTAL SUSTAINABILITY OF WATER, SOILS AND STREAM SEDIMENTS IN SOUTHWESTERN NIGERIA | T. A. Laniyan, O. M Morakinyo |
| | 13:45-14:00 | NON-CARCINOGENIC HEALTH RISK ASSESSMENT OF FLUORIDE AND NITRATE CONTAMINATION OF GROUNDWATER OF KALTUNGO AREA, GOMBE NORTHEAST NIGERIA. | E.Y. Mbiimbe; I.B. Gonil; J.M. El-Nafaty; M. Bukar & Sulaiman I. A. |
| | 14:00-14:15 | MICROBIAL ASSEMBLAGE AND ECOLOGICAL FUNCTION OF PLANT ASSOCIATED MICROBIOMES ACROSS PLANT NICHES UNDER CADMIUM STRESS | Enzong Xiao; Li Shao; & Tangfu Xiao |
| | 14:15-14:30 | SEED-MEDIATED GROWTH OF SCHWERTMANNITE FOR APPLICATION IN ACID MINE DRAINAGE TREATMENT | Feng Jiang, Zhi Dang, Lijuan Zhang, Bichun Huang & Xiaoyun Yi |
| | 14:30-14:45 | THE ENVIRONMENTAL GEOCHEMISTRY OF PIT LAKES IN ENYIGBA AND ENVIRONS, ABAKALIKI MINE DISTRICT, SOUTHEASTERN NIGERIA | Chinenye Florence Onyeabor, Daniel Chukwuemeka Ozoko, Agwu Ama Irem and Stella Tochukwu Animba |
| | 14:45-15:00 | ASSESSMENT OF HEAVY METAL CONTAMINATION IN GROUNDWATER FROM COMMUNITIES WITH COMPROMISED PETROLEUM PIPELINE IN LAGOS STATE, NIGERIA | M. Adeyemi; A. Gbadebo; A. Taiwo; O. Sojnu & A. Adeola |

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| 15:00-15:15 | THE PURIFICATION OF ACID MINE DRAINAGE THROUGH THE FORMATION OF SCHWERTMANNITE WITH FE(0) REDUCTION AND ALKALI-REGULATED BIOMINERALIZATION PRIOR TO LIME NEUTRALIZATION | Xiaoyun Yi, Feng Jiang, Zhi Dang, Lijuan Zhang, Bichun Huang |
| 15:15-15:30 | HEAVY METAL CONCENTRATION AND UPTAKE OF JATROPHA CURCAS. L. GROWN IN ABUJA, FEDERAL CAPITAL TERRITORY, NIGERIA | Saminaka, I.B and Ogunlade-Anibasa, G.O. |
| 15:30-15:45 | ASSESSMENT OF CONTAMINATION, HEALTH RISK AND BIO-ACCESSIBILITY OF POTENTIALLY TOXIC ELEMENTS (PTES) IN THE SOIL OF ARTISANAL GOLD MINE SITES IN NORTH CENTRAL NIGERIA | Abiodun M. Odukoya; Michael J. Watts & Temitope O. Adedayo |
| 15:45-16:00 | OPPORTUNITIES AND PLATFORMS FOR MEDICAL GEOLOGY TRAINING IN AFRICA: THE JOSE CENTENO INTERNATIONAL CENTER FOR MEDICAL GEOLOGY RESEARCH, NASARAWA STATE UNIVERSITY, KEFFI, NIGERIA | K'tso Nghargbu, Robert B Finkelman, Jose A. Centeno, Suleiman B Mohammed |
| 16:00-18:00 | Technical Session 5 | |
| 16:30-16:15 | ASSESSMENT OF COASTAL GROUNDWATER QUALITY FOR SUITABILITY OF DRINKING PURPOSES IN OKERENKOKO, NIGER DELTA REGION OF NIGERIA | O.M Omorogieva, R.D Beckie, J.A Tonjoh, O.A Ehinlaye and B.C Adebayo |
| 16:15-16:30 | ASSESSMENT OF NATURAL RADIONUCLIDES OF SELECTED BASEMENT ROCKS FROM SOUTHWESTERN NIGERIA AND POTENTIAL HEALTH EFFECTS | S. O. Olayemi and Olatunji A.S. |
| 16:30-16:45 | NOVEL FRAMEWORK TO ASSESS AND MANAGE OFFSHORE PRODUCED WATER FOR EFFICIENCY, RELIABILITY, SAFETY AND SUSTAINABILITY AT THE NIGERIAN OFFSHORE ENVIRONMENT | Bamanga Awwal and Basse Bassey |

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| | 16:45-17:00 | HEAVY METAL CONTENT IN URBAN SOILS AND DUSTS OF BATTERY MAINTENANCE WORKSHOPS IN OSOGBO, SOUTHWESTERN NIGERIA | Tesleem O. Kolawole, Jerry O. Olajide-Kayode and Luqmon A. Azeez |
| | 17:00-17:15 | GEO-ENVIRONMENTAL IMPACT OF SELECTED LANDFILLS IN LAGOS, SOUTHWESTERN NIGERIA | A.S. Olatunji, A.; S.M. Shasore.; Kuseju, M. O. Oloruntola, T. Kolawole, O. O. Baiyewu, J. Olajide Kayode, O. Olisa and T. M. Amodu |
| | 17:15-17:30 | ASSESSMENT OF POLLUTION LEVEL RESULTING FROM SMALL SCALE ATISANAL MINING OPERATIONS IN NEW BUSSA BORGU LOCAL GOVERNMENT AREA NIGER STATE | J.A. OLATUNJI, O.V. OMONONA, D. OLASEHINDE |
| | 17:30-17:45 | GEOCHEMISTRY OF SOILS BENEATH THREE FOREST TREES IN AN ARBORETUM OF FORESTRY RESEARCH INSTITUTE OF NIGERIA (FRIN), IBADAN, SOUTHWESTERN NIGERIA | Ruth O Ojedokun and A.S. Olatunji |
| | 17:45-18:00 | HEAVY METAL CONCENTRATIONS IN <i>PERIOPHTHALMUS BARBAROUS</i> OF ESCRAVOS ESTUARY, NIGER DELTA, DELTA STATE, NIGERIA | J.S. Ewutanure, O.M. Omorogieva and O.P. Endoro |
| | 20:00-23:00 | Conference Dinner and Awards Evening | |
| Thursday 4 July 2024 | 09:00-14:00 | Post Conference Field Excursion | |