

## SECOND SYMPOSIUM OF THE WEST AFRICA INTERPORE CHAPTER

*Special Topic: Clay applications, Mining waste management in Africa*

<https://events.interpore.org/event/57/>

### REPORT

The second annual meeting and symposium of the West Africa Interpore Chapter (WAIC) was held in virtual format on July 27 & 28, 2024 with the participation of over 20 academic researchers for this second event.

The meeting was opened by **Dr Adu SAKYI** from *Kwame Nkrumah University of Science and Technology (Ghana)*, Chair of the steering committee of WAIC.

In his opening remarks on behalf of the symposium's organizing and scientific committees, **Dr. SAKYI** recalled the background to creating this chapter of InterPore, almost two years ago on October 27, 2022, the very first in Africa with a regional character. He expressed his gratitude to all Organising and Scientific Committee members for their efforts in making this year's symposium possible. He concluded with the emphasis that the symposium offers a unique opportunity to bring together Professors, Researchers and Scholars in West Africa and serves as a platform to deliver innovative research results and the latest trends and developments in the field of sciences and engineering. He hoped that all the attendees would enjoy and benefit from the discussions.

**Prof. Bi Tié Albert GOULA** from *Université Nangui Abrogoua, (Côte d'Ivoire)* and Chairman of the Scientific committee recalled the main objective of the event, which was to foster interdisciplinary discussions and collaborations among researchers, engineers, and industry stakeholders to explore the latest advancements and potential applications of porous media science and engineering in the context of clay applications, Mining waste management in Africa. A call for contributions was published, and nine abstracts were received: 1 from Sénégal and 8 from Burkina Faso. Before presenting the scientific program, he thanked the Scientific Committee and the Organizing Committee for their efforts in making the symposium a success. A special mention went to the Interpore EC in particular Margaret, who spared no effort to support us in this process.

The opening session was followed by a keynote lecture by **Prof. Anozie EBIGBO** from Helmut-Schmidt-Universität Hamburg title: *Relative permeability hysteresis in underground hydrogen storage – a look at the finer details.*

During the session, two other keynotes were given:

- *Clays applications* by **Dr Brahim SORGHO**, Université Joseph KI-ZERBO (Burkina Faso);
- *Thermodynamics of irreversible processes (TIP) approach flow modeling at the porous medium-atmosphere interface* by **Dr Marcel Bawindsom KEBRE**, Université Joseph KI-ZERBO, (Burkina Faso).

For the contributions, 15 minutes were allotted to each, followed by a discussion with the audience.

The chapter is grateful to **Prof. François ZOUGMORE**, Dean of Burkina Institute of Technology (BIT), a pioneer in porous media research, especially soil physics in Burkina Faso, for his participation and words of encouragement to our young chapter.

A competition was organized to reward the best doctoral student papers.

The list of scientific contributions are as follows:

1. *Contribution to numerical study of combined heat and moisture transfers in porous building multilayer walls made of local material in dry tropical climate* by **Dr Etienne MALBILA**, (École Supérieure d'Ingénierie, Université de Fada N'Gourma, Burkina Faso), Dr Garba NAYETE (Centre universitaire Polytechnique de Kaya, Université Joseph KI-ZERBO, Burkina Faso), Prof. David Yemboini Kader TOGUYENI (Ecole Polytechnique de Ouagadougou (EPO), Burkina Faso)
2. *Analysis of the stability of tailings dams in a sahelian context: the case of the Sanbrado mine in Burkina Faso* by **Mrs Fatimata Bintou SAKANDE** (PhD student, Université Joseph KI-ZERBO, Burkina Faso), Prof. Seta NABA (Université Joseph KI-ZERBO, Burkina Faso) & Prof. Tikou BELEM (Université du Québec en Abitibi-Témiscamingue (UQAT))
3. *The activity of metal ions impregnated on natural phosphates from Burkina Faso for the synthesis of chalcone in a green solvent* by **Mr Jean – Baptiste ZOUNGRANA** (PhD student, Université Joseph KI-ZERBO, Burkina Faso) & Dr SORGHO Brahim (Université Joseph KI-ZERBO, Burkina Faso)
4. *Soil water dynamics under drip irrigation: potential water losses through deep drainage* by **Dr Siguibnoma Kévin Landry OUÉDRAOGO** (Université Joseph KI-ZERBO, Burkina Faso), Prof. François ZOUGMORE () & Dr Marcel Bawindsom KEBRE (Université Joseph KI-ZERBO, Burkina Faso).
5. *Development and characterisation of clay nanoparticles for use in removing Cr(VI) from water* by **Mr Hadi Hamadoum GORO** (PhD student, Université Joseph KI-ZERBO, Burkina Faso) & Dr SORGHO Brahim (Université Joseph KI-ZERBO, Burkina Faso)
6. *Estimation of evaporation from the surface energy balance for soil in a tropical environment* by **Mr François DABILGOU** (PhD student, Université Joseph KI-ZERBO, Burkina Faso), Dr Marcel Bawindsom KEBRE (Université Joseph KI-ZERBO, Burkina Faso), Soumaïla GANDEMA (Université Joseph KI-ZERBO, Burkina Faso), Guillaume Zamantakoné KI (Université Joseph KI-ZERBO, Burkina Faso)
7. *Geotechnical characterization of excavated soils for reuse as road embankments and subgrades* by **Mr Soumaïla GANDEMA** (PhD student, Université Joseph KI-ZERBO, Burkina Faso), Dr Marcel Bawindsom KEBRE (Université Joseph KI-ZERBO, Burkina Faso), Rimyalegdo KIEBRE (Université de Ouahigouya, Burkina Faso), Guillaume Zamantakoné KI ((Université Joseph KI-ZERBO, Burkina Faso), Fayçal ILBOUDO ((Université Nazi BONI, Burkina Faso), François DABILGOU (Université Joseph KI-ZERBO, Burkina Faso)
8. *Exploratory analysis of long-term meteorological data from Burkina Faso: anomaly detection and management* by **Guillaume Zamantakoné KI** (PhD student, Université Joseph KI-ZERBO, Burkina Faso), Soumaïla GANDEMA (Université Joseph KI-ZERBO, Burkina Faso) & Dr Marcel Bawindsom KEBRE (Université Joseph KI-ZERBO, Burkina Faso).
9. *Mathematical analysis and numerical modeling of mass transfer processes and density flows using the mixed finite element method* by **Dr Mamadou Salif DIALLO** (Université Alioune Diop, Bambey, Sénégal), Prof. El Hadji Bamba DIAW (Ecole Polytechnique de Thiès, Sénégal)