



## 8<sup>th</sup> EAI International Conference on Innovations and Interdisciplinary Solutions for Underserved Areas (EAI INTERSOL 2025)

Ouagadougou, les 03-04 juillet 2025 / Université Joseph KI-ZERBO, Salle des Actes



ACADÉMIE  
DE RECHERCHE ET  
D'ENSEIGNEMENT  
SUPÉRIEUR



| Day 1 : July 03, 2025 |                                                                                                                                                                                                                                                      |                                                                         |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 08h00 – 09h00         | Registration & Badge Pickup and installation                                                                                                                                                                                                         | Organizing Committee                                                    |
| 09h00 – 10h00         | <p>Opening Ceremony</p> <p>Director of LAMI speech</p> <p>EAI Conference Manager speech</p> <p>CAMES speech</p> <p>General Chair speech</p> <p>President of UJKZ speech</p>                                                                          | Organizing Committee                                                    |
| 10h00 – 10h30         | Coffee Break                                                                                                                                                                                                                                         | Organizing Committee                                                    |
| 10h30 – 12h30         | <p><u>Keynote 1</u> :</p> <p>Knowledge Engineering for Urban Planning</p> <p><u>Pr Robert LAURINI</u></p> <p><u>PhD Session</u> :</p> <p>How to ethically write AI-assisted scientific papers and dissertations?</p> <p><u>Pr Robert LAURINI</u></p> | <p><u>Chairs</u> :</p> <p>Pr Alain MILLE</p> <p>Pr Tiguiane YELEMOU</p> |

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| 12h30 – 13h30 | <p style="text-align: center;"><b><u>Oral Session 1 : AI &amp; Applications</u></b></p> <p style="text-align: center;"><b>Latency reduction strategies in fog computing with LSTM and secondary controller</b><br/>Koundoul, Birane (Université Alioune Diop de Bambey)</p> <p style="text-align: center;"><b>Emergency Severity Index protocol with Machine Learning</b><br/>TOUGMA, Manegaouindé Roland (Université Joseph KI ZERBO); Zerbo, Boureima (Université Thomas SANKARA/UFR-ST); GUEL, Désiré (Université Joseph KI ZERBO); TRAORE, Salah Idriss Seif (Centre Hospitalier Universitaire de Bogodogo); NAPON, Salifou (Centre Hospitalier Universitaire de Bogodogo)</p>                                                                                                                                                                                                                                                                                                                                                         | <p style="text-align: center;"><b><u>Chairs :</u></b></p> <p style="text-align: center;">Pr Alain MILLE<br/>Pr Tiguiane YELEMOU</p>    |
| 13h30 – 14h30 | Lunch Break                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Organizing Committee</b>                                                                                                            |
| 14h30 – 16h30 | <p style="text-align: center;"><b><u>Oral Session 2 : AI &amp; Applications</u></b></p> <p style="text-align: center;"><b>Multi-label Classification of Plant Diseases Using the Binary Relevance Approach: an Application for Tomato</b><br/>KOURSANGAMA, Hamandé (Joseph KI-ZERBO University); KEITA, Zakaria Cheick Oumar (Joseph KI-ZERBO University); TRAORE, Yaya (Joseph KI-ZERBO University)</p> <p style="text-align: center;"><b>Security Concerns related to the use of Artificial Intelligence Powered Meeting Assistants</b><br/>Mutemwa, Muyowa (CSIR); Maduma, Precious Mary (CSIR); Nefale, Vhuthu (CSIR)</p> <p style="text-align: center;"><b>Ontology population and maintenance based on web scraping: case of ontoSYSPARCOTCI</b><br/>TEHIA, Kouaho N'Guessan Narcisse (NAZI BONI UNIVERSITY); KOUAKOU, Malanno (Centre National de Recherche Agronomique, CÔTE D'IVOIRE); BINI, Kouadio Kra Norbert (Centre National de Recherche Agronomique, CÔTE D'IVOIRE); KABORE, Ben Abdoul Nassire (Université Nazi BONI)</p> | <p style="text-align: center;"><b><u>Chairs :</u></b></p> <p style="text-align: center;">Dr Abdoulaye SERE<br/>Dr Kisito K. KABORE</p> |

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|                      | <b>Maize Productivity Optimization: An Analysis of Hybrid, Cobb-Douglas, and CES Models</b><br>Dzarma, Ezra Daniel (Universite de Abomey Calavi); DAGBA, Theophile Komlan (UNIVERSITE D'ABOMEY-CALAVI); Degla, Guy (Univerite de Abomey Calavi/IMSP Dangbo) |                            |
| <b>16h30 – 17h30</b> | Social events – Tourist visit                                                                                                                                                                                                                               | <b>Organizing Commitee</b> |
| <b>20h00 – 22h00</b> | Social Diner                                                                                                                                                                                                                                                | <b>Organizing Commitee</b> |

| Day 2 : July 04, 2025 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                   |
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| 08h00 – 08h30         | Registration & installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Organizing Commitee                                                               |
| 08h30 – 10h00         | <p><b><u>Keynote 2 :</u></b></p> <p><b>A Novel Learning-Based Framework for Characterizing Mobile Phishing Attacks, Leveraging both Reinforcement Learning (RL) and Imitation Learning (IL)</b></p> <p><u>Dr Franklin Tchakounte</u></p>                                                                                                                                                                                                                                                                                                                                                | <p><b><u>Chairs :</u></b></p> <p>Dr Assane Gueye<br/>Dr Boureima ZERBO</p>        |
| 10h00 – 10h30         | <p><b><u>Communication :</u></b></p> <p><b>Personnal Data Protection Issues</b></p> <p>CIL Burkina</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p><b><u>Chairs :</u></b></p> <p>Dr Assane Gueye<br/>Dr Boureima ZERBO</p>        |
| 10h30 – 11h00         | Coffee Break                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Organizing Commitee                                                               |
| 11h00 – 13h30         | <p><b><u>Oral Session 3 : Networks, Blockchain, IoT &amp; Applications</u></b></p> <p><b>Millimeter wave transmitter model based on an Optical Phase-Locked Loop (OPLL) for high bit rate and low cost in next generation networks.</b></p> <p>Kiélem, Wilfried Albert Duniwangda (Université Iba Der Thiam); Diouf, Mamadou Diallo (Thies Polytechnic school (EPT)/Labolatory of Information Processing and Intelligent Systems (LTISI)/Senegal); Sawadogo, Moumouni (Thies Polytechnic school (EPT)/Labolatory of Information Processing and Intelligent Systems (LTISI)/Senegal)</p> | <p><b><u>Chairs :</u></b></p> <p>Dr Yaya TRAORE<br/>Dr Justin P.<br/>KOURAOGO</p> |

**A New Okumura-Hata Calibration Method Based on Neural Network and Drive Tests: Case study of Yaounde Town, Cameroon**

TALLA TANKAM, Narcisse (University Institute of Technology Fotso Victor / University of Dschang / Cameroon); FOTSING, Janvier (Faculty of Science, University of Buea, Cameroon); DEUSSOM DJOMADJI, Eric Michel (Faculty of Science, University of Buea, Cameroon); DIPANDA, Albert (Polytech Dijon, University of Burgundy, France); TONYE, Emmanuel (National Advanced School of Engineering, University of Yaounde 1, Cameroon)

**Enhancing Vehicle Fitness Recording and Integrity through Blockchain-Based Decentralised Application in Mauritius**

Ujoodah, Ashley (Middlesex University Mauritius); Ramsurrun, Visham (Middlesex University Mauritius); Seeburrun, Parvesh (Middlesex University Mauritius); Veerabudren, Karel (Middlesex University Mauritius); Sharma, Mrinal (Middlesex University Mauritius); Seeam, Amar Kumar (Middlesex University Mauritius)

**Optimization of supervised models in an HPC environment**

FALL, Oumar (Gaston Berger University); DIOP, Babacar (Gaston Berger University); DIOP, Cheikh (CINERI); Diongue, Dame (University Gaston Berger of Saint Louis)

**5G-NR PRACH Detection Using an AutoEncoder Under Interference**

Ahmed, Sawadogo (Université Joseph Ki Zerbo); Désiré, Guel (Université Joseph Ki Zerbo); Boureima, Zerbo (Université Thomas SANKARA)

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|                      | <p align="center"><b>A Comparative Study of CDL/TDL Channel Models in 5G-mmWave Networks</b></p> <p align="center">SOGOBA, Mahamadi (Université Joseph KI-ZERBO); GUEL, Désiré (Université Joseph KI-ZERBO); ZERBO, Boureima (Thomas SANKARA University)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
| <b>13h30 – 14h30</b> | Lunch Break                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Organizing Commitee</b>                                                                                                  |
| <b>14h30 – 16h30</b> | <p align="center"><b><u>Oral Session 4</u> : ICT, Energy &amp; Applications</b></p> <p align="center"><b>Semantic Similarity-Based Legal Document Retrieval and Summarization</b></p> <p>G., Dhekshagna (Chaitanya Bharathi Institute of Technology); D., Jayaram (Chaitanya Bharathi Institute of Technology); Vangala, Nityashree(Chaitanya Bharathi Institute of Technology); B., Shree Keerthana (Chaitanya Bharathi Institute of Technology)</p> <p align="center"><b>Vehicle Routing Optimization for Medical Product Distribution in Regional Capitals of Burkina Faso: A Linear Programming Approach with Gurobi</b></p> <p>DABIRE, Saan-nonnan Olivier (Joseph KI-ZERBO University); ZERBO, Boureima (Thomas SANKARA University); GUEL, Désiré (Joseph KI ZERBO University)</p> <p align="center"><b>Development of a photovoltaic solar induction cooker for households in rural areas in the Sahel</b></p> <p>Thiam, Ababacar (UADB); Pape, Ndiaye Omar (UADB); Mouhamadou, Thiam (Ecole Polytechnique de Thiès)</p> <p align="center"><b>Principal component analysis for the frequency stability of the SENELEC electricity grid integrating solar PV and wind power plants</b></p> <p align="center">Ndiaye, Alphousseyni (alioune diop university of bambey)</p> | <p align="center"><b>Chair :</b></p> <p align="center">Dr Cheikh Fadel KEBE</p> <p align="center">Dr Moustapha BIKIENGA</p> |

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| <b>16h30 – 17h00</b> | Closing & Awards Ceremony | <b>Organizing Committee</b> |