



5th International Conference on ICT for Development for Africa
October 26-28, Bahir Dar, Ethiopia



Day 1: Virtual
Thursday October 26, 2023

Time	Title/Task	Presenter	Moderator
08:30 – 09:00	Registration (Joining Zoom)		Biniam Behailu
09:01 – 09:15	Conference Briefing	Dr. Esubalew Alemneh	Dr. Michael Melse
09:16 – 09:25	Message from Scientific Director of Bahir Dar Institute of Technology Bahir Dar University	Dr. Bimrew Tamrat	
09:26 – 09:30	Welcome Speech	Prof Ethiopia Nigussie	
09:31 - 10:15	Keynote Speech I: Building our Sustainable Future through Science and Computing	Dr. Solomon Assefa	Dr. Ethiopia Nigussie

10:16 -10:30 **Coffee Break**

Parallel Session I
Track1: Intelligent Systems and Data Science and Track 6: Information System
(Session Manager: Dr. Esubalew Alemneh)

10:31 – 10:45	Habesha Women’s Dress Embroidery Design Identification Using an Ensemble Feature Extraction Approach	Arega Mulu Mezemir	Dr. Tesfa Tegegne
10:46 – 11:00	An AI Contribution to African Economic Development through Mother Tongue Education - a Linguistic Evaluation of an African-based AI Mathematics Tutoring Bot	Laurie Butgereit	
11:01- 11:15	Small Screws Detection using Machine Vision	Getachew A Ambaye	
11:16 – 11:30	Performance Analysis of SDN with a Hybrid Data Plane of MPLS and SDN	Belayneh Kebie Teshome	
11:31 – 11:45	Test case generation from quality attribute scenarios using machine learning approach	Abebaw Worku	
11:45 – 12:00	Automatic Medical Image diagnosis for lung diseases using deep transfer learning	Irada Mwendo	

12:01 – 13:30 **Lunch**

Parallel Session II
Track 5: Natural Language Processing, Track 2: Wireless Communications & Emerging Networking and Track 6: Information System
(Session Manager: Dr. Esubalew Alemneh)

Time	Topic	Presenter	Chair person
10:31 – 10:45	Design Amharic Text Sentiment Analysis Model Using Machine Learning Techniques. In Case of restaurant reviews.	Birku Gedif	Dr. Michael Melese
10:46 – 11:00	COSMIC-Functional Size Classification of Agile Software Development: Deep Learning Approach	Yohannes Sefane Molla	
11:01- 11:15	Ge’ez-English Bi-directional Neural Machine Translation Using Transformer	Yirga Yayeh	

11:16 – 11:30	Machine Learning Based Soil-type Classification	Yirga Yayeh	
11:31 – 11:45	Evaluating the effectiveness of hybrid features in fake news detection on social media	Mesay Gameda	
11:45 – 12:00	Bi-directional Machine Translation between Amharic and Khimtagne using Deep Learning	Adane K Chekole	
12:01 – 13:30			
Day 1 Afternoon: Virtual			
Time	Topic	Presenter	Chair person
13:31 -14:15	Keynote Speech II: ICT and Fresh Water lake Ecosystems and Services	Prof Nils Gustav Andreas Ekelund	Dr. Tesfa Tegegne
Parallel Session I			
Track1: Intelligent Systems and Data Science and Track 6: Information System (Session Manager: Dr. Esubalew Alemneh)			
Time	Topic	Presenter	Chair person
14:16 – 14:30	Anaphoric Term Classification and Resolution Model for Amharic Pronouns: Using Deep Learning Technique	SIRAYE MEKONNEN	Dr. Michael Abebe
14:31 – 14:45	Classification and Prioritization of Requirements Smells Using Machine Learning Techniques	Fekerte Berhanu Tadle	
14:46- 15:00	Toward explainable Artificial intelligence for Pneumonia and tuberculosis classification from Chest X-ray	Getamesay Haile Dagnaw	
15:01 -15:15	Detecting Fraud in Motor Insurance Claims Using XGBoost Algorithm with SMOTE	David Gichohi Maina	
15:16- 15:30	Application of Machine Learning Algorithms for Pneumonia Detection and Classification	Hamza SH. Abdurahman	
15:31 – 15:45	Coffee Break		
15:46 – 16:00	Wind power Forecasting Model using Deep Learning Approach	Seblewongale Ayene	Dr. Tesfa Tegegne
16:01 – 16:15	Predicting Software Reliability Using Deep Learning Methods	Getachew Mekuria Habtemariam	
16:16 – 16:30	A Real-Time Obstacle Detection And Classification System For Assisting Blind And Vissually Impaired People Based On Yolo Model	Yesuneh Getachew	
16:31 – 16:45	Multitask Deep Learning Approach for Habesha Fashion Cloth Recognition and Classification	Yohannes A Worku	
16:46 – 17:00	A Knowledge-Based System to Predict Crime from Criminal Records in the case of Hossana Police Commission	Betelhem Zewdu Wubineh	
17:01 – 17:15	Hybrid Deep-Machine Learning Based Performance Comparison for Soybean Plant Disease Identification	Yirga Yayeh	
End of Day 1			

Parallel Session II
Track 5: Natural Language Processing, Track 2: Wireless Communications & Emerging Networking and Track 6: Information System
(Session Manager: Dr. Esubalew Alemneh)

14:16 – 14:30	Geez Part of Speech Tagging Using Deep Learning Approaches	Abdulkerim Mohammed	Dr. Mohammed Abebe
14:31 – 14:45	Amharic Text-to-Speech Synthesis Using Deep Learning Approach	Abdulkerim Mohammed	
14:46- 15:00	Multimodal Cyberbullying Detection Using Deep Learning Techniques: A Review	Immaculate Ms Musyoka	
15:01 -15:15	Machine Learning-Based Categorization Of Racism In Amharic Text Using Multi-Class Classification	Abebe Desie	
15:16- 15:30	Ensemble Learning for Encrypted Malware Detection and Classification	Sileshi Nibret Zeleke	
15:31 – 15:45	Coffee Break		
15:46 – 16:00	Controller-Targeted DDoS Attack Detection and Mitigation in Software-Defined Internet of Vehicles (SD-IoV)	Behaylu T. Alemu	Dr. Mekuanint Agegnehu
16:01 – 16:15	Cyclic Redundancy Check Assisted Successive Cancellation List Polar Code for MIMO-PLC Systems	Fikreselam Gared Mengistu	
16:16 – 16:30	Software Risk Prediction at Requirement and Design Phase : An Ensemble Machine Learning Approach	Yibeltal Assefa Zelelew	
16:31 – 16:45	Machine Learning Based Delivery Date Prediction For Child Birth	Yibeltal Assefa Zelelew	
16:46 – 17:00	Performance Analysis of POCO Framework under Failure Scenario in SDN-Enabled Controller Placement	Getasew Abeba Agengnehu	
17:01 – 17:15	ACO-OFDM based VLC System with CRC Aided Successive Cancellation List Polar Cod	Fikreselam Gared Mengistu	

End of Day 1

Day 2 Friday October 27, 2023

<i>Time</i>	<i>Topic</i>	<i>Presenter</i>	<i>Chair person</i>
08:30 – 09:15	Keynot Speech III: 5G Testbeds the Innovation Vehicle for Smart Cities	Prof Jari Handelberg	Dr Fisseha Mekuria

Parallel Session I
Track1: Intelligent Systems and Data Science and Track 6: Information System
(Session Manager: Dr. Esubalew Alemneh)

<i>Time</i>	<i>Topic</i>	<i>Presenter</i>	<i>Chair person</i>
09:16 – 09:30	Visual Acuity Classification Using Ensemble Machine Learning Algorithms: With Explainable Approach	Abdulkerim Mohammed Yibre	Dr. Mohammed Abebe
09:31 – 09:45	Hadiyyissa Automatic Speech Recognition using Deep Learning Approach	Amin Tuni Gure	
09:45 – 10:00	Data-Driven Decision-Making and Its Impacts on Education Quality in Developing Countries: A Systematic Review	Zelalem Asfaw	

Closing Remarks [ICT4DA-2023 Organizing Committee]

Parallel Session II

***Track 5: Natural Language Processing, Track 2: Wireless Communications & Emerging Networking and Track 6: Information System
(Session Manager: Dr. Michael Melese)***

<i>Time</i>	<i>Topic</i>	<i>Presenter</i>	<i>Chair person</i>
<i>09:16 – 09:30</i>	Investigating the Benefits of Using Non-Orthogonal Multiple Access for double connction LiFi-RF Networks.	Ermias Kassahun Azage	Dr. Mekuanint Agegnehu
<i>09:31 – 09:45</i>	Mutual Coupling Reduction for Multiband Phased Array Antenna using Metamaterial Surface for Millimeter Wave Communication	Mulugeta Atlabachew Abegaz	

Closing Remarks [ICT4DA-2023 Organizing Committee]