

General Conference Program

	Morning		Afternoon	
	<i>Before Tea Break</i>	<i>After Tea Break</i>	<i>Before Tea Break</i>	<i>After Tea Break</i>
Day 1 (Nov 22, 2021)	Welcome Keynote Speech 1 Special Session Talk 1 Panel Discussion I	Special Session Talk 2 Panel Discussion II	Workshop: Community Network	Special Session: Women in ICT/Engineering
Day 2 (Nov 23, 2021)	Keynote Speech 2	Parallel Session I Parallel Session II	Keynote Speech 3 IEEE Awareness Session	Parallel Session I Parallel Session II
Day 3 (Nov 24, 2021)	Keynote Speech 4 Parallel Session I Parallel Session II	Parallel Session I Parallel Session II	<i>Site seeing</i>	

Keynotes, Special Session Talks and Panel Discussions:

- **Keynote Speech 1:** Enabling Sustained Rural Health Care Through ICT Innovations
- **Special Session Talk 1:** Digital Transformation of Healthcare
- **Panel Discussion I:** Healthcare Information Management System
- **Special Session Talk 2:** Emerging Digital Technologies in Restoration Efforts of Fresh Water Lakes of Africa
- **Panel Discussion II:** The role of Emerging Digital Technologies in Development
- **Keynote Speech 2:** Mobile banking security
- **Keynote Speech 3:** Bootstrapping NLP for under resourced languages
- **Keynote Speech 4:** The role of Unsupervised and Recursive Learning in Joint Deployments of Mobile Robots, Unmanned Aerial Vehicles, and Wireless Sensor Networks

Day 1

Monday Nov 22, 2021			
Day 1: Morning			
Time	Topic	Speaker/Presenter	Chair person
08:30 – 08:50	Registration	Local Chairs	-
08:51 – 09:00	Program Introduction	Dr. Esubalew Alemneh	Dr. Waltenegus Dargie
09:01 – 09:10	Welcoming Speech by Scientific Director of Bahir Dar Institute of Technology	Dr. Seifu Admasu	
09:11 – 09:20	Official Opening Speech by President of Bahir Dar University	Dr. Firew Tegegne	
09:21 - 09:30	Guest of Speech by Guest of Honor	Guest of Honor	
09:31 - 09:50	Keynote Speech 1: Enabling Sustained Rural Health Care Through ICT Innovations	Dr. Rahel Bekele, Associate professor at the School of Information Science, Addis Ababa University	
09:51 – 10:20	Special Session Talk 1: Digital Transformation of Healthcare	Dr. Shegaw Anagaw, Associate Professor of Information Systems, USN Business School, Norway	
10:21 – 11:00	Panel Discussion I: Healthcare Information Management System	Dr. Rahel Bekele, Dr. Shegaw Anagaw, eTech, CoMHS-BDU,	
11:01 – 11:20	Coffee Break		

11:21 –11:50	Special Session Talk 2: Emerging Digital Technologies in Restoration Efforts of Fresh Water Lakes of Africa	Dr. Fisseha. Mekuria	Dr. Esubalew Alemneh
11:51 –12:30	Panel Discussion II: The role of Emerging Digital Technologies in Development	Dr. Ethiopia Nigussie, Dr. Waltenegeus Dargie, <i>more panelist to be invited</i>	Dr. Fisseha. Mekuria
12:31 –13:30	Sponsored Lunch		
Monday Nov 22, 2021 (Day 1: Afternoon)			
13:31 – 15:00	Workshop: Community Network <ul style="list-style-type: none"> - Brief Presentation (30mins) - Experience sharing from African community networks (2X15mins) - Discussion (30mins) 	Dr. Dawit Bekele, African community network Experiences	Dr. Tesfa Tegegne
15:00 – 15:15	Coffee Break		
15:16 – 17:00	Women in ICT/Engineering: Enabling entrepreneurship through innovation and research <ul style="list-style-type: none"> - Entrepreneurial skills in Research (20 Minutes) - Experience sharing (Opportunities and Challenges of women in Engineering/ Technology (20 Minutes)) - Linking Research and innovation with Industry (20 minutes) - Panel discussion (30 Minutes) 	Prof. Judy Van Biljon, Prof Anicia Peters, Dr. Rahel Bekele	Dr. Ethiopia Nigussie
17:30 – 19:00	Welcome Reception	Local Chairs	-

Day 2

Tuesday November 23, 2021

Day 2: Morning

Time	Topic	Panelists / Presenter/ Speaker	Chair person
09:00 – 09:10	Registration	Local Chairs	-
09:11 – 10:00	Keynote Speech 2: Mobile banking security	Dr. Erik Poll, Associate professor in Radboud University Nijmegen, Netherlands	Dr. Ethiopia Nigussie
10:01 - 10:15	Coffee Break		
10:16 – 12:15	Parallel Sessions		
Parallel Session I		Venue: NCR1	
Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing			
10:16 – 10:35	An Early Warning System for Evaluating Effects of Medical Treatment using Machine Learning	Mohammed Abebe	Dr. Birhanu Hailu
10:36 – 10:55	Performance Analysis of Adaptive Filter and Machine Learning Algorithms for Heart Rate Estimation Using PPG Signal	Tsion Yigzaw	
10:56 – 11:15	Identifying Risk Factors and Predicting Food Security Status using Supervised Machine Learning Techniques	Melaku Alelign,	
11:16 – 11:35	Investigate Risk Factors and Predict Neonatal and Infant Mortality Based on Maternal Determinants using Homogenous Ensemble Methods	Melaku Alelign	Dr. Adane Nega
11:36 – 11:55	Identification of Architecturally Significant Non-Functional Requirement	Esmael Mohammed	
11:56 – 12:15	Transfer Learning and Data Augmentation Based CNN Model for Potato Late Blight Disease Detection	Natnael Tilahun	

12:16 – 13:30	Sponsored Conference Lunch Break		
Parallel Session II		Venue: NCR2	
Track 2: Wireless Communication & Emerging Technology, track 3: Circuits and Computing Systems, Track 4: Security and Privacy & Track 6: Human Computer Interaction			
10:16 – 10:35	Augmented Random Access MAC Protocol for Cognitive Radio Network (ACR-MAC)	Mulugeta Atlabachew	Dr. Fikreselam Gared
10:36 – 10:55	Density Aware Cooperative Precoding Technique for Massive MIMO Systems	Shenko Chura	
10:56 – 11:15	Autonomous RACH Resource Slicing for Heterogeneous IoT Devices Communication Using Deep Reinforcement Learning	Hussen Yesuf	
11:16 – 11:35	Comparison of Two End-to-End Path Quality Measurement Methods in Mobile Ad-hoc Networks.	Tinsae Tadesse	Dr. Mekuanint Agegnehu
11:36 – 11:55	Probability of Error Minimization Techniques in Downlink Massive MIMO Systems	Shenko Chura	
11:56 – 12:15	Impact of Enhanced Inter-Cell Interference Coordination on Heterogeneous Network Topology in LTE –A Using Cell Range Extension	Kehali A. Jembe	
12:31 – 13:30	Sponsored Conference Lunch Break		
Tuesday November 23, 2021			
Day 2 Afternoon			
13:31 – 14:15	Keynote Speech 3: Bootstrapping NLP for under resourced languages	Dr. Filip Ginter, Associate Professor at University of Turku, Finland	Dr. Seid Muhie

14:16 – 15:15	IEEE Awareness Session	IEEE Kenya Section and IEEE African Council	Dr. Esubalew Alemneh
15:16 – 15:30	Coffee Break		
15:30 – 17:30	Parallel Sessions		
Parallel Session I		Venue: NCR1	
Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing			
15:31 – 15:50	Preventing Traffic Accidents Through Machine Learning Predictive Models	Tarikwa Tesfa	Dr. Abdulkerim Mohammed
15:51 – 16:10	Hate Speech Detection Framework from Social Media Content: The Case of Afaan Oromoo Language	Lata Guta	
16:11 – 16:30	Design Sensitive Personal Information Detection and Classification Model for Amharic Text	Amare Genetu	
16:31 – 16:50	Classifying Severity Level of Psychiatric Symptoms on Twitter Data	Meron Aragaw	Dr. Gebeyehu Belay
16:51 – 17:10	Spatial Locality based Identifier Name Recommendation	SetegnAsnakew	
17:11 – 17:30	A Parallel Corpora for bi-directional Neural Machine Translation for Low Resourced Ethiopian Languages	AtnafuLambebo	
19: 00 – 20:00	Conference Dinner		
Parallel Session II		Venue: NCR2	
Track 2: Wireless Communication & Emerging Technology, track 3: Circuits and Computing Systems, Track 4: Security and Privacy & Track 6: Human Computer Interaction			
15:31 – 15:50	Fuzzy Logic Inference System for Quality of Experience Modeling	Amare Kassaw	

	for LTE Video Streaming: Case of Addis Ababa LTE Network		Dr. Yirga Yayeh
15:51 – 16:10	Rescuing the Fresh Water Lakes of Africa through the Use of Drones and Underwater Robots	Fisseha Mekuria	
16:11 – 16:30	SSIW: Squirrel Search and Invasive Weed Based Cost-Makespan Task Scheduling for Fog-Cloud Environment	Abate Tsegaye	
16:31 – 16:50	Latency optimized architectures for a real-time inference pipeline for control tasks	Florian Schellroth	Dr. Amare Kassaw
16:51 – 17:10	Adaptive Circuit Power Control for Down-link Massive MIMO Systems	Shenko Chura	
17:11 – 17:30	BackIP: Mutation Based Test Data Generation Using Hybrid Approach	Seifu Detso	
19: 00 – 20:00	Conference Dinner		

Day 3

Wednesday November 24, 2021

Day 3: Morning

Time	Topic	Speaker/Presenter	Chair person
08:30 -09:10	Keynote Speech 4: The role of Unsupervised and Recursive Learning in Joint Deployments of Mobile Robots, Unmanned Aerial Vehicles, and Wireless Sensor Networks	Dr.-Ing. Habil. Waltenequs Dargie, Professor at the TU Dresden, Germany	Dr. Tesfa Tegegne
Parallel Session I		NCR1	
Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing			
09:10 – 09:30	Amharic Text Corpus based on Parts of Speech tagging and stemming	Tsegaye Abebe	Dr. Michael Melese
09:31 – 10:00	Cross-lingual textual entailment using deep learning approach	Wubie Belay	
10:01 – 10:20	Multilingual Neural Machine Translation for Low Resourced Languages: Ometo-English	Mesay Gemedo	
10:21 – 10:35	Coffee Break		
10:36 – 10:55	Natural Language Interface for Covid-19 Amharic Database Using LSTM Encoder Decoder Architecture with Attention	Ephrem Tadesse	Dr. Tesfa Tegegne
10:56 – 11:15	Impacts of Homophone Normalization on Semantic Models for Amharic	Tadesse Destaw,	

11:16 – 11:35	Automatic Quality Attribute Scenarios Identification and Generation from Quality Attribute Requirements	Amsalu Tessema	
11:36 – 11:55	Leveraging on cross linguistic similarities to Reducing Grammar Development Effort for the Under-Resourced Languages: A Case of Kenyan Bantu Languages	Benson Kituku	
Parallel Session II		NCR2	
Track 2: Wireless Communication & Emerging Technology, track 3: Circuits and Computing Systems, Track 4: Security and Privacy & Track 6: Human Computer Interaction			
09:10 – 09:30	Maturity of information systems security in selected private Banks in Ethiopia	Tadele Shimels	Dr. Mekonnen Wagaw
09:31 – 10:00	Past Event Recall Test for Mitigating Session Hijacking and Cross-Site Request Forgery	Omoniyi Wale Salami	
10:01 – 10:20	Maturity of information systems security in selected private Banks in Ethiopia	Tadele Shimels	
10:21 – 10:35	Coffee Break		
10:36 – 10:55	Development and Heuristic-based Usability Evaluation of an E-partograph	Tegegn Kebebew	Dr. Mekonnen Wagaw
Wednesday November 24, 2021			
Day 3: Afternoon			
14:30 – 18:00	<i>Site seeing on Lake Tana Monasteries OR Tiss Issat Fountain and Closing Ceremony</i>		