

Conference Program

| Day 1: Morning Monday Nov 22, 2021 | | | |
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| 08:00 – 08:30 Registration | | | |
| 08:31 – 08:35 | Welcome Speech by Dr. Seifu Tilahun, Scientific Director of Bahir Dar Institute of Technology Bahir Dar University | Chaired Person: Dr. Tesfa Tegegne | |
| 08:36 – 08:50 | Conference Briefing by Dr. Esubalew Alemneh, Director of ICT4D Research Center, BiT, BDU | | |
| 08:51 – 09:40 | Keynote Speech 1: The role of Unsupervised and Recursive Learning in Joint Deployments of Mobile Robots, Unmanned Aerial Vehicles, and Wireless Sensor Networks by Dr.-Ing. Habil. Waltenegus Dargie, Professor at the TU Dresden, Germany | | |
| 09:41 – 12:20 | Parallel Sessions | | |
| Parallel Session I | | Venue: Seminar Room | |
| Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing (Session Manager Dr. Birhanu Hailu) | | | |
| Time | Topic | Presenter | Chair person |
| 09:41 – 10:00 | An Early Warning System for Evaluating Effects of Medical Treatment using Machine Learning | Mohammed Abebe | Dr. Tesfa Tegegne |
| 10:01 – 10:20 | Performance Analysis of Adaptive Filter and Machine Learning Algorithms for Heart Rate Estimation Using PPG Signal | Tsion Yigzaw | |
| 10:21 - 10:40 | Identifying Risk Factors and Predicting Food Security Status using Supervised Machine Learning Techniques | Melaku Alelign | |
| 10:41 – 11:00 | Tea Break | | |
| 11:01 - 11:20 | Investigate Risk Factors and Predict Neonatal and Infant Mortality Based on Maternal Determinants using Homogenous Ensemble Methods | Melaku Alelign | Dr. Tesfa Tegegne |
| 11:21 – 11:40 | Identification of Architecturally Significant Non-Functional Requirement | Esmael Mohammed | |
| 11:41 – 12:00 | Transfer Learning and Data Augmentation Based CNN Model for Potato Late Blight Disease Detection | Natnael Tilahun | |

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| 12:01 – 12:20 | Amharic Text Corpus based on Parts of Speech tagging and stemming | Tsegaye Abebe | Dr. Adane Nega |
| 12:20 – 13:30 | Lunch Time | | |
| Parallel Session II | | Venue: PG Lab | |
| Track 2: Wireless Communication & Emerging Technology, track 3: Circuits and Computing Systems, Track 4: Security and Privacy & Track 6: Human Computer Interaction <i>(Session Manager Dr. Mekonnen Wagaw)</i> | | | |
| 09:41 – 10:00 | Augmented Random Access MAC Protocol for Cognitive Radio Network (ACR-MAC) | Mulugeta Atlabachew | Dr. Fikreselam Gared |
| 10:01 – 10:20 | Density Aware Cooperative Precoding Technique for Massive MIMO Systems | Shenko Chura | |
| 10:21 - 10:40 | Autonomous RACH Resource Slicing for Heterogeneous IoT Devices Communication Using Deep Reinforcement Learning | Hussen Yesuf | |
| 10:41 – 11:00 | Tea Break | | |
| 11:01 - 11:20 | Comparison of Two End-to-End Path Quality Measurement Methods in Mobile Ad-hoc Networks. | Tinsae Tadesse | Dr. Fikreselam Gared |
| 11:21 – 11:40 | Probability of Error Minimization Techniques in Downlink Massive MIMO Systems | Shenko Chura | |
| 11:41 – 12:00 | Impact of Enhanced Inter-Cell Interference Coordination on Heterogeneous Network Topology in LTE –A Using Cell Range Extension | Kehali A. Jembe | Dr. Yirga Yayeh |
| 12:01 – 12:20 | Maturity of information systems security in selected private Banks in Ethiopia | Tadele Shimels | |
| 12:20 – 13:30 | Lunch Time | | |
| Day 1: Afternoon Monday Nov 22, 2021 | | | |
| 13:30 – 14:20 | Keynote Speech 2: Bootstrapping NLP for under resourced languages by Dr. Filip Ginter, Associate Professor at University of Turku, Finland | Chair Person: Dr. Seid Muhie | |
| Parallel Session I | | Venue: Seminar Room | |
| Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing | | | |

| <i>(Session Manager Dr. Birhanu Hailu)</i> | | | |
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| 14:21 – 14:40 | Cross-lingual textual entailment using deep learning approach | Wubie Belay | Dr. Adane Nega |
| 14:41 – 15:00 | Multilingual Neural Machine Translation for Low Resourced Languages: Ometo-English | Mesay Gemeda | |
| 15:01 - 15:20 | Natural Language Interface for Covid-19 Amharic Database Using LSTM Encoder Decoder Architecture with Attention | Ephrem Tadesse | |
| 15:21 – 15:40 | Tea Break | | |
| 15:41 - 16:00 | Impacts of Homophone Normalization on Semantic Models for Amharic | Tadesse Destaw, | Dr. Abdulkerim Mohammed |
| 16:01 – 16:20 | Leveraging on cross linguistic similarities to Reducing Grammar Development Effort for the Under-Resourced Languages: A Case of Kenyan Bantu Languages | Benson Kituku | |
| 16:21 – 16:40 | Automatic Quality Attribute Scenarios Identification and Generation from Quality Attribute Requirements | Amsalu Tessema | |
| 16:41 - 17:00 | Preventing Traffic Accidents Through Machine Learning Predictive Models | Tarikwa Tesfa | |
| 17:01 – 17:20 | Hate Speech Detection Framework from Social Media Content: The Case of Afaan Oromoo Language | Lata Guta | |
| End of Day 1 | | | |
| Parallel Session II | | Venue: PG Lab | |
| Track 2: Wireless Communication & Emerging Technology, track 3: Circuits and Computing Systems, Track 4: Security and Privacy & Track 6: Human Computer Interaction | | | |
| <i>(Session Manager Dr. Mekonnen Wagaw)</i> | | | |
| 14:21 – 14:40 | Past Event Recall Test for Mitigating Session Hijacking and Cross-Site Request Forgery | Omoniyi Wale Salami | Dr. Yirga Yayeh |
| 14:41 – 15:00 | Development and Heuristic-based Usability Evaluation of an E-partograph | Tegegn Kebebaw | |
| 15:01 - 15:20 | Fuzzy Logic Inference System for Quality of Experience Modeling for LTE Video Streaming: Case of Addis Ababa LTE Network | Amare Kassaw | |
| 15:21 – 15:40 | Tea Break | | |
| 15:41 - 16:00 | Rescuing the Fresh Water Lakes of Africa through the Use of Drones and | Fisseha Mekuria | |

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| | Underwater Robots | | Dr. Amare Kassaw |
| 16:01 – 16:20 | SSIW: Squirrel Search and Invasive Weed Based Cost-Makespan Task Scheduling for Fog-Cloud Environment | Abate Tsegaye | |
| 16:21 – 16:40 | Latency optimized architectures for a real-time inference pipeline for control tasks | Florian Schellroth | |
| 16:41 - 17:00 | Adaptive Circuit Power Control for Down-link Massive MIMO Systems | Shenko Chura | |
| 17:01 – 17:20 | BackIP: Mutation Based Test Data Generation Using Hybrid Approach | Seifu Detso | |
| End of Day 1 | | | |
| Day 2: Morning Monday Nov 23, 2021 | | | |
| 09:00-09:40 | Keynote Speech 3: Mobile banking security by Dr. Erik Poll, Associate professor in Radboud University Nijmegen, Netherlands | Chair Person: Dr. Ethiopia Nigussie | |
| Parallel Session I | | Venue: Seminar Room | |
| Track1: Artificial Intelligence and Data Science, & Track 5: Natural Language Processing <i>(Session Manager Dr. Birhanu Hailu)</i> | | | |
| 09:41 – 10:00 | Design Sensitive Personal Information Detection and Classification Model for Amharic Text | Amare Genetu | Dr. Gebeyehey Belay |
| 10:01 – 10:20 | Classifying Severity Level of Psychiatric Symptoms on Twitter Data | Meron Aragaw | |
| 10:21 - 10:40 | Spatial Locality based Identifier Name Recommendation | Setegn Asnakew | |
| 10:41 - 11:00 | A Parallel Corpora for bi-directional Neural Machine Translation for Low Resourced Ethiopian Languages | Atnafu Lambebo | |
| End of the conference | | | |