



## Schedule for the 7<sup>th</sup> ICAST-2019 EAI Conference

### General Program Outline

	08:30-10:10	10:10-10:40	10:40-12:00	12:00-14:00	14:00-17:30	18:00-21:00
Friday August 2, 2019	Registration				Opening and Plenary/keynote	
Saturday, August 3, 2019	Parallel Technical sessions	Coffee break	Parallel technical sessions	Lunch break	Parallel technical sessions	Conference Dinner and Closing session
Sunday August 4, 2019	Tour					

### Opening Technical and Non-Technical Program

Friday August 2, 2019 (14:00-18:20)

Session Chair: Prof. Kibret Mequanint

Time	Opening Technical and Non-technical Program
14:00 -14:15	Welcome Message Dr. Abebech Abera, SRGS A/Dean & Organizing Committee Dr. Seifu Admassu, BiT Scientific Director Dr. Firew Tegegne, Bahir Dar University President
14:15-14:30	<b>Guest of Honor</b> Dr. Ahmedin Mohammed, State Minister of FDRE Ministry of Innovation and Technology
14:30 -15:10	<b>Opening Key Speaker 1:</b> “Transformational Solutions to Sustainable Development in Africa” <b>Prof. Kiflai Gebremedhin</b> , School of Civil and Environmental Engineering, Cornell University, Ithaca, New York, USA
15:10-15:50	<b>Opening Keynote Speaker 2:</b> “Solar Energy and Its Relevance for Energy Deprived Rural Areas” <b>Prof. Samuel Lakeou</b> , Professor Emeritus, District of Columbia (UDC), USA
15:50 – 16:20	<b>Coffee Break</b>
16:20 -17:00	<b>Opening Keynote Speaker 3:</b> “Title: Challenges and Opportunities of Irrigated Agriculture in Ethiopia” <b>Dr. Michael M. Moges</b> , Commissioner, The Irrigation Development Commission
17:00-17:15	General Q&A



**Parallel Sessions – Sessions 1 - 5**  
**Saturday August 3, 2019, Time: 8:30 -17:30**

Time	Session 1: Agro-processing industries for sustainable development (Room – GA2) Session Chairs: Mesfin Wogayehu/Hirut Asaye/Neela Sateesh Rapporteurs: Alemayehu Kiflu/Tadele Andargie/Yisaye Kindie
8:30-9:00	<b>Keynote Speaker 1: Prof. Eduardo Ojito, AAiT-AAU</b> Title: <b>“Biotechnology, Indigenous bio-products and Community development”</b>
9:10-9:30	<b>Organic Biofertilizer from Brewery Wastewater Sludges via Aerobic Composting Process</b> <i>Mequanint Demeke</i>
9:30- 9:50	<b>Endosulfan pesticide dissipation and residue levels in khat and onion in a sub-humid region of Ethiopia</b> <i>Feleke K. Sishu</i>
9:50-10:10	<b>Assessment of Ergonomics of Farming Activities for Backyard Vegetable Production in the North Western Ethiopia: Case of Dangishta Community</b> <i>Getnet K Awoke</i>
10:10 – 10:40	<b>Coffee Break</b>
10:40-11:00	<b>An Integrated Approach to Solve Small Farm Holder’s Mechanization Barriers in Ethiopia</b> <i>Tsehaye Dedimas</i>
11:00-11:20	<b>Production and Characterization of Glue from Tannery Hide Trimming Waste</b> <i>Tadele Negash</i>
11:20-12:40	<b>Kinetic modeling of quality change in Ethiopian Kent mango Stored under different temperature</b> <i>Mekdim K. Assefa</i>
11:40-12:00	<b>Modeling of Gasification of Refuse Derived Fuel: Optimizations and Experimental Investigations</b> <i>Dawit Musse</i>
12:00 – 13:30	<b>Lunch Break</b>
13:30-14:20	<b>Keynote Speaker 2: Dr. Mulugeta Admassu, KU Leuven &amp; BDU</b> Title: <b>" Postharvest losses in developing countries: causes and solutions "</b>
14:20- 14:40	<b>On-farm Performance and Assessment of Farmers’ Perceptions of Hermetic Bags for Farm- Stored Wheat and Maize in Northwestern Ethiopia</b> <i>Karta Kaske Kalsa</i>
16:20-17:30	<b>Networking/Refreshment Break &amp; Poster Session</b>

Time	Session 2: Water resource and environmental engineering (Room – GA1) Session Chairs: Mamaru M./Mulugeta Azeze/ Fasikaw Atanaw/ Muluneh Rapporteurs: Degenet Sultan/ Asgidew Gashaw/ Mekete Dessie/Abebech A.
8:30-9:00	<b>Keynote Speaker 1: Dr. Adanech Yared, FDRE Basins Development Authority Director General</b> Title: <b>“Strategic directions for Ethiopian River basins: Major areas for research and collaboration”</b>
9:00-9:30	<b>Keynote Speaker 2: Dr. Tena Alamirew, WLRC, AAU</b> Title: <b>“Harnessing Water Resources at Scale to meet the SEGs: Issues Opportunities &amp; Recommendations for Amhara Regional State”</b>
9:30-9:45	<b>Integration of SWAT and Remote Sensing Techniques to Simulate Soil Moisture in the Upper Blue Nile Basin: Case of Awramba micro-watershed</b> <i>Berhanu G. Sinshaw</i>
9:45-10:10	<b>Dynamics of Eutrophication and its Linkage to Water Hyacinth on Lake Tana, Upper Blue Nile, Ethiopia: Understanding Land-Lake interaction and process</b> <i>Minychl G. Dersseh</i>
10:10-10:25	<b>Multi-purpose reservoir operation analysis in the Blue Nile Basin, Ethiopia</b> <i>Dereje M. Ayenew</i>
10:25 – 10:40	<b>Refreshment Break</b>
10:40-11:00	<b>Evaluation of Stream Flow Prediction of Hydrological Models in the Upper Blue Nile Basin, Ethiopia</b> <i>Bayu G. Bihonegn</i>



11:00-11:20	<b>Evaluating the Impacts of Climate Change on the Stream flow events in range of Scale of watersheds, in the Upper Blue Nile Basin</b> <i>Gerawork F. Mulu</i>
11:20-11:40	<b>Performance Evaluation and Assessment of Quashni Small scale Irrigation Scheme, in Amhara region</b> <i>Muluedel Aseres</i>
11:40-12:00	<b>Evaluation of Shallow Ground Water Recharge and its Potential for Dry Season Irrigation at Brante Watershed, Dangila, Ethiopia</b> <i>Daniel G. Eshete</i>
12:00 – 13:30	<b>Lunch Break</b>
13:30-14:00	<b>Assessment of Industrial Effluent Pollution on Borekena River, Kombolcha, Ethiopia</b> <i>Alemayehu Ali</i>
14:00-14:20	<b>Pilot-scale horizontal subsurface flow constructed wetland for Removal of Chromium from Tannery Waste Water with Suitable Local Substrate material</b> <i>Gemechu Kassaye</i>
14:20- 14:40	<b>Evaluation of Co-composting Methods Using Effective Microorganisms</b> <i>Tilik Tena</i>
14:40-15:00	<b>Developing Domestic Water Security Index in Urban Cities, Bahir Dar City, Ethiopia</b> <i>Marshet Berhan</i>
15:00-15:20	<b>Soil Water Dynamics on Irrigated Garlic and Pepper Crops Using Hydrus –1D Model in the Lake Tana-Basin, Northwestern Ethiopia</b> <i>Enguday Bekele</i>
15:20-15:50	<b>Networking/Refreshment Break &amp; Poster Session</b>
15:50-16:10	<b>Urban Growth and Land Use Simulation using SLEUTH Model for Adama City, Ethiopia</b> <i>Yanit Mekonnen</i>
16:10-16:30	<b>Impact of Land Use and Landscape on Runoff and Sediment in the Sub-humid Ethiopian Highlands: The Ene-Chilala Watershed</b> <i>Nigus H. Tegege</i>
16:30 – 11:30	<b>Networking/Refreshment Break &amp; Poster Session</b>

<b>Time</b>	<b>Session 3: Recent advances in electrical, electronics, and computing technologies (Room – F2A1)</b> Session Chairs: Belachew B./ Fikreselam G. / Gebeyehu B./ Tesfa T./ Mekuanint A. / Tasew T. Rapporteurs: Abinew A. / Abrham D./ Edom W./ Lijadis G./ Mekonnen W. / Siranesh G.
8:30-9:00	<b>Keynote Speaker 1: Dr. Dereje Yohannes, AASTU</b> <b>Title: “Artificial Intelligence: An Emerging and Enabling Field for Every Discipline”</b>
9:10-9:30	<b>Basic Facial Expressions Analysis on a 3D Model: Based on Action Units and the Nose Tip</b> <i>Meareg Hailemariam</i>
9:30-9:50	<b>Planning, Designing and Performance Evaluation of Micro Wave Link Case Study from Wegeda to Nefas Mewucha</b> <i>Gashaw Mihretu</i>
9:50- 10:10	<b>Joint Evaluation of Spectral Efficiency, Energy Efficiency and Transmission Reliability in Massive MIMO Systems</b> <i>Tewelgn Kebede</i>
10:10 – 10:40	<b>Coffee Break</b>
10:40-11:00	<b>Reconfigurable Integrated Cryptosystem for Secure Data Exchanges between Fog Computing and Cloud Computing Platforms</b> <i>Abiy Tadesse Abebe</i>
11:00-11:20	<b>Optimization-based Robust PID controller to enhance the Performance of Conical Tank System</b> <i>Mulugeta Debebe</i>
11:20-11:40	<b>Enhancement of power flow with reduction of power loss by proper placement of FACTS devices based on voltage stability index</b>



	<i>Yeshitela Shiferaw</i>
11:40-12:00	<b>Generator Excitation Loss Detection on Various Excitation Systems and Excitation System Failures</b> <i>Alganesh Yigzaw</i>
12:00 – 13:30	<b>Lunch Break</b>
13:30-14:00	<b>Designing and Modelling of a Synchronous Generator Using AGC, PSS, and AVR Case study on Tis Abay II Hydroelectric Power System</b> <i>Abdulkerim Ali</i>
14:00-14:20	<b>Practical Implementation of Geo-location TVWS Database for Ethiopia</b> <i>Habib M. Hussien</i>
14:20- 14:40	<b>Performance Enhancement of Distribution Power System by Optimal Sizing and Sitting of Distribution Statcom</b> <i>Nebiyu Yisaye</i>
14:40-15:00	<b>Power Distribution System Reliability Assessment and Improvement Case of Jimma Town, Ethiopia</b> <i>Eyasu Berhanu Abrha</i>
15:00-15:20	<b>Wind Turbine Control Challenges-A Comprehensive Survey</b> <i>Endalew Ayenew</i>
15:20-15:40	<b>Optimal Allocation of Distributed Generation for Performance Enhancement of Distribution System Using Particle Swarm Optimization</b> <i>Elias Mandefro</i>
16:20-17:30	<b>Networking/Refreshment Break &amp; Poster Session</b>
	<b>Room F2A2</b>
13:30-14:00	<b>E-Learning Readiness of Technology Institutes in Ethiopian Public Universities: From the Teachers' Perspective</b> <i>Abinew Ali Ayele</i>
14:00-14:20	<b>Pareto Optimal Solution for Multi-Objective Optimization in Wireless Sensor Networks</b> <i>Haimanot Bitew Alemayehu</i>
14:20- 14:40	<b>Low-Power Endoscopic Image Compression Algorithms Using Modified Golomb Codes</b> <i>Kinde A. Fante</i>
14:40-15:00	<b>Ethiopic Natural Scene Text Recognition Using Deep Learning Approaches</b> <i>Direselign Addis</i>
15:00-15:20	<b>Automatic Amharic Part of Speech Tagging (AAPOST): A Comparative Approach Using Bidirectional LSTM and Conditional Random Fields (CRF) Methods</b> <i>Worku Kelemework Birhanie</i>
15:20-15:40	<b>Mobility Prediction in Wireless Networks Using Deep Learning Algorithm</b> <i>Abebe Belay Adege</i>
16:20-17:30	<b>Networking/Refreshment Break &amp; Poster Session</b>

<b>Time</b>	<b>Session 4: Product design, manufacturing, and systems optimization (Room – F1A1)</b> Session Chairs: Hailu Shimelis / Addisu Negash / Dr.Bimrew Tamrat/ Assefa Asmare Rapporteurs: Addisu Negash / Hailu Shimelis / Assefa Asmare / Dr.Bimrew Tamrat
8:30-9:00	<b>Keynote Speaker 1: Dr. Eshetie Berhan, AAU</b> <b>Title: "Bridging the Gap on University Industry Linkage in Ethiopia"</b>
9:10-9:30	<b>Experimental Investigation of Augmented Horizontal Axis Wind Turbine</b> <i>Abiyu Mersha Tefera</i>
9:30- 9:50	<b>Design and Simulation of Waste Heat Recovery System for Heavy Oil Preheating In Dashen Brewery Company</b> <i>Addisu Yenesew Kebede</i>
9:50-10:10	<b>Development and Testing of Improved Double Skirt Rocket Stove for reducing the emission level of Carbon monoxide</b> <i>Fetene Teshome</i>
10:10 – 10:40	<b>Refreshment Break</b>



10:40-11:00	<b>Effects of Shielded Metal Arc Welding Process Parameters on Mechanical Properties of S355JR Mild Steel</b> <i>Fetene Teshome</i>
11:00-11:20	<b>Performance Evaluation of Motorized Maize Sheller.</b> <i>Solomon Tekeste</i>
11:20-11:40	<b>A Review on Design and Performance of Improved Biomass Cook Stoves</b> <i>Atsede Tariku woldesemayate</i>
11:40-12:00	<b>Design and Optimization of Continuous Type Rice Husk Gas Stove</b> <i>Bimrew Tamrat</i>
<b>12:00 – 13:30</b>	<b>Lunch Break</b>
13:30 - 13:50	<b>Computational Fluid Dynamic Modeling and Simulation of Red Chili Solar Cabinet Dryer</b> <i>Eshetu Getahun</i>
13:50 - 14:10	<b>Development and Performance Evaluation of a Solar Baking oven</b> <i>Bisrat Yilma Mekonnen</i>
14:10 - 14:30	<b>Adaption of water ram pump for small-scale irrigation</b> <i>Assefa Asmare Tsegaw</i>
14:30 - 14:50	<b>Shell and Tube Heat Exchanger, Empirical Modeling Using System Identification</b> <i>Firew Dereje</i>
<b>16:20-17:30</b>	<b>Networking/Refreshment Break &amp; Poster Session</b>

Time	Session 5: Material science and engineering (Room – GA3) Session Chairs: Zerihun Getahun / Misganaw Alemu / Maru Dessie Rapporteurs: Maru Dessie / Zerihun Getahun / Misganaw Alemu
8:30-9:00	<b>Keynote Speaker 1: Prof. Teketel Yohannes, AASTU</b> <b>Title: “Conducting Polymer from Discovery to Use for Solar Energy Conversion”</b>
9:10-9:30	<b>Fabrication and Characterization of Metakaolin Based Flat Sheet Membrane for Membrane Distillation</b> <i>Tsegahun Mekonnen Zewdie</i>
9:30- 9:50	<b>Assessment of Quality of Sand Sources and the Effect on the Properties of Concrete (The Case of Bahir Dar and Its Vicinities)</b> <i>Abel Fantahun</i>
9:50-10:10	<b>Synthesis and characterization of <math>\beta</math>-Wollastonite from limestone and rice husk as reinforcement filler for clay based ceramic tiles</b> <i>Chirotaw Getem</i>
<b>10:10 – 10:40</b>	<b>Refreshment Break</b>
10:40-11:00	<b>Dynamic Mechanical Properties of Kenaf, Thespesia lampas and Okra Fiber Polyester Composites</b> <i>Melak Misganew</i>
11:00-11:20	<b>Manufacturing of Interior Automobile Accessories from Natural Fiber Reinforced Recycled Plastics Waste Composite Material for sustainable automotive industry</b> <i>Halefom Aregay</i>
11:20-11:40	<b>Experimental Investigation of Bending Strength of Oxytenanthera Abyssinica and Yushania Alpina Bamboos</b> <i>Fentahun Ayu Muche</i>
11:40-12:00	<b>The effect of mechanical treatment and calcination temperature of Ethiopian Kaolin on amorphous metakaolin product</b> <i>Tadele Assefa Aragaw</i>
<b>12:00 – 13:30</b>	<b>Lunch Break</b>
13:30 - 13:50	<b>Plasma polymer deposition of neutral agent carvacrol on a metallic surface by using dielectric barrier discharge plasma in ambient air</b> <i>T. G. Getnet</i>
13:50-14:10	<b>Analysis of Bending and Tensile Strength of Sisal / Bam-boo / Polyester Hybrid Composite</b> <i>Yesheneh Jejaw Mamo</i>
<b>16:20-17:30</b>	<b>Networking/Refreshment Break &amp; Poster Session</b>



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