



**Adama Science and Technology University**  
**The 4<sup>th</sup> International Research Symposium Schedule**  
**Grand Theme-: Promoting Digital Economy through Research and Innovation**  
**April 28-29, 2023**

**Day 1-April 28, 2023-Morning**

**Plenary Session**

**Venue: ASTU, Oda Nabee Hall**

Time	Activity	Responsible	Chair p/Facilitator	Rapporteur
8:30 am-9:00am	Registration of participants	Reception subcommittee		
9:00 am-9:10 am	Program Introduction	Dr. Diriba Eticha		
9:10 am-9:20am	Welcoming Address	Dr. Lemi Guta, President of ASTU		Dr. Kassaye Gutema
9:25am-9:35am	Opening Remark	H.E. Dr. Samuel Kifle State Minister, Ministry of Education	Dr. Lemi Guta President of ASTU	
9:35am-9:45am	Opening Remark	H.E. Dr. Bikila Hurissa (Prosperity Party, Oromia Branch Head of Political Wing and Central Committee Member)	Dr. Lemi Guta President of ASTU	
	Opening Remark	H.E. Ms. Firehiwot Tamiru CEO, Ethio telecom	Dr. Lemi Guta President of ASTU	
9:45am-9:55am	Opening Speech	H.E. Mr. Melaku Alebel (Minister, Ministry of Industry)	Dr. Lemi Guta President of ASTU	
9:55am-10:25am	Keynote Address	Prof. Oliver Scholz	Dr. Alemu Disassa VPRTT of ASTU	Dr. Tegene Desalegn
10:25am-10:45am	Tea Break and collaborative Discussions (ODA Nabee Hall, ASTU)			
10:45am-11:15am	Plenary Speech 1	Prof. Alemayehu Gebisa	Dr. Teshome Abdo	Dr. Yadeta Chimdessa
11:15am-11:45pm	Discussions		VPAA of ASTU	
11:45pm-12:30pm	Exhibition (Admin Building)	Exhibition Committee		
12:30pm-2:00pm	Lunch			



## Syndicate Sessions

**Day 1-April 28, 2023- Afternoon**

**Syndicate 1: Energy and Infrastructure**

**Venue: New Admin Borati Hall**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Novel organic materials discovery for green and renewable energies with generative adversarial network(GAN)	Dr. Mesfin Diro, <i>Addis Ababa University, Ethiopia</i>	Dr. Legesse Lemecha	Dr. Tefera Terefe
2:20pm -2:40pm	A Comprehensive Review of Energy Storage Technologies Application Potential for Grid-Connected Renewable Source	Mr. Henok Ayele, <i>Jimma University, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Health Break and collaborative Discussions			
3:40pm -4:00pm	Synthesis of Resorcinol–formaldehyde resins doped with TiO2 as semiconductor photocatalysts for Solar-to-hydrogen peroxide energy conversion and post-synthesis organic transformation	Mr. Addisalem Abebe, <i>Indian Institute of Technology, (IIT) Mandi, India</i>	Dr. Fedlu Kedir	Dr. Getinet Asrat
4:00pm -4:20pm	Metal oxide semiconductors Nonmaterials electron transport layer to improve the interface in the planar perovskite solar cells	Dr. Wegene Lemma, <i>Jimma University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Syndicate Sessions

**Day-1, April 28, 2023 –afternoon**

**Syndicate 2: Smart Materials and Technology**

**Venue: ICT Blg Hall, Room 1**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Teleportation of Biosignal to Develop Lung Cancer Telemedicine Platform	Mr. Alemayehu Getahun, <i>ASTU, Ethiopia</i>	Dr. Teklu Urgessa	Dr. Mesfin Abebe
2:20pm -2:40pm	Design And Develop Botnet Detection Method Using Machine Learning Approaches	Mr. Gizachew Teshome, <i>Dire Dawa University, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Health Break and collaborative Discussions			
3:40pm -4:00pm	RNA-Seq analysis reveals important factors involved in metabolic adaptation in transition cows	Dr. Girma Debele, <i>Bio and Emerging Technology Institute, Ethiopia</i>	Dr. Bedasa Abdisa	Dr. Ismael Adem
4:00pm -4:20pm	Evolution of INH resistance in <i>Mycobacterium tuberculosis</i> strains inpatients during the course of standard anti-TB therapy	Dr. Ketema Tafess, <i>ASTU, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Syndicate Session

**Day-1, April 28, 2023 –afternoon**

**Syndicate 3: Environment and Natural resources**

**Venue: ICT Blg Hall, Room 2**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	HSSFCW Efficiency and Microbial dynamics in treating UASBR brewery effluent	Mr. Ermias Alayu, <i>Wachemo University, Ethiopia</i>	Dr. Belay Birehane	Dr. Kero Jemal
2:20pm -2:40pm	Local microalgae potential for wastewater remediation, lipid and bioethanol production	Dr. Zenebe Yirgua, <i>Wolaita Sodo University, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Health Break and collaborative Discussions			
3:40pm -4:00pm	Landslide Factor Optimization For Landslide Susceptibility Modeling	Mr. Azemeraw Wubalem, <i>University of Gondar, Ethiopia</i>	Dr. Alemgena Belete	Dr. Oumer Beriso
4:00pm -4:20pm	Roles of Formal and Customary Institutions in Environmental Resource Governance and Sustainability along Ethiopia-Kenya border: Do complement or compete?	Mr. Girma Defere, <i>Jimma University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Syndicate Session

**Day-1, April 28, 2023 –afternoon**

**Syndicate 4: Manufacturing and Computational Science**

**Venue: MSE B-534 Room**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Fabrication Of Inorganic Ceramic Membrane Water Filters	Dr. Enyew Amare, <i>ASTU, Ethiopia</i>	Dr. Alemu Gonfa	Dr. Melaku Tesfaye
2:20pm -2:40pm	Front-End Passive Safety System For Vehicle Collisions: Design and Analysis	Mr. Kibru Aregahegn, <i>ASTU, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Health Break and collaborative Discussions			
3:40pm -4:00pm	Design, Construction and Performance Evaluation of Tractor Drawn Potato Planter	Dr. Sagni Bedassa, <i>Ambo University, Ethiopia</i>	Dr. Yadesa Melaku	Dr. Demissie Jobir
4:00pm -4:20pm	Analyzing Sustainable Manufacturing Practices In Leather Industry	Dr. Sisay Addis, <i>Debre Markos University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Day 2

**April 29, 2023-Morning**

### Plenary Session

**Venue:** ASTU, Oda Nabee Hall

Time	Activity	Responsible	Chair p/Facilitator	Rapporteur
9:00 am-9:30am	Plenary Speech 3: (Virtual)	Prof. Samuel Kinde	Dr. Boja Mekonin	Dr. Temesgen Debelo
9:30am-10:00am	Plenary Speech 2	Prof. Wilhelm Stork		
10:00 am-10:30 am	Plenary Speech 4:	Prof. Jaebeom Lee		
10:30am-11:00pm	Discussions			
11:00am-12:00am	Health Break/ Exhibition (Admin building, ground floor)			
12:00pm-2:00pm	Lunch			



## Syndicate Sessions

**Day 2-April 29, 2023- Afternoon**

**Syndicate 1: Energy and Infrastructure**

**Venue:** **New Admin BoratiHall**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm-2:20pm	Electrocatalytic study of Pd/CeO <sub>2</sub> -N, S-rGO for Hydrogen and Oxygen Evolution application Hydrogen and Oxygen Evolution reaction	Dr. Mengistu Woldetinsay, <i>Wollega University, Ethiopia</i>	Mr. Tadesse Hailu	Dr. Enyew Amare
2:20pm-2:40pm	Defect-Rich Ultrathin NiCoFeOx Nanosheets for Efficient Oxygen Evolution Catalysts	Dr. Lemma Teshome, <i>ASTU &amp; Chungnam National University, South Korea</i>		
2:40pm-3:20pm	Discussion			
3:20pm-3:40pm	Tea Break and collaborative Discussions			
3:40pm-4:00pm	Clean Energy Uptakes and Its Determinants in Rural Ethiopia: Evidence from Ethiopian Rural Household Survey	Mr. Obsa Urgessa, <i>Ambo University, Ethiopia</i>	Dr. Birku Reta	Mr. Sisay Dechasa
4:00pm-4:20pm	Influence Of Maize Cob Ash As A Filler Material In Asphalt Concrete Mixes	Mr. Destaw Kifile, <i>Debre Tabor University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Syndicate Sessions

**Day 2-April 29, 2023- Afternoon**

**Syndicate 2: Smart Materials and Technology**

**Venue: ICT Blg Hall, Room 1**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Molecular Magnetism Behavior in Triangular Erbium Complex: Two Step of slow Magnetic Relaxation exhibited under External Magnetic field	Dr. Mamo Gebrezgiabher, <i>Addis Ababa Science and Technology University, Ethiopia</i>	Dr. Solomon Tiruneh	Dr. Mesfin Asfaw
2:20pm -2:40pm	Novel Transition Metal complexes of Aminoquinoline derivative for Drug design: Combined with DFT and Molecular Docking	Dr.Tadewos Damena, <i>Wachemo University, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Tea Break and collaborative Discussions			
3:40pm -4:00pm	Nanomaterials Based Electronic Thermometer Design and Development	Dr. Almaw Ayele, <i>Debre Markos University, Ethiopia</i>	Dr. Shimelis Lemma	Dr. Dinsefa Mensur
4:00pm -4:20pm	Non-Thermal Plasma Assisted Fabrication of Ultrathin NiCoOx Nanosheets for High-Performance Supercapacitor	Dr. Birhanu Bayissa <i>Chungnam National University, South Korea &amp; Haramaya University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			





## Syndicate Sessions

**Day 2-April 29, 2023- Afternoon**

**Syndicate 3: Environment and Natural resources**

**Venue: ICT Blg Hall, Room 2**

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Potential Groundwater Recharge Zones Within Dinder River Basin, Ethiopia	Mr. Afera Halefom <i>Debre Tabor University, Ethiopia</i>	Mr. Mitiku Kinfu	Dr. Andinet Kebede
2:20pm -2:40pm	Assessing the impact of land use/land cover change on the hydrology of Gidabo River sub-basin, Ethiopian Rift Valley Lakes Basin	Dr. Henok Mekonnen, <i>Dilla University, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Tea Break and collaborative Discussions			
3:40pm -4:00pm	Remote Sensing-based River Discharge Estimation for a Small River Flowing Over the High Mountain Regions of the Tibetan Plateau	Dr. Mulugeta Genanu, <i>Chinese Academy of Sciences, China &amp; Arba Minch University , Ethiopia</i>	Dr. Mesfin Benti	Dr. Fikreyesus Demeke
4:00pm -4:20pm	Flood vulnerability mapping and local management strategies in the intermediate urban centers of Ethiopia: the case of Adama city	Dr. Sitotaw Haile, <i>Haramaya University, Ethiopia</i>		
4:20pm-5:00pm	Discussion			



## Syndicate Session

Day 2-April 29, 2023- Afternoon

**Syndicate 4: Manufacturing and Computational Science**

**Venue:** MSE Blg, Room

Time	Title	Speaker/Affiliation	Chairperson	Rapporteur
2:00pm -2:20pm	Hybrid Nonlinear Controller Design for Quadrotor under Multiple Disturbances	Mr. Kalkidan Yirmed, <i>Debre Tabor University, Ethiopia</i>	Dr. Worku Jifara	Dr. Tilahun Melak
2:20pm -2:40pm	Constructing Birth Weight Prediction Model Based on Maternal Determinate in Ethiopia Using Ensemble Machine Learning Algorithms	Mr. Belayneh Endalamaw, <i>University of Gondar, Ethiopia</i>		
2:40mp- 3:20pm	Discussion			
3:20pm-3:40 pm	Tea Break and collaborative Discussions			
3:40pm -4:00pm	Optimization of Pressure Vessel Design Problem Using Four Metaheuristic Optimization Techniques: A Comparative Study	Mr. Getaw Ayay, <i>Addis Ababa Science and Technology University, Ethiopia</i>	Dr. Alemayehu Wakjira	Dr. Endalew Ayenew
4:00pm -4:20pm	Small Ball Tracking with Trajectory Prediction	Mr. Shambel Ferede, <i>Assosa University, Ethiopia &amp; Xidian University, China</i>		
4:20pm-5:00pm	Discussion			
6:00 pm	Closing Remark and Certification Fair well dinner			