



MACHAKOS UNIVERSITY

2ND ANNUAL INTERNATIONAL CONFERENCE

DATES:

24TH - 26TH APRIL 2019

PROGRAMME

THEME:

*Supporting Green Growth and Knowledge Economy
through Research Innovation and Technology
for Sustainable Development*

Supported by:



National
Bank



Soaring Heights in Transforming Industry and Economy

FUNDAMENTAL STATEMENTS

Our Vision

A preferred University of Excellence in Scholarship and Service Delivery

Our Mission

Provide scholarly education through Training, Research and Innovation for Industrial and socio-economic transformation of our communities.

Our Identity

Machakos University is an academic institution committed in transmitting knowledge, skills and attitude through science, Technology and Innovation for the benefit of humanity.

Our Philosophy

The Philosophy of Machakos University is to provide transformative leadership in Teaching, Training, Research, Innovation, Industrial and Technology transfer for wealth creation.

Core Values

Integrity
Accountability
Professionalism
Inclusivity
Creativity
Teamwork
Equity



MACHAKOS UNIVERSITY

2ND ANNUAL INTERNATIONAL CONFERENCE

DATE:

24TH -26TH APRIL 2019

VENUE:

MACHAKOS UNIVERSITY HOTEL AND CONFERENCE CENTRE

THEME:

Supporting Green Growth and Knowledge Economy through Research,
Innovation and Technology for Sustainable Development

CONFERENCE COMMITTEE MEMBERS

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Dr. David Wekesa

Dr. Euna Nyarige

Dr. Mark Kimathi

Dr. Elijah Muange

Dr. George Waswa

Mr. Paul Mutua Kombo

MESSAGE FROM THE VICE-CHANCELLOR



It is with great pleasure that I welcome you to Machakos University and to her 2nd Annual International Conference on the theme of “Supporting Green Growth and Knowledge Economy through Research, Innovation and Technology for Sustainable development”.

This conference purposes to take an in-depth reflection on global, regional and national interests, as espoused by Sustainable Development Goals adopted by the United Nations, Africa Union 2063 Agenda, Vision 2030 and the Kenya Government’s Big Four Agenda.

As we may be aware, conferences provide moments to network, build collaborative synergies, linkages, and partnerships that shall continue on, beyond the three days that we shall be gathered here. I would like to take this opportune moment to encourage you to share your experiences and opportunities with your fellow participants. In welcoming you to Machakos University, I wish to share with you that since its inception as a Technical School in 1957, the university has made a niche in Engineering and

Technology especially in Mechanical Engineering, Electrical & Eletronics Engineering Civil Engineering and Hospitality. The researchers and scholars participating from various universities, industry and other organizations’ in sharing their knowledge, shall propel not just this university but Kenya, Africa and the entire globe in general.

Finally, I wish to thank our Chief Guests, Keynote Speakers, Guests Speakers and all the participants, for finding time to be with us during this important occasion. I welcome you all to interact freely not just amongst yourselves but also with the University community.

Thank you and God bless you.

Prof. Lucy W. Irungu, PhD
VICE-CHANCELLOR & PROFESSOR OF ENTOMOLOGY
MACHAKOS UNIVERSITY



MESSAGE FROM THE CHAIRMAN, CONFERENCE COMMITTEE

After successfully hosting the 1st International Conference in April 2018, we have organized this 2nd International Conference with great enthusiasm pivoted on the lessons learnt earlier. I am therefore filled with joy to welcome you to this conference, under the theme: Supporting Green Growth and Knowledge Economy through Research, Innovation and Technology for Sustainable Development. This theme underscores Machakos University's inherent efforts to the realization of Sustainable Development while being conscious of the environmental implications. The University further underscores the fact that development occurs in an environment, both physical and socio-economic, facets that are captured in the following sub-themes of this Conference

1. Agriculture, Food and Nutrition Security
2. Health care, Leisure and Tourism Innovation
3. Language, Culture, Social Equity and Governance
4. Built Environment and Infrastructure Development, Industrialization:
Emerging Technologies, Manufacturing & Agro- processing
5. Energy, water, climate Change and Environmental Sustainability
6. Mathematics, Statistics & Data Science, Basic and Applied Sciences
7. Issues in Education and Training
8. Business, Entrepreneurial Innovation, SMEs & Marketing

Preparation of the conference started in August 2018 and the first call went out in October 2018, while final call closed on 15th March, 2019. I wish to thank participants for submitting quality abstracts from which a total of 206 from 10 countries were reviewed and accepted. I take pleasure to welcome all of you to Machakos University and appreciate you for choosing to share your scientific and academic work and experiences in this Conference. As it has become our tradition, one of our post-conference activities will be to peer-review all submitted papers and have them published. The papers that were presented during the 1st conference appeared in the proceedings and the ones that we further peer-reviewed and accepted appeared in the Machakos University Journal of Science and Technology.

On behalf of the conference committee, I wish to acknowledge and appreciate support received from Machakos University, National Research Fund, Athena at Two Rivers, Konza Technopolis Development Authority, National Bank of Kenya, Kenya Commercial Bank, Equity Bank, Coca-Cola and Sidia Bank. Your support made this 2nd Conference possible. May I further appreciate fellow Conference Committee members that I chair, upon whose collective effort, the Conference has come forth.

Finally, I wish you all fecund deliberations and networking throughout Conference period.

Thank you.

Prof. Peter N. Mwita, PhD
DEPUTY VICE-CHANCELLOR (RESEARCH, INNOVATION AND LINKAGES) &
CHAIRMAN, CONFERENCE COMMITTEE

MEMBERS OF MACHAKOS UNIVERSITY COUNCIL



Prof. Gideon Hanjari
Chairman

MEMBERS



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Ms. Florence Muthoni Gichohi



Ms. Harriette Chiggai



Mr. Richard Mativu Musau



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Mr. Peter Njoroge
*Rep. CS National
Treasury*



Mr. Paul Mwangi
*Rep. PS State Dept of
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Council Secretary/Vice Chancellor

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Prof. Ezara Ondari-Okemwa
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(Academic & Students' Affairs)



Dr. Susan Nzioki
Registrar
(Administration & Planning)



Ms. Aileen Nyatuga
Chief,
Finance Officer

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| Closing Ceremony: Venue: Kilimambogo Hall | 29 |

CHIEF GUEST~OFFICIAL OPENING



HON. MR. KERIAKO TOBIKO

(Cabinet Secretary for the Ministry of Environment and Forestry.)

Before his appointment, Tobiko was the Director of Public Prosecutions, the first holder of the office under the Constitution of Kenya 2010 having been first appointed in 2005. He was re-designated as the Chief Public Prosecutor in August 2010 and appointed to head the independent constitutional office in June 2011. He is an advocate of the High Court of Kenya and formerly a lecturer at the University of Nairobi. Hon. Tobiko is an alumnus of the University of Nairobi and Cambridge University. He is the winner of GadhiSmarak Award for Best “A” Level student 1984 (Kenya), Barclays Cambridge Commonwealth Scholarship, 1990 for Kenya and Pegasus Cambridge Scholarship, 1990 as well as Fellow of Cambridge Commonwealth Society (FCCS).

He has served in other national institutions namely: The Commission of Inquiry into the Land Law Systems in Kenya (The Njonjo Land Commission, between 1999 – 2002) where he was a Commissioner; The Constitution of Kenya Review Commission (CKRC, between 2000-2005) where he was a commissioner; Appointed as Director of Public Prosecutions in 2005; Member of the Commonwealth Group of contact persons on International Cooperation in criminal matters from 2007 to date; From 2007 to-date, member of the Governing Council of the National Crime Research Centre (NCRC); Member of the Advisory Board of the Witness Protection Agency (WPA) from 2008 to date; Ad hoc Secretary to the Constitutional Advisory Committee on Prerogatory of Mercy in 2009; Served as Alternate to Hon. Attorney-General as member of the Ransely Task Force on Police Reforms in 2008-09; Re-designated as Chief Public Prosecutor in August 2010; Alternate to Hon. Attorney General as a Member of The Police Reforms Implementation Committee (PRIC) from 2010 to date; Appointed by the Hon. Attorney-General as the National contact person in relation to cooperation with ICC from March 2010 to-date; Appointed to team up with Hon. Attorney-General and Solicitor-General to represent GOK in the proceedings before the ICC in relation to the 2007/08 Post Election Violence in Kenya from March 2011.

CHIEF GUEST-OFFICIAL CLOSING



PROF. CHACHA NYAIGOTTI-CHACHA
(Chairman, Commission for University Education)

Professor Chacha Nyaiigotti-Chacha is a Kenyan playwright and consummate Swahili language educationalist. He has served as an executive secretary of the Inter-University Council for East Africa (2000–2010), and was the first CEO of the Kenyan Higher Education Loans Board (1995–2000). He is currently serving as the Chairman of the Kenyan Commission for University Education (CUE) and he has been the chairman of Kenya Institute of Mass Communication (KIMC).

He was educated at Kenyatta College, receiving a BEd (Swahili Language), and later studied at Yale University, gaining an MA in Anthropological Linguistics and a Ph.D. in Swahili Language Linguistics. He has been a Tutorial Fellow and Lecturer in Swahili Language and Linguistics at Kenyatta University and later Egerton University in Kenya. He was a Research Professor at the Institute of Regional Integration and Development of the Catholic University of East Africa.

In 1994 Awarded Head of State Commendation (HSC) Medal (Kenya) for Distinguished Service and 2004 he was Awarded the Order of the Grand Warrior (OGW) Medal (Kenya).

KEYNOTE SPEAKERS



HON. JEROME OCHIENG

Principal Secretary, ICT & Innovation

Mr. Jerome Ochieng is Principal Secretary for ICT and Innovation. Until his appointment, Mr. Ochieng was the Director of the Integrated Financial Management Information System (IFMIS) at the National Treasury and a member, Board of Directors at the Information, Communication Authority. He has 17 years' work experience in the field of information and communication technology in the Public Service. Mr. Ochieng has also served as

ICT Manager with Public Procurement Oversight Authority for 6 years. He holds a Masters' Degree in Information Engineering from the University of the Ryukyus, Okinawa, Japan. He is a registered fellow of the Computer Society of Kenya and a Licentiate Member of the Institute of Management Information Systems (IMIS), UK.



PROF. GILIAN WESTHORP

Charles Darwin University-Australia

Prof. Gill is a realist research and evaluation methodologist and a Professorial Research Fellow at Charles Darwin University, where she leads the Realist Research Evaluation and Learning Initiative (RREALI). She also runs a private consultancy business specialising in realist research and evaluation. She is co-author of the international publication standards and quality standards for realist evaluation and realist literature review. Prof. Gill has provided in

excess of 70 training workshops in 14 countries, developed several new methods for realist research and evaluation, and published in realist methodologies. In 2018 she was made a Fellow of the Australian Evaluation Society. She is currently working on two aspects of realist philosophy – epistemology (knowledge) and axiology (value) - and their implications for evaluation methods.



PROF. FABIO SANTONI

Sapienza University of Rome

Prof. Fabio Santoni received the Dr. Eng. degree in Aeronautical Engineering (cum laude) and the PhD in Aerospace Engineering both at Università di Roma "La Sapienza", in 1992 and 1996. In 1996 he was visiting scholar at Stanford University, where he participated in the small satellite programs Sapphire and Opal. He had technical management responsibility in the education program UNISAT at University of Rome "La Sapienza", till 2009. He is presently Associate

Professor in Aerospace Systems at the Dipartimento di Ingegneria Astronautica, Elettrica ed Energetica (DIAEE) of University of Rome "La Sapienza", where he established the Aerospace Systems Laboratory. His research activity is mainly devoted to nanospacecraft design, attitude determination and control, space debris observation, mitigation and remediation techniques, including end-of-life disposal and active debris removal.

GUEST SPEAKERS



PROF. WILLIAM FAUSTINE EPEJU

William Epeju is a Professor of Agricultural Education and Extension at Kyambogo University, Uganda with diverse interest and experience in Agricultural Education. He holds a PhD in Agricultural Education (Extension) and has been the Dean of the Faculty of Vocational Studies which houses and administers the Department of Agriculture at Kyambogo University. He has been a member of several professional committees and bodies including Uganda Society and Association of Third World Studies, Kenya Chapter. His major area of interest is improving agricultural productivity through improved education and training of the farmers.

He has special interest in poverty reduction and eradication on smallholdings through improved productivity to assure food security and better incomes. He is active in matters of tree planting and participated in national environmental action plan process (NEAP) in Uganda during the 1990s. He is the Guest Speaker for Sub-Theme 1: Agriculture, Food and Nutrition Security.



PROF. ELIJAH GITONGA RINTAUGU

Professor Elijah G. Rintaugu is a Professor at Kenyatta University in the Department of Recreation and Sport Management. He holds Doctor of Philosophy (Socio-Psychology of Sport) from Kenyatta University. Elijah is a member of several professional bodies such as International Council for Health, Physical Education, Recreation Sport and Dance (ICHPER-SD) Africa Association for Health, Physical Education, Recreation, Sport and Dance (AAHPERD) and Kenya Association of Health, Physical Education Recreation Sport and Dance. He serves as a reviewer for many international journals and has sat in a number of Committees in the University. He is

the Guest Speaker for Sub-Theme 2: Health care, Leisure and Tourism Innovation.



PROF. MARTIN NJOROGE

Prof. Martin C. Njoroge is a Professor of Languages & Linguistics, holds PhD in Linguistics (KU). Prof. Njoroge is an accomplished scholar and researcher and has conducted extensive research on Multilingual Education, English language teaching and sociolinguistics. He is co-editor of Multilingualism and Education in Africa: The State of the State of the Art, and Springer's Multilingual Education in Africa journal. He is also a peer reviewer for the Commission for University Education. He is the Guest speaker for Sub-theme 3: Language, Culture, Social Equity and Governance.



PROF. MUGENDI K M'RITHAA

Professor Mugendi K. M'Rithaa is a transdisciplinary industrial designer, educator and researcher. He studied in Kenya, the USA, India and South Africa and holds postgraduate qualifications in Industrial Design, Higher Education, and Universal Design. He has taught in Kenya, Botswana, South Africa and Sweden and is passionate about various expressions of socially conscious design, including Designerly Strategies for Mitigating Climate Change; Design for Social Innovation and Sustainability; Distributed Renewable Energy; Indigenous Knowledge Systems; Participatory Design; and Inclusive/Universal Design. He is a founding member of the Network

of Afrika Designers (NAD), a member of the Association of Designers of India (ADI). He is the Guest Speaker for Sub-theme 4: Built Environment, Infrastructure Development Industrialization: Emerging Technologies, Manufacturing & Agro-processing.



PROF. BERNARD KIPSANG ROP

Kipsang is a Professor of Petroleum Geology and formerly, Chairman Mining, Materials & Petroleum Engineering Department, Jomo Kenyatta University of Agriculture Technology, Kenya. He holds a Ph.D. in Petroleum Geology, from University of Pune, India. He has attended and facilitated various local and international symposia/workshops among them; The East Africa Petroleum Conference and Exhibition (EAPC'15), Kigali, Rwanda, Governing Council Meeting at the Southern Eastern African Mining Center, Dar ES Salaam, Tanzania, Governing Council meeting at the Southern Eastern African Mining Center, in Luanda, and United Nations Commission on Sustainable Mining Extractive Developments, Geneva, Switzerland, UN HQs. Mineral Extractive Industry Development. He is the Guest Speaker for Sub-theme 5: **Energy, water, climate Change and Environmental Sustainability.**



PROF. ANNE W.T. MUIGAI

Prof Anne Muigai is a molecular population geneticist with over 15 years' experience in the field of Genetics and Biotechnology. She is a Professor of Genetics at JKUAT and a member of the Animal Genetic Taxonomy Advisory Group (AnGR-TAG) of the African Union. She is also a Commissioner with the Commission for University Education and a Director with the Kenya Plant Health Inspectorate Service (KEPHIS), a state corporation within the Ministry of Agriculture that regulates the agricultural sector. She was recently appointed to become a member of the World Health Organization international advisory committee on the future of human gene editing. She is the Guest Speaker for Sub-theme 6: **Mathematics, Statistics & Data Science, Basic and Applied Sciences.**



PROF. KISILU KOMBO

Professor Kombo holds a PhD in Sociology of Education, and currently the Acting Dean, School of Education, Kenyatta University. Some of the significant researches he has done include the Impact of Nairobi-Thika Super Highway on Ruiru Town in Kenya and Cactus Pilot Project on Health Promotion in Selected Primary Schools in Nairobi, Kenya. His areas of interest include Education, Research and Community Development. He is the Guest Speaker for Sub-theme 7: **Issues in Education and Training.**



PROF. SIMMY MARWA

Simmy is a Professor and practitioner of Strategic Quality Management and has well over 20 years' academic practice in Higher Education Institutions (HEIs) and international experience in consultancy (both public and private sector) in UK, Middle East and Africa. He is also a Certified Manager in Six Sigma Green and Black Belt, Process Excellence and Project Management as well as a Fellow of the Higher Education Academy (UK). Simmy has acquired considerable experience working with the public and private entities in diverse sectors and specialisms and is passionate about quality deliverables in every project. He is the Guest Speaker for Sub-theme 8: **Business, Entrepreneurial Innovation, SMES & Marketing.**

OFFICIAL OPENING AND KEYNOTE ADDRESSES

| TIME | DAY 1: WEDNESDAY 24 TH APRIL 2019 | RESPONSIBLE |
|--------------------|--|--|
| 8:00-9.00 | Arrival and Registration and Brief Entertainment | Secretariat |
| 9.00-10.30 | OFFICIAL OPENING OF THE CONFERENCE VENUE: KILIMAMBOGO HALL | |
| | Welcoming Remarks, Prof. Peter Mwita (DVC- Research, Innovation and Linkages, Machakos University) | Registrar (RIL) |
| | Opening Address, Prof. Lucy Irungu (Vice- Chancellor, Machakos University) | Prof. Peter Mwita Deputy Vice- Chancellor (RIL) |
| | Opening Address; Prof. Gideon Hanjari (Chairman, Machakos University Council) | Prof. Lucy Irungu Vice-Chancellor, Machakos University |
| | SPEECH AND OFFICIAL OPENING OF THE CONFERENCE BY THE CHIEF GUEST: HON. MR. KERIAKO TOBIKO, CABINET SECRETARY, MINISTRY OF ENVIRONMENT AND FORESTRY | Prof. Gideon Hanjari (Chairman, Machakos University Council) |
| 10.30-11.00 | PHOTO SESSION AND HEALTH BREAK | Registrar (RIL) |
| 11.00-11.30 | Hon. Mr. Jerome Ochieng (Principal Secretary for ICT & Innovation) ICT and Innovation Synergies for Supporting Green Growth and Sustainable Development | Prof. Peter Mwita, DVC-RIL, MKsU |
| 11.30- 12.00 | Prof. Gillian Westhorp (Professorial Research Fellow, Charles Darwin University) A Realist Approach to understanding Green Growth and Sustainable Development in Low- and Medium- Income Countries. | Prof. Joyce Agalo, DVC-ASA, MKsU |
| 12.00-12.30 | Prof. Fabio Santoni (Sapienza University of Rome) Kenya's First Satellite | Prof. Douglas Shitanda DVC-APF, MKsU |
| 12.30-1.00 | Plenary (Key Note Speakers) | Prof. Fredrick Ogola |
| 1.00-2.00 | LUNCH BREAK | |

SUB-THEME 1: AGRICULTURE, FOOD AND NUTRITION SECURITY

DAY 1: WEDNESDAY 24TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: VOI HALL

| TIME | PRESENTER | RESPONSIBLE |
|-----------|---|------------------------|
| 2.00-2.20 | Shirandula Duncan: Food wastage in Hotels in Kenya: Interventions for Realization of Food Security | Dr Jacob, J.J.Konyango |
| 2.20-2.40 | Kyule, N. Miriam, Konyango J.J O. Jacob: The place for Dry Land Agriculture in Kenya's Secondary School Agriculture Curriculum | |
| 2.40-3.00 | Serah W. K Muchai, Ngetich, K. Felix, Mary Baaru and Monicah W.M. Muna: Evaluation of sorghum production under zai [pit system in semi-arid areas of Kenya | |
| 3.00-3.20 | Javan O. Owiti, Jacob J.J. OchiengKonyango, James J. Obara, Mark N. Mutinda: Extension Environment Characteristics Influencing the Use of Video Mediated Technology in Teaching Agricultural Knowledge and Skills to Farmers in Homa-Bay County, Kenya | |
| 3.20-3.40 | Mary Wambura Kamau: Evaluation of Effects of Sewage Farming Vegetables to Consumers and Their Awareness in Peri-Urban Areas: A Case Study of Ruai, Nairobi County | |

DAY 2: THURSDAY, 25TH APRIL 2019 CONFERENCE PRESENTATION SESSIONS. VENUE: VOI HALL

GUEST SPEAKER: PROF. FUASTINE WILLIAM EPEJU

| TIME | PRESENTER | RESPONSIBLE |
|-----------|--|---|
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-9.20 | Guest Speaker Address and Plenary | Prof. Benjamin Onyango (Missouri State University) |

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| 9.20-9.40 | Samuel Namu, Hannah Karuri, Editah Njeri: Evaluating the efficiency of high-resolution melting curve analysis in diversity analysis of Meloidogyne species in rice fields | |
| 9.40-10.00 | Paul Mwari Maina: Integrating Information and Communication Technology (ICT) in the Farming System for livelihood improvement, “a case of Kieni East constituency, Nyeri County, Kenya” | |
| 10.00-10.20 | Nderitu Wangari Peris, Otieno Mark, Arunga Esther, Geoffrey O. Wafula, John Jamleck Muturi, Mattias Jonsson: Tomato leaf miner (TUTAABSOLUTA) incidence and severity in Kirinyaga County, Kenya | |
| 10.20-10.40 | Pauline N. Mutura and Lilac Osanjo: Improving Food Security through Adoption of Bio-based Practices in Rural Kenya | |
| 10.40-11.00 | David Agole, William Faustine Epeju: Determinants of Participation of Young Farmers without Disability in Capacity-building Programs Designed for the Public in Uganda | |
| 11.00-11.30 | HEALTH BREAK | |
| 11.30-11.50 | Angelica M. Kimwele, Sophie A. Ochola, Mary N. Mugambi: Implication of School feeding programs, national food policies, action of plan and strategies on school meals and food security among school children in Kenya (Review) | Dr. Marther Ngigi |
| 11.50-12.10 | Seraphine Sherry Aholi, Jacob J.J. Ochieng Konyango: Influence of Secondary School Students Attitude Towards Agriculture on Employment Creation in Vihiga County, Kenya | |
| 12.10-12.30 | Daniel Kitonga, Robert Arasa, Damaris K. Muthusi: Hands on Strategy’ on Food Security: A Freirean pedagogical approach with the pastoralist communities in Kenya | |
| 12.30-12.50 | John Kiratu, George Gachumi: In Agricultural Products Processing Application of Supercritical Carbon Dioxide | |
| 12.50-2.00 | LUNCH BREAK | |
| 2.00-2.20 | Zachary Getenga, Anastasiah Ngige, Selly Kimosop, Gershon Mutua, Francis Orata, Isaac Kowino, Hassan Were, Daniel Onunga, Bonface Mbithi: Enhancement of Degradation of Persistent Agricultural Chemicals in Soils: Strategy for Decontamination of Polluted Environments | Dr. Elijah Mwuange |

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| 2.20-2.40 | Tindih H.S, Geysen D, Goddeeris B.M, Awino E, Naessens. J: Differential induction of host innate responses after infection of cattle with two <i>Theileriaparva</i> isolates of different virulence | |
| 2.40-3.00 | Alice Kosgei Leah Mutanu, Margaret Wachu Gichuhi and David Steven Scott: Effective methods for data collection in rural setup: A pilot study focusing on Agricultural practices in Kinangop, Nyandarua County, Kenya | |
| 3.00-3.20 | Alhaji ModuBukar, Mohammed Zanna Malilima: Pathogenicity and Control of Root Knot Nematode (<i>Meloidogyne incognita</i>) on Cowpea. | |
| 3.20-3.40 | Onyango S, Muchina S.W, Ng'ang'aS.I: Small Holder Tea Industry Sustainability: Environmental Accounting and Reporting as A Strategy to Cushion on Environmental Concerns | |
| 3.40-4.00 | Daniel Oduor Onyango: Human and Physical Variables in the Adoption of Cash Crop Farming in Gem Sub County, Siaya County, Kenya | |
| DAY 3: FRIDAY, 26TH APRIL 2019 CONFERENCE PRESENTATION SESSIONS. VENUE: VOI HALL | | |
| 8.30-8.50 | Muhia. S, Ilatsia. D & Achieng .C: Effects of Anthropogenic Activities on the Water Quality of Malewa River for Animal Consumption: - A Case Study of Kenya Agricultural and Livestock Research Organization (KALRO)-Naivasha | Dr. Alice Kosgei |
| 8.50-9.10 | Wambu Charles: Women Technological Empowerment in Agriculture: Issues, Challenges and Policy Option: A Case of Rural Women Farmers Groups in Njoro Sub-County Kenya | |
| 9.10-9.30 | Benjamin Onyango: Predictors of the Purchase of Organic Foods in the United States: A Study of Attitudes and Practice in Emerging Food Markets | |
| 9.30-9.50 | Philip Mwangi Gichuki: Effects of Exotic Trees on Mycorrhizal Association and Bio-Geochemical Processes of the Adjacent Native Pastures | |
| 9.50-10.05 | Wambua B., Muli E., Kanui T., and Muli B: Large Hive Beeﬂe: A potential new pest of honeybee in Kenya. | |
| 10.05-10.20 | Eunice Kabura: Constraints and Opportunities for Youths Engaged in Agricultural Value Chain in Limuru Sub-County in Kiambu County | |

SUB-THEME 2: HEALTH CARE, LEISURE AND TOURISM INNOVATION

| TIME | DAY 1: WEDNESDAY 24 TH APRIL 2019 | RESPONSIBLE |
|--|---|-----------------------|
| 2.00-3.00 | GUEST SPEAKER: PROF. ELIJAH GITONGA RINTAUGU | Dr. Esther Nduku |
| 3.00-3.20 | Plenary | |
| 3.20-3.40 | Lucy Rotich: Effect of Consistency Culture on Performance of Selected 5-Star Chain Affiliated Hotels in Kenya | |
| 3.40-4.00 | Mwawaza M. S, Shirandula, D: A review of literature on local community participation towards sustainable tourism development in East Africa | |
| DAY 2: THURSDAY, 25TH APRIL 2019 CONFERENCE PRESENTATION SESSIONS VENUE: ROOM 11 | | |
| TIME | PRESENTER | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-9.20 | Guest Speaker and Plenary | |
| 9.00-9.20 | Alice M. Nzioka: Tourism product Innovation: Positioning Meetings, Incentives, Conferences and Exhibitions, as a strategy for product diversification in Beach Hotels of Mombasa County, Kenya | Mr. Duncan Shirandula |
| 9:20-9:40 | Linnet Hamasi, Faith Wambua: Tourism Potential in Elgeyo-Marakwet County and Prospects for Development | |
| 9:40-10:00 | Linnet Hamasi: Community Reproductive Sexual Health Scouts and Monitors Among the Pastoralist Communities of Northern Kenya and Implications for Development | |
| 10:00-10:20 | Akunja L. Aluoch: Institutional Frameworks for Sustainable Events Management: A Kenyan Perspective | |
| 10:20-10:40 | Nelima Barasa: Design Aspects for Smart Maternity Wear: A Strategy for growing the Maternity Wear Market in Kenya | |
| 10:40-11:00 | Khisa Kevin Nandasaba: Improving Health Care Delivery by Community Health Workers Through Mobile Phones | |
| 11:00-11:30 | HEALTH BREAK | |

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|-------------------|---|----------------------|
| 11:30-11.50 | Charles Ndambuki: Mathematical Modelling of Cholera Transmission Dynamics for Aquatic Reservoir with Control Strategy | Dr. Alice Nzioka |
| 11.50-12.10 | Michael Bennett Sepula and Jacqueline Korir: Harmonisation of Hotel Rating Systems in Southern Africa: Benefits and Challenges for the Hospitality Industry in Malawi | |
| 12.10-12.30 | Mutai, C & Bii, C: Antimicrobial activity of Maytenusheterophylla extracts. | |
| 12.30-12.50 | Rose Achieng' Agalo: Significance of Social Media in the Kenya Tourism Industry | |
| 12.50~2.00 | LUNCHBREAK | |
| 2.00-2.20 | Bett, C.J., Waweru, B.R.: Adoption of Green Practices within the Hospitality and Tourism Sector for Sustainable Development: A Case Study of Selected Hospitality and Tourism Industries in Machakos County, Kenya | Dr. Charles Ndambuki |
| 2.20-2.40 | Isa Yetunde Opeyemi, Onuoha Stanley Chukwudozie, Oladele Olasoji Vincent: Drug Resistances Detection in Mycobacterium Tuberculosis Patient in Jos, Plateau state Nigeria | |
| 2.40-3.00 | Susan Chepchirchir Boit: Community Perception of Tourism Development; A case study of Rimoi National Reserve, Elgeyo-MarakwetCounty, Kenya | |
| 3.00~4.00 | Group Plenary | |
| 4.00~4.20 | HEALTH BREAK | |

SUB-THEME 3: LANGUAGE, CULTURE, SOCIAL EQUITY AND GOVERNANCE

| DAY 1: WEDNESDAY, 24TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: ROOM 10 | | |
|---|---|-----------------|
| TIME | PRESENTATION | RESPONSIBLE |
| 2.00-2.20 | Jackson Ndung'u Mwangi: Analysis of the Motives Elicited by Use of Symbolic Names in Swahili Novel KidagaaKimemwozea | Dr. Vifu Makoti |
| 2.20-2.40 | Raphael Francis Otieno: The Role of the 'Path' and the 'Container' Image Schemas in Political disclosure in Kenya | |

| 2.40-3.00 | Martin C. Njoroge, Peter Mutahi: Practices in Undergraduate Phonology Andragogical Class Integrating Visually Impaired Students: Lessons from Kenya, Africa | |
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| 3.00-3.20 | Eunice Wanjiku Ndung'u: Critical Reflections on the Impact of Non-Governmental Organizations in the Development of the Kenyan Rural Community: A Case Study of the Ogiek Peoples' Development Program (OPDP) | |
| 3.20-3.40 | Ian Slade Ashivende & Steve Gachie: Matatu Design Culture in Nairobi Kenya: An Iconological Analysis | |
| 3.40- 4.00 | Jeremiah Mutuku Muneeni: Linguistics Elements and Meaning: Imagery as a Subtle Communication of Ideologies in Poetry | |
| 4.00-4.20 | Ruth M. Mwanzia, Njoki Wane and George Muthaa: Philosophical Foundations and Ethics: A Deconstruction and Reconstruction of Kenyan Education System | |
| 4.20-5.00 | HEALTH BREAK | |
| DAY 2: THURSDAY, 25TH APRIL 2019: VENUE ROOM 10 | | |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| GUEST SPEAKER: | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8.30-9.20 | Guest Speaker and Plenary | |
| 9.00-9.20 | Mugambi C. Ngumo, Mwai K. Francis: Subversion of Grand Narratives in Trevor Noah's Story 'Run' | |
| 9.20-9.40 | Grace Gakii Muthuri, David Malonza, Farai Nyabadza: Modeling the Effects of Targeted Mass Media Campaigns on Alcohol Abuse in Kenya | Prof. Geoffrey Maroko |
| 9.40-10.00 | Benson Boniface Kinjofu & Joseph Hokororo Ismail: The Contribution of the Mother Language to Tanzanian Socio-economic Development through Media: With special reference to Mashami | |
| 10.00-10.20 | Chipanda Simon: Evaluation of Speech Act Theory in the 5 th Tanzanian Presidents Speeches | |
| 10.20-10.40 | J. W. Mbithi: Critical Thinking, Democracy and Sustainable Development | |
| 10.40-11.00 | Larry Ndivo: Kinyanjui Kombani: Didactic Escapee or Just a Story Teller? | |

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| 11.00-11.30 | HEALTH BREAK | Dr Larry Ndivo |
| 11.30-11.50 | Paul Kombo: The Legacy of Cecil John Rhodes: The British Diamond Magnate | |
| 11.50-12.10 | Chipanda Simon: Analysis on the maximum number of freely Affix ordering in Kisukuma Verb Extensions | |
| 12.10-12.30 | Geoffrey Maroko & Gladys Mokuu: Geoffrey Maroko&Gladys Mokuu: Unpacking the linguistic metaphors entrenching HIV/Aids-related stigma in Kisii County | |
| 12.30-12.50 | Romano Okwi Elingit & Beatrice Kemunto Obaga: Gender Mainstreaming Interventions in the Public Sector of Kenya | |
| 1.00-2.00 | Geoffrey Maroko, Larry Ndivo, Sophia Njeru: Postgraduate Attrition: Supervisor Feedback Too Is to Blame | |
| 12.50-2.00 | LUNCH BREAK | Dr. Anashia Ong'onda |
| 2.00-2.20 | Mercy Mueni Wambua: Effects of Parental Divorce or Separation on Adolescent's Psychosocial Wellbeing in Kajiado North Sub-county | |
| 2.20-2.40 | Chipanda Simon: Evaluation of Speech Act Theory in the 5 th Tanzanian Presidents Speeches | |
| 2.40-3.00 | Emmanuel Mutungi: Conserving the African Narrative: Blacksmith Practice among the Ethur Community in the Western Karamoja in Northern Uganda | Dr John Mutua |
| 3.00-3.20 | Mugambi C. Ngumo & Mwai K. Francis: Subversion of Grand Narratives in Trevor Noah's Story 'Run' | |
| 3:20-3:40 | Susan Mwangi: The Role of Vernacular Radio in Peace Building and Post-Conflict Reconstruction Initiatives in Kenya | |
| 3:40-4:00 | Ong'ayo, A H. and Hassan, F. A: Relationship Between Human and Social Capitals and Community Participation in Development Initiatives in Coastal Region of Kenya | |
| 4.00-4.20 | Ngira Amos Anthony: Terrorism and Disaster Preparedness among Higher Educational Institutions in Kenya | |
| 4.20-5.00 | HEALTH BREAK | |

| DAY 3: FRIDAY, 26TH APRIL, 2019 VENUE: ROOM 10 | | Dr Francis Mutua |
|--|--|-------------------------|
| 8.30-8.50 | Murithi Joseph Jesse: ItikadikatikaRiwayazaDunia Yao (2006) naMhangaNafsiYangu (2013) za S. A. Mohamed | |
| 8.50-9.10 | John Musyoka Mutua: Usawiri wa Mitazamo ya Vijana Wazee katika Ukombozi wa wanamke: Tamthilia ya Kitumbua Kimeingia Mchanga (Said A. Mohamed) na Migogoro (Mwenda Mbatiah) | |
| 9.10-9.30 | Joseph Hokororo Ismail: Ujitoshelezaji wa Kiswahili kamaChombo cha kutafsiriaNyarakaTeulezaKimahakama Tanzania | |
| 9.30-9.50 | Joseph Hokororo Ismail: Mchango WA Kiswahili katika Upunguzaji WA AjalizaVyombovya Moto Barabarani: MifanokutokaMadereva WA Magari Tanzania | |
| 9.50-10.05 | Jackson Ndung'u Mwangi: Dhamira Zinazo ibuliwa Na Umajazi Wa Wahusika Katika Riwaya Ya KidagaaKimemwozea | |
| 10.05-10.20 | Magdalene Wangu Gituru & John M. Kobia: Mifanyiko Ya Unyambulishaji Wa Vitenzi Katika Kigichugu | |
| 1.0.20-10.35 | Justus Kyalo Muusya: Tathmini Ya Ujumi Mweusi Katika Tamthilia Ya Mashetani Wamerudi (S.A.M 2016) | |
| 10.35-10.50 | Jackson Ndung'u Mwangi: Dhamira Zinazo ibuliwa na Umajaziwa Wahusika Katika Riwaya ya Kidagaa Kimemwozea | |
| 10.50-11.05 | Joseph Hokororo Ismail & Baraka Kasinge Mkwabwe: Mustakabali wa Ufundishaji na Ujifunzaji wa Fonolojia ya Kiswahili kwa kutumia Uwili Lugha katika Elimu ya Juu Tanzania: Mifano kutoka Programu za Uzamili | |
| 11.00-11.30 | HEALTH BREAK | |

SUB-THEME 4: BUILT ENVIRONMENT, INFRASTRUCTURE DEVELOPMENT INDUSTRIALIZATION: EMERGING TECHNOLOGIES, MANUFACTURING AND AGRO-PROCESSING

| DAY 1: WEDNESDAY, 24 TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: THATHA HALL | | |
|---|---|---------------------|
| TIME | PRESENTATION | RESPONSIBLE |
| 2.00-2.20 | Ibrahim Oyediran, Jacob Mutua, Eliud Mathu, Benard Kipsang Rop, Faith Mlewa: Validation of GIS based approach to optimally locating Drilling Targets during Exploration of Gold in Kakamega, Western Kenya | Dr. Mark Kimathi |
| 2.20-2.40 | Stanley M. Makindi: Participatory Forest Management (PFM) Performance within the Mau Forest Complex, Kenya | |
| 2.40-3.00 | Mohammed H, Mohammed B, Adam M, Adamu H: An Assessment on The Impact of Information Technology: Case Study of University of Maiduguri Teaching Hospital, Nigeria. | |
| 3.20-3.40 | Susan Mwangi: Digitizing the voice of the community: The Use of ICTs in Community Radio Broadcasting in Kenya | |
| 3.40 -4.00 | Michael K. Muiya: Application of Design in Enhancing Quality Handmade Products in Kenya | |
| 4.00-4.20 | Mark Kimathi: Description of Traffic Flow on an Inclined Road; The Fundamental Diagram Approach | |
| 4.20-5.00 | HEALTH BREAK | |
| DAY 2: THURSDAY, 25 TH APRIL 2019: VENUE: THATHA | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| GUEST SPEAKER: PROF. MUGENDI K. M'RITHAA | | |
| 8.30-9.00 | Guest Speaker Address and Plenary | Dr. Charles Mwaniki |
| 9.00-9.20 | Mercy Wanja Njagi: E-Learning: The Emerging Technologies in Instruction | |
| 9.20-9.40 | Simon Mburu Njoroge: Supporting Green Growth and Knowledge Economy through Research, Innovation and Technology for sustainable Development | |

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| 9.40-10.00 | John Samuel Njoroge: Global High-Tech Digital based Company (e-Global) | |
| 10.20-10.40 | Osmund Kapinga, Victoria A. Gores: The History of Tanzania industrial Research and Development Organization (TIRDO) 1976 to 2018. | |
| 10.40-11.00 | Angela Kemunto Nyambane; Factors influencing Integration of ICT and Sustainable Development in Secondary Schools | |
| 11.00-11.30 | HEALTH BREAK | |
| 11.30-11.50 | Mugiira E. K., Emmanuel Kinoti: Review of Ancillary services provided by Solar PV plants | Dr. George Waswa |
| 11.50-12.10 | Nicholas Anyuor, Olgah Awuor-Kiboye: Community Radio and Women Empowerment in Kenya: Case of Mama Milambo Programme of Radio Milambo in Migori County | |
| 12.10-12.30 | Purity Mugambi, MA, James Murunga, MA: Creating Favorable Macroeconomic Environment for Manufacturing Industry in Kenya | |
| 12.30-2.00 | LUNCH BREAK | |
| 2.00-2.20 | Mwaniki Charles: Medium Network Optimal Load Shedding using Cuckoo Search with Levy Flight Algorithm for System Stability | Dr. Sophia Njeru |
| 2.20-2.40 | Obondo Gaudence, Violet K. Nabwire, and Jackson K. Too: The smart phone Revolution Has Arrived in Classroom! What Are my Options? | |
| 2.40-3.00 | Coletta Ruth Matayo, Justin Kyalo: Towards Self-Sustaining Communities Through the Art of Basketry; The Case of Mumo WaManyala Group, Masii Sub County, Machakos County, Kenya | |
| 3.00-3.20 | GW Waswa, J van Tol, SA Lorentz & D Vermeulen: Dynamics of pressure waves and groundwater flow at a wetland zone in a headwater catchment | |
| 3.20-3.40 | Hesbon Kipchirchir Kiptoo, Benard Mutisya Nzyoka, David Muchangi Mugo: A Service Oriented Architecture Approach to Implementing an Omni channel Personal Health Record system | |

| 3.40-4.00 | Mohammed. B, Mohammed H, Tu'unji. S.A, Ahmed I: Building conditions Survey and systematic Defects Diagnosis on Library building in Nigeria | |
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| 4.00-5.00 | HEALTH BREAK | |
| DAY 3: FRIDAY, 26TH APRIL 2019: VENUE: THATHA HALL | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8.30-8.50 | Nosayaba F. O. Evbuomwan: Creating the Infrastructural Framework for Innovation in Africa | Dr Charles Mwaniki |
| 8.50-9.10 | Emmanuel Kiamba, Richard Muthui Kasomo, Bernard K. Rop & Jackson Mwangangi Mwendwa: Limestone Production Optimization by Fragmentation Control – Case Study of Bissel Quarry | |
| 9.10-9.30 | Waswa, G. W. Vermeulen & D. Lorentz, S. A: A new pressure wave theory for a transient drawdown in an unconfined aquifer during pumping | |
| 9.30-9.50 | Watson Kanuku, George Okeyo & Michael Kimwele: A Stage Model for Cloud Computing Adoption in E-Government Implementation | |
| 9.50-10.10 | Ali H. Wako: Nanotechnology: A New Dawn for Kenya | |
| 10.10-10.30 | Oluwaseye Oniekeku, Stanley Musee Shitote, John Mwero, Adeola. A. Adedeji: Comparative Analysis of Compressive Strength of Bamboo Leaf Ash and Baggash Ash Concretes | |
| 11.10-11.30 | HEALTH BREAK | |

SUB-THEME 5: ENERGY, WATER, CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY

| DAY 1: WEDNESDAY, 24TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: ILUVYA HALL | | |
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| TIME | PRESENTATION | RESPONSIBLE |
| 2.00-2.20 | Ma'arf Murtala: Spatio-Temporal Analysis of Rainfall Trends and Fluctuations in Northwestern Nigeria | Dr Julius Nzeve |

| 2.20-2.40 | Babangida Garba: Assessing the Constrains of Water Supply for Irrigation in Hadejia Valley Irrigation Project Area, Jigawa State Nigeria | |
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| 2.40-3.00 | Ruth N. Kundu, Marther N. Ngigi: Fostering resilience to climate change through institutional innovations and gender inclusion in Africa | |
| 3.00-3.20 | Levi Situma Chepkania: Mapping Geographical Features; Case Study of Bungoma County | |
| 3.20-3.40 | Kioko Mutunga: Environmental Degradation and poverty nexus: The Twin threat and barrier to Sustainable Development | |
| 4.00-4.20 | HEALTH BREAK | |
| DAY 2: THURSDAY, 25TH APRIL 2019. VENUE: ILUVYA HALL | | |
| GUEST SPEAKER: PROF. BERNARD ROP | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-9.20 | Guest Speaker Address and Plenary | |
| 9.20-9.40 | David Wafula Wekesa: Feasibility Study for Development of 2 MW Solar PV power plant at Machakos University, Machakos County | Dr. David Wekesa |
| 9.40-10.00 | Jones F. Agwata: Reflections on Disaster Management Regulatory Frameworks in Kenya | |
| 10.00-10.20 | Philip Komo Kahuho, Phirista Nakato Nassali, James Maina & Paul Byatta: Describing an Effective Volunteer in Program Implementation: A Case of Promoter in the Dispensers for Safe Water Program in Rural Kenya, Uganda and Malawi | |
| 10.20-10.40 | Temitope Ezekiel Idowu, Nelly Cherono Nelly Kiplangat, Rose Waswa: Land cover changes and its Implications on Urban Heat island in Nairobi County: A GIS and Remote Sensing Approach | |
| 10.40-11.00 | Onyango, S; Muchina, S.W, Nga'ang'a: Small Holder Tea Industry Sustainability: Environmental Accounting and Reporting as a Strategy to Cushion on Environmental Concerns | |
| 11.00-11.30 | HEALTH BREAK | |

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| 11.30-11.50 | Caroline Maina, Bernard K Rop, Wycliffe H Namwiba, Jackson M mwenda: Importance of Applied Geology in Mining Perspective | Dr. Cornelius Okello |
| 11.50-12.10 | K. Muchiri, J. N. Kamau, D.W. Wekesa: Solar PV Potential and Energy Demand Assessment in Machakos County | |
| 12.10-12.30 | Shelin Kasozi, Emmanuel Mutungi: Community Participation in Sustaining Safe and Clean Water: The Case of Kyampisi Child Care Ministries Water Project in Mukono District, Central Uganda | |
| 12.30-2.00 | LUNCH BREAK | |
| 2.00-2.20 | Christabel Muhonja · Huxley Mae Makonde, Mabel Imbuga, Gabriel Magoma: Biodegradability of Polyethylene by Bacteria and Fungi from Dandora Dumpsite-Nairobi Kenya | Dr Elizabeth Ndunda |
| 2.20-2.40 | Muhia S., Ilatsia D., Achieng C.: Effects of Anthropogenic Activities on the water Quality of Malewa River for Animal Consumption: - A Case Study of Kenya Agricultural and Livestock Research Organization (KALRO)-Naivasha | |
| 2.40-3.00 | Philip Komo Kahuho, Phirista Nakato Nassali, James Maina & Paul Byatta: Optimizing Access to Safe Water through Chlorinated Dispensers in Rural Kenya, Uganda and Malawi | |
| 3.00-3.20 | George Kiarie: The Role of Religion in Environmental Conservation in Kenya | |

SUB-THEME 6: MATHEMATICS, STATISTICS & DATA SCIENCE; BASIC AND APPLIED SCIENCES

| DAY 1: WEDNESDAY 24 th APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: KILIMAMBOGO HALL | | |
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| TIME | PRESENTER | RESPONSIBLE |
| 2.00-2.20 | J. O. Awino, T. J. O. Aminer, T.M. Onyango and N. B. Okelo: Numerical Analysis of mathematical Model for Carbon Pollution in roads with ventilated Embankments in Absence and Presence of Forced Convection | Prof. Richard Simwa |
| 2.20-2.40 | Virginia Mwelu Kitetu, Prof. Thomas Tonny Mboya Onyango, Prof. Jackson Kioko Kwanza: Control Volume Analysis of Unsteady mhd Mixed Convection nanofluid Flows as a Result of Stretching Surface and Sunction | |

| 2.40-3.00 | Ngesa Joel Ochola: Mathematical modelling for behavioral dynamics of controlled evacuations based on visual perception | |
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| 3.00-3.20 | Mwelu Susan, Gichuhi Waititu, Peter N. Mwita: Change Point Analysis in the Generalized Pareto Distribution | |
| 3.20-3.40 | Conlet Biketi Kikechi, Richard Onyino Simwa, Ganesh Prasad Pokhariyal: Results on Model based Robust estimators in Finite Populations | |
| 3.40-4.00 | Queensley C. Chukwudum: Assessing the Extreme Temperature Dependence in the East African region | |
| 4.00-5.00 | HEALTH BREAK | |
| DAY 2: THURSDAY, 25TH APRIL 2019 CONFERENCE PRESENTATION SESSIONS VENUE: KILIMAMBOGO HALL | | |
| TIME | PRESENTER | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| GUEST SPEAKER: PROF. ANN W.T. MUIGAI | | |
| 8.30-9.20 | Guest Speaker Address and Plenary | Prof. Zachary Getenga |
| 9.20-9.40 | Owiti Edgar Oduor: Near infrared hybrid graphene embedded plasmonic metasurface with dual-band tunable performance based on localized surface plasmons | |
| 9.40-10.10 | Josephie Njeri Ngure, Anthony Waititu: Change Point Estimation in Volatility of a Time Series | |
| 10.00-10.20 | S.K. Rotich: Ranks and Sub Degrees of $G=PGL(2, q)$ On The Cosets of Its Subgroups | |
| 10.20-10.40 | Emmanuel Torsen, Peter N. Mwita, Joseph K. Mung'atu: Non-Parametric Prediction Interval for Conditional Expected Shortfall Admitting a Location -Scale Model using Bootstrap Method | |
| 10.40-11.00 | Wambua B, Muli E, Kanui T, Muli B: Large Hive Beetle: A potential new pest of honeybee in Kenya | Dr. Euna Nyarige |
| 11.00-11.30 | HEALTH BREAK | |
| 11.30-11.50 | Ibrahim Oyediran, Jacob Mutua, Eliud Mathu, Benard Kipsang Rop, Faith Mlewa: Validation of GIS based approach to optimally locating Drilling Targets during Exploration of Gold in Kakamega, Western Kenya | |

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| 11.50-12.10 | Moges TY, Ahemen I, Mwita P and Dejene BF: Light Energy (Solar and Luminescent materials) in Service of Man Kind- from Nanoscale to Microscale | |
| 12.10-12.30 | Duncan Kiboi, Boiyo, E.K. Rotich Kipnoo, T.B. Gibbon: Bragg Trans-reflectance OADM based VCSEL Optical Fibre Access Networks within the 1550nm Transmission Window | Dr.Veronica Okello |
| 12.30-12.50 | Stephen N. Mailu: Graphenated Polypyrrole Nanocomposite for Real Time Determination of Pollutants in Water | |
| 12.50-1.10 | Peter G. Murage, Joseph K Mung'atu, Evelyne Odero: Threshold Determination for Maximum Product of Spacing Methodology with Ties for Extreme Events | |
| 1.10-2.00 | LUNCH BREAK | |
| 2.00-2.40 | Special Representation on Research and Applied Sciences by Prof. Joseph Chacha (Deputy Vice Chancellor - Students' and Academic Affairs Maseno University) | Dr. Stephen Mailu |
| 2.40-3.00 | Plenary | |
| 3.00-3.20 | Benard Okelo: On Characterization of Classes of Hilbert Space Operators and Applications | |
| 3.20-3.40 | Veronica Okello, Nian Du: Poly (Amic) Acid Nanostructured Membranes for Capture and Detection of VENGES Generated Nano-Aerosols: Air and Water Purification | |
| 3.40-4.00 | Virginia Mwelu Kitetu, Thomas Tonny Mboya Onyango, Jackson Kioko Kwanza: Control Volume Analysis of Unsteady MHD Mixed Convection Nano fluid Flow as a Result of Stretching Surface and Suction | |
| 4.00-4.20 | Kalovwe Sebaastian Kaweto: Modeling stock Returns Volatility Using Regime Switching Models | |
| DAY 3: FRIDAY 26TH APRIL 2019; KILIMAMBOGO HALL | | |
| 8.00-8.30 | Arrival, Registration & Entertainment | Secretariate |
| 8.30-9.30 | Open Forum on Research issues in pure and applied Sciences | Dr. Stephen Mailu |
| 9.30-10.00 | PLENARY | |

SUB-THEME 7: ISSUES IN EDUCATION AND TRAINING

| DAY 1: WEDNESDAY, 24TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: KOMA HALL | | |
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| TIME | PRESENTATION | RESPONSIBLE |
| 2.00-2.20 | Seraphione Sherry Aholi, Jacob J. J. Ochieng konyango: Influence of Secondary School Students' Attitude Towards Agriculture on Employment Creation in Vihiga County, Kenya | Dr Peter Koech |
| 2.20-2.40 | Sammy KipkorirBii: Indigenous Methods of Education as Practised by the Kipsigis | |
| 2.40-3.00 | Ezra Ondari Okemwa: The Role of Knowledge Workers in Innovation and Technology for Sustainable Development | |
| 3.00-3.20 | Daniel Njane Thuo: Teachers' Professional Development Issues and their Impact on Teachers' Service Delivery | |
| 3.20-3.40 | Martin C. Njoroge, Peter Mutahi: Practices in an Undergraduate Phonology Andragogical Class Integrating Visually Impaired Students: Lessons from Kenya, Africa | |
| 3.40-4.00 | David M. Mulwa & Dominic Maingi: The Influence of School Climate on Students' Discipline in Public Secondary Schools in Makueni County | |
| 4.20-4.40 | Mercy Kariuki: Influence of Self Esteem on Student's Psychomotor and Cognitive Academic Performance | |
| 4.40-5.00 | Mary M. Muema, Peter Kibet Koech & Pamela Muriungi: Influence of Material Selection Criteria on Acquisition of Numeracy Skills among Children in Pre-School Institutions in Kathiani Sub-County | |
| 5.00~ | HEALTH BREAK | |
| DAY 2: THURSDAY, 25TH APRIL 2019 VENUE: KOMA | | |
| GUEST SPEAKER: PROF. KISILU KOMBO | | |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-9.20 | Guest Speaker and Plenary | Prof. James Muola |

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| 9.00-9.20 | Sammy Kipkorir Bii: Indigenous Methods of Education as Practiced by the Kipsigis | |
| 9.20-9.40 | Eric Mwenda Elias, Catherine Nkirote Maingi: Training, In-service Training, Pre-service, refresher courses, Management skills, Enhance | |
| 9.40-10.00 | Kirima Lucy Karimi: Influence of Educational Support on Academic Performance of Orphans and Vulnerable Children in Public Primary Schools in Kalama Sub County, Machakos County, Kenya | |
| 10.00-10.20 | Nathan Mutua, Dr Jennifer Kilonzo: Influence of Non-Governmental Organizations Education Support Activities on Academic Performance of Students in Public Primary Schools in Kenya: A Case of Machakos County | Dr.Pamela Muriungi |
| 10.20-10.40 | Milcah Nyaga: An Investigating on Student-Teachers' Acquisition of New Skills During Teaching Practice Exercise. A case Study of University of Embu | |
| 10.40-11.00 | Mercy Wanja Njagi: E-Learning: The Emerging Technologies in Instruction | |
| 11.00-11.30 | HEALTH BREAK | |
| 11.30-11.50 | Wanjiru Jane J. Mugai: Promotion of Child Friendly Schools Model | |
| 11.50-12.10 | Hassan Kinyua Omari and Edith Kayeli: Comprehensive sex education in Kenya: Islamic perspective | |
| 12.10-12.30 | Fellis N. Mutune: Research and publication, publish or perish, so what? | Dr. Richard Kimiti |
| 12.30-12.50 | Nicholas Anyuor: The Educational Role of Nation and Standard Newspapers in Creating Awareness on Functions of County Governments among Residents of Embakasi East Sub County, Nairobi | |
| 1.00-2.00 | LUNCH BREAK | |
| 2.00-2.20 | Henry.E. Embeywa: Rediscovering the Core Cognitive Processes that Define Scientific Competence | |

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| 2.20-2.40 | Joseph Hokororo Ismail: The contribution of ICT in teaching and learning Tone of Tanzanian Bantu languages | |
| 2.40-3.00 | Murungi, J. Mwenda and Muthaa, G.M: Kenyan Curriculum and Self-reliance: A Decolonizing Perspective | |
| 3.00-3.20 | James M. Muola, Wycliffe Amukowa, David Mulwa Peter Kimiti: Academic Advising Needs of University Students: The Case of Machakos University | |
| 3:20-3:40 | Kimiti, Richard Peter: The 8-4-4 School Curriculum: Is it still relevant for the Kenyan Child? | |
| 3:40-4:00 | Yahya Umar Magaji: Using path analysis for determining parental involvement on child academic performance in selected primary schools in Adamawa state, Nigeria | |
| 4.00-4.20 | Margret Nakesa Shibo: Effects of level of Enforcement of KNEC and Regulations on the Prevalence of Examination Malpractice in Public and Private Secondary Schools in Kisii County between 2008-2014 | |
| 4.20-4.40 | Joseph Muriungi Kirugua, Njoki Wane and George M. Muthaa: Inculcation of Societal Norms in School System in Meru County, Kenya: An Afrocentric Perspective | |
| 4.40-5.00 | Areba George Ngwacho: Management of Co-Curricular Activities and Its Implications on Quality Education in Public Secondary Schools in Kisii County, Kenya | |
| 4:00-5:00 | HEALTH BREAK | |
| DAY 3: FRDAY, 26TH APRIL 2019: KOMA HALL | | |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-8.45 | Elizabeth Welu Kiamba, Francis Mutua & David Mulwa: Influence of Teacher's Preparation of Professional Documents on Students' Academic Achievement of Kiswahili Language in Public Secondary Schools in Kathonzi Sub-County, Kenya | Dr Peter Koech |

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| 8.45-9.00 | Andima George: An integrated early literacy intervention model for children living in disadvantaged contexts: Snapshots from the Reading Kenya Intervention | |
| 9.00-9.15 | Denis Kintu: Technical Vocational Education and Training (TVET) Institutions' Contribution to Promoting Sustainable Development | |
| 9.15-9.30 | Mukolwe Akhasakhulu Newton & Akinyi Nila Oduori: The Phenomenon of Missing Marks in Kenyan Public Universities – Reality or Myth: The Case of Maasai Mara University in Narok County, Kenya | |
| 9.30-9.45 | Collins Omondi Ogogo: An Empirical Analysis of the Effects of Mastery Learning Strategies (MLS) on Self-Esteem and Learning Outcomes of High School Students | |
| 9.45-10.00 | Motanya, Jared Ochwangi: An Interplay between Higher Education, knowledge economy and Green Growth towards Achieving Sustainable Development in Africa | |
| 10.00-10.15 | Elizabeth Mutiso Mutio & Peter KibetKoech: Influence of Teacher Teaching Strategies on Children Literacy Development in Pre-Primary Education | |
| 10.15-10.30 | Eustace Murage Muthui, George M. Muthaa, Barchok K. Hillary & David K. Wamukuru: Influence of Participation of Student Councils in Conflict Resolution on Management of Public Boys' and Girls' Boarding Secondary Schools, Nyeri County, Kenya | Prof. Fredrick Ogola |
| 10.30-10.45 | Stephen O. Odebero & Simala I.K: Assessing Skills Supply and Youth Employability in Kenya: secondary school education graduates training (miss-) match with Mumias Sugar Company labour market needs | |
| 10.45-11.00 | Aminu Ahmadu Michika: A Comparative Study of Academic Performance of Students Admitted Through Pre-NCE & Direct Entry in Final NCE Examination (A Case Study of English Department Federal College of Education, Yola) | |
| 11.00-11.15 | Stephen O. Odebero & Simala IK: The Craze for Students' Numbers in Kenya's Public and Private Universities and the Optimal Operation of MasindeMuliro University of Science and Technology: Towards A Cost Recovery Strategy | |
| | HEALTH BREAK | |

SUB-THEME: 8 BUSINESS, ENTREPRENEURIAL INNOVATION, SMEs & MARKETING

| DAY 1: WEDNESDAY, 24TH APRIL 2019: CONFERENCE PRESENTATION SESSIONS VENUE: PGL 3 | | |
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| TIME | PRESENTATION | RESPONSIBLE |
| 2.00-2.20 | Nosayaba F. O. Evbuomwan: Creating the Infrastructural Framework for Innovation in Africa | Prof. Charles Ombuki |
| 2.20-2.40 | Hamma njoda Kabiru: Service Quality Delivery and Customers' Satisfaction in Nigeria Banking Industry | |
| 2.40-3.00 | Robert Arasa, John Achuora: Strategic Inventory Management Practices And Performance Of Supermarkets In Nairobi County, Kenya | |
| 3.20-3.40 | Leah Jeruto Chemitei & Romano Okwi Elingit: An Assessment of Team Work Relevance in the Twenty First Century on Organizational Performance | |
| 3.40 -4.00 | Eunice Wanjiku Ndung'u: Critical reflections on the Impact of Non—Governmental Organizations in the Development of the Kenyan Rural Community: A Case Study of the Ogiek Peoples' Development Program (OPDP) | |
| 4.00-4.20 | Beatrice Kemunto Obaga & Romano Okwi Elingit: Emotional Intelligence and Organizational Performance | |
| 4.20-4.40 | Betrum Namanya, Mugabe Robert and Firimooni Rweere Banugire: Towards Decentralized Economic Policy Making and Management of Developing Economies with Special Reference to Uganda | |
| 4.40-5.00 | Beatrice Kemunto Obaga & Romano Okwi Elingit: Assessment of Human Resource Analytics and Employee Performance and Motivation Reviews | |
| 5.00 | HEALTH BREAK | |
| DAY 2: THURSDAY, 25TH APRIL 2019 VENUE: PGL3 | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |

| GUEST SPEAKER: PROF SIMMY MARWA | | |
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| 8.30-9.20 | Guest Speaker Address and Plenary | Prof. Mboya Kiweu |
| 9.20-9.40 | Josphat Mboya Kiweu, Johnstone Kiteme Gregory Munyao: Corporate Boards, CEO Compensation, and Firm Performance | |
| 9.40-10.00 | Purity Mugambi, James Murunga: Creating Favorable Macroeconomic Environment for manufacturing Industry in Kenya | |
| 10.00-10.20 | Jacinta Munyiva Kinyili: Influence of Organizational Culture and Information Communication Technology on Knowledge Management in Organizations- A Review from Literature. | |
| 10.20-10.40 | Charles Andoh, Kudjawa Alexandra Fafali, Saint Kuttu: The Effects of Holidays on the Ghanian Equity Market | |
| 10.40-11.00 | Jane Matingi Nyikuri, Winnifred Nduta Ribebe, Jemmy Mutua: Influence of Business Entrepreneurial Skills, Innovation and marketing on Performance of small and Medium Enterprises (SMEs) in Machakos County, Kenya | |
| 11.00~11.30 | HEALTH BREAK | |
| 11.30-11.50 | Romano Okwi Elingit & Beatrice Kemunto Obaga: Knowledge Economy Interventions for the Achievement of Kenya Vision 2030 | Dr. Jacinta Kinyili |
| 11.50-12.10 | Grace Maina: Analysis of Cost Leadership Strategies Adopted by Contractors in Kenya on Organizational Performance: A Case of National Construction Authority of Kenya | |
| 12.10-12.30 | Catherine Kathure Kaimenyi: The Moderating Effect of Stereo type on the Relationship Between Organizational Strategy and Implementation of Workforce Diversity Policies in Public Universities in Kenya | |
| 12.30-12.50 | Jacinta Kaigai: Demystifying the relationship between insurance intermediaries and their clients in Nakuru County in Kenya. | |
| 12.50-1.10 | Angeline Wambui Wambugu: How much does labor turnover cost? A case study of Kenyan Small and Medium | |
| 1.10~2.00 | LUNCH BREAK | |

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| 2.00-2.20 | Josephat Mboya Kiweu, Andrew Mutunga Kimondi: Corporate Governance in Kenya: Ownership Structure and The Performance of Listed Firms | Prof. Arasa Robert |
| 2.20-2.40 | Kariuki, S. N. and Mutugi, J: Effect of risk retention techniques on theft in SACCOs in Embu County, Kenya | |
| 2.40-3.00 | Kariuki, S. N. and Zachary, J. M. N: Determinants of tax compliance by small and medium businesses in Embu County, Kenya | |
| 3.00-3.20 | Jacinta Munyiva Kinyili: Promoting the Big 4 Agenda: HIV and AIDS Stigmatizations and Discrimination, Their Effect and the Way Forward- A Review from Literature | |
| 3.20-3.40 | Editah Njeri: Human Resource Management Practices and Employee Turnover in Commercial Banks in Kenya | |
| 3.40-4.00 | Michael K. Muiya: Application of Design in Enhancing Quality Handmade Products in Kenya | |
| 4.00-4.20 | HEALTH BREAK | |
| 4.20-4.40 | Wamitu Susan Njeri: Well these Policies Have Been Applied and Fortified to Enhance Public Sector Performance | |
| 4.40-5.00 | Firimooni Rweere Banugire, Betrum Namanya: Towards Good Economic Governance of African Economies with Special Reference to Uganda | |
| DAY 3: FRIDAY, 26TH APRIL 2019. VENUE: PGL 3 | | |
| TIME | PRESENTATION | RESPONSIBLE |
| 8:00-8.30 | Arrival, Registration and Entertainment | Secretariat |
| 8.30-8.50 | Joséphat Mboya Kiweu: Alpha Nunda: Dividend Policy and Behavior in Kenya: An Empirical Analysis | Prof. Charles Ombuki & Dr Jacinta Kinyili |
| 8.50-9.10 | Mohammed Zannah Malilima: Role of Bio-Entrepreneurial Skills Opportunities in Biology Education in Eliminating the Current Economic Crisis in Some Selected Tertiary Institutions in Borno State | |
| 9.10-9.30 | Cyrus M Munyua: Influence of Budget Efficacy on Household Effects in Kenya | |

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| 9.30-9.50 | Evans Geoffrey Mogeni, Gideon Nyabando Masese & Pollyene Mutunga Mbithe: An Assessment of Health System in Kenya: Towards the Achievement of Universal Health Coverage | |
| 9.50-10.10 | Stephen Kamau Warui, Phelista Njeru, George Gongera & Julius Bichanga: Merger Strategy and its Effects on Profitability for Commercial Banks Listed in the NSE in Kenya | |
| 10.10-10.30 | Plenary | |
| 11.00-11.30 | HEALTH BREAK | |

CLOSING CEREMONY: VENUE: KILIMAMBOGO HALL

| TIME | DAY 3: FRIDAY, 26TH APRIL 2019 | RESPONSIBLE |
|-------------|--|---|
| 11:30-1200 | Assembling and Arrival of Chief Guest | Dr Wycliffe Amukowa (Registrar – RIL) |
| 12.00-1.00 | OFFICIAL CLOSING PROGRAMME | |
| | ❖ Conference Recap and Ways Forward: Prof. Geoffrey Maroko | Secretariat |
| | ❖ Closing Remarks by Prof. Peter Mwita (DVC- Research, Innovation and Linkages, Machakos University) | |
| | Closing Address, Prof. Lucy Irungu (Vice-Chancellor, Machakos University) | Prof. Peter Mwita (DVC- Research, Innovation and Linkages, Machakos University) |
| | SPEECH AND OFFICIAL CLOSING OF THE CONFERENCE: PROF. CHACHA NYAIGOTTI-CHACHA | Prof. Lucy Irungu (Vice-Chancellor, Machakos University) |
| 1.00 | PHOTO SESSION AND LUNCH BREAK | Secretariat |



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