

The 7th Zetech University

Research & Innovation Conference

28th to 30th May 2025 - Technology Park Mang'u Campus

**Theme: Education for Sustainable Prosperity: Empowering
Lives Through Innovation**



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UNIVERSITY**

Inventing the future



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HOUSEKEEPING

Zetech University

The conference will take place at Zetech University - Technology Park Mangú Campus. You can refer any queries to the Reception Desk staff, Conference Assistant, or to a member of the Support Team, who will be happy to help.

Wi-Fi Access

Wi-Fi Access is available at the conference halls and the Auditorium. See wall posters for Wi-Fi Passwords.

Mobile Phones

Please turn your mobile phones to silent mode during the presentations, but feel free to post at any time - our conference hashtags include: #ZetechResearchWeek #ZUResearchWeek #ResearchWeek2025.

Luggage

Coat rails are provided near the Library luggage area at ground floor. Kindly take care of your sensitive personal items.

Lavatories

These are located on each floor of the university complex.

Meals & Refreshments

Lunch will be available for all registered participants in the University cafeteria, ground floor. Catering staff will be available to help you through the process. Please allow speakers who are presenting straight after lunch to take priority.

Support team

For any assistance or enquiries, contact:

Prof. Alice Njuguna - 0722 850 186
Dr. Benjamin Muindi - 0724 232419
Ms. Esther Mwangi - 0722 575 400
Eunice Gathoni - 0716 475 669
Isaac Muendo - 0715 552 889



Day 1
28th May 2025
Opening Ceremony
Moderator: Dr. Lydia Pkaremba
Rapporteur: Dr. Henry Kiogora

| Time | Activity | | |
|---------------------|---|------------------------|--|
| 08:00 AM - 08:30 AM | Registration | | |
| 08:30 AM - 08:35 AM | National Anthem, East Africa Community Anthem, Zetech University Anthem | | |
| 08:35 AM - 08:40 AM | Opening Prayer - Rev. Eric Irungu | | |
| 08:40 AM - 09:10 AM | Performance by the University Choir | | |
| 09:10 AM - 09:15 AM | Introduction of Guests by John Mwai - Director Corporate Affairs & Marketing, Zetech University | | |
| 09:15 AM - 09:25 AM | Research & Innovation Week Overview by Esther Mwangi - Director Research & Innovation, Zetech University | | |
| 09:25 AM - 09:35 AM | Welcome Address by Prof. Alice Njuguna -Deputy Vice Chancellor Academics, Research & Student Affairs | | |
| 09:35 AM - 09:50 AM | Messages of Goodwill - Partners | | |
| 09:50 AM - 10:15 AM | Opening Remarks by: Prof. Njenga Munene J. - Vice Chancellor, Zetech University Prof. Harriet Kidombo - Chair of Council, Zetech University Prof. Susan Alfano Nkinyangi - Chancellor, Zetech University | | |
| 10:15 AM - 10:45 AM | Keynote Address by Dr Catherine Kyobutungi - Executive Director, African Population & Health Research Center (APHRC) | | |
| 10:45 AM - 11:00 AM | Photo Session, Visit to the exhibitions, Press Conference & Tree Planting | | |
| 11:00 AM - 11:30 AM | Tea Break | | |
| 11:20 AM - 12:30 PM | Thematic Area: Reducing Inequality Financial Literacy for All: Empowering Individuals to Build Economic Security | Keynote Speaker | Mercy Kimalat - Chief Executive Officer, The Association of Startup & SMEs Enablers of Kenya (ASSEK) |
| | | Moderator | Prof. Peter Kibas - Dean, School of Business & Economics, Zetech University |
| | | Rapporteur | Andrew Ndege |
| | | Panellists | <ul style="list-style-type: none"> Waihiga K. Muturi, Rtn. - Co-CEO & Director of Communications, Media & Innovations - Lets Create Africa (LCA) Lucy Munga - Managing Director, Amara Capital Limited Dr. Wicliffe Anyango - School of Business & Economics, Zetech University Brian Mtana - Youth Innovator, Zetech University |
| 12:30 PM - 01:00 PM | Group Photo Session/ Visit to the exhibitions | | |
| 01:00 PM - 02:00 PM | Lunch Break | | |



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|---------------------|---|------------------------|--|
| 02:00 PM - 03:40 PM | Thematic Area: Decent Work & Economic Growth Skills for the Future: Aligning Education with the Evolving Needs of the Job Market | Keynote Speaker | Albert Kimani - Director of Programs & Strategy, Power Learn Project Africa |
| | | | Winnie Rachael - Country Manager, UNICAF |
| | | Moderator | Prof. Owen Ngumi - Dean, School of Education, Arts & Social Sciences, Zetech University |
| | | Rapporteur | Dr. Samuel Macharia |
| | | Panellists | <ul style="list-style-type: none"> • Dr. Esphan King'ori - Educational expert, State Department for Higher Education & Research • Dr Chikezie E. Uzuegbunam- Senior Lecturer, Rhodes University, South Africa • Jeffrey Rowlings - Founder & CEO, Rawlinz Designs Limited • Danfold Mosongo - Tech Policy & Sustainability Advocate, Community Lead, Tech.Paths • George Kosimbei - Chief of Party, YALI Kenya • Florida Korir - Google Developer Groups On Campus Lead, Zetech University |
| 03:40 PM - 03:50 PM | Group Photo Session | | |
| 04:00 PM - 04:30 PM | Visit to Exhibitions | | |



| Day 2 29 th May 2025 | | | |
|------------------------------------|--|--|---|
| 08:00 AM - 08:30 AM | Registration | | |
| 08:30 AM - 08:40 AM | Opening Prayers & Welcome Remarks | | |
| 08:40 AM - 10:00 AM | Thematic Area: Climate Action & Environmental Growth Green Skills for a Sustainable Future: Education & Training for the Green Economy | Keynote Speaker | Arnold Kipchumba - Director, Environment and Climate Change & Ag. Food Security and Livelihoods, Office of the First Lady |
| | | Moderator | Faith Ngige, HSC - National Coordinator, Kenya Platform for Climate Governance, PACJA |
| | | Rapporteur | Mercy Mugambi |
| | | Panellists | <ul style="list-style-type: none"> Prof. Alice Njuguna - DVC Academics, Research & Student Affairs, Zetech University Prof. Francis Mburu - DVC Research, Innovation & Outreach (RIO), Professor of Forestry, Maasai Mara University Sylvia Wachira - Co-ordinator, Nairobi Summer School On Climate Justice, PACJA Patrick Kiarie Nyokabi - Executive Director, We Don't Have Time Kenya Maryam Wangeshi - Nairobi Cityzens Hub Coordinator, UrbanBetter |
| | Thematic Area: Quality Education for All Digital Equity in Education: Bridging the Divide for Inclusive Learning | Keynote Speakers | Gideon Murenga - Senior TVET & Labour Markets Advisor, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) |
| | | Special Appearance | Dr. Simon Chege - Lecturer, Department of Media, Arts and Design, Zetech University |
| | | Moderator | Dr. Njoki Chege - Senior Lecturer, School of Business & Economics, Zetech University |
| | | Rapporteur | Solomon Kimaita |
| | | Panellists | <ul style="list-style-type: none"> Christopher Arunga - Talents Manager, Zone01 Kisumu Doreen Cherono - Educator, KipMcGrath Education Center Isaac Kega - Academy Principal, Powerlearn Project Albert Kiptoo - Programs Officer at Teach for Kenya |
| | Tea Break | | |
| 10:20 AM - 10:30 AM | BREAKOUT ROOM A Session Chair: Dr. Joy Kibor Rapporteur: Hellen Nyambura | BREAKOUT ROOM B Session Chair: Dr. Wycliffe Anyango Rapporteur: Diana Chepkoech | BREAKOUT ROOM C Session Chair: Prof. Owen Ngumi Rapporteur: Doreen Mwangi |

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| 10:30 AM – 10:45 AM | Blue Ocean Strategy for Competitive Differentiation in the African Fintech Sector Jane Muthoni Gatonye Peter Kibas | A Systematic Literature Review On The Use of Recommender Systems In Course Selection Process Among Learners In Africa Daniel Njeru | Innovative Approaches to Ensuring Quality Education for All: Bridging Gaps in Access, Equity, & Sustainability Sheila Kirotna & Eliud Mwangi |
| 10:45 AM – 11:00 AM | Micro, Small & Medium Enterprises In Kenya: Challenges, Intervention Mechanisms & Achieving Sustainable Development Goals Ngoze Moses | The Role of Technology in Enhancing Tax Administration in Kenya Peter Kiano Chabari & Peter Kibas | AI-Driven Cybersecurity Framework For Safeguarding University Networks From Emerging Threats Boniface Mwangi Wambui, Margaret Mwinji, Hellen Nyambura |
| 11:00 AM – 11:15 AM | Innovative Financing Models For Smart Water Technologies In Kenya's Rural Water Systems Mugendi Ann Makena | Product Innovation in Strengthening Competitive Advantage: Insights from M-Pesa Jane Muthoni Gatonye, Peter Kibas | Artificial Intelligence, Big Data & Cloud Computing in Developing an Afrocentric Model for Cybersecurity Threats Nicodemus A. Ishmael, Joy Kibor, Alice Njuguna, Benjamin Muindi |
| 11:15 AM - 11:35 AM | Q & A | | |
| 11:35 AM – 11:50 AM | Leveraging on the Public Private Partnerships for Enhanced Industrialisation, Innovation & Infrastructure Development in Kenya. Daniel Mutegi Giti | Fostering Innovation & Resilient Infrastructure To Drive Sustainable Growth For Small & Medium Enterprises In Kenya Evance Onyango, Peter Kibas | Architectural Frameworks For Integrating Agentic AI To Software Systems Josephat Onkoba |
| 11:50 AM – 12:05 PM | Empowering Communities Through Professional Poultry Farming in Kenya: A Pathway to Decent Work & Economic Growth Beauttah Mwangi Waweru | School Management Factors Influencing Academic Performance In Agriculture Subject Among Public Day Secondary Schools In Kisumu County. Martin Ochieng Deya | Use Of Virtual Reality (VR) in Cost Reduction of Healthcare Training Anne Chege |



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| 12:05 PM – 12:20 PM | Is ESG Investing Just a Hypocritical Bubble? Evidence from Greenwashing & Performance Trade-offs Wicliffe Anyango | Utilisation Of Leadership & Authority In Higher Educational Institutions In Kenya According To Situational & Contingency Theories. Nicholas Osir & Linet Chedeye | Assessing the State of Advanced Computer Science & IT Education in Kenya: Availability, Enrollment, & Faculty Competency Wilfred Gikaru |
| 12:20 PM - 12:40 PM | Q & A | | |
| 12:40 PM - 1:00 PM | Networking & Visit to Exhibitions | | |
| 1:00 - 2:00 PM | Lunch Break | | |
| 02:30 PM - 04:00 PM | Thematic Area: Industry Innovation & Infrastructure 360-Degree Storytelling: The Convergence of Documentary, Film, and Broadcast in Virtual Reality | Keynote Speaker | Alex Chamwada - Journalist, Media Consultant, Founder & CEO of Chams Media Ltd |
| | | Moderator | Anne Mwangi - Graduate Assistant, School of ICT, Media and Engineering, Zetech University |
| | | Rapporteur | Winnie Odwar - Graduate Assistant, Zetech University |
| | | Panellists | Michael Tsimangi - Global Communications Expert, TV Reporter, and Voice Over Artist, Chams Media Ltd Michael Strano - Co-Founder & Chief Operations Officer of YAKWETU™ Online Limited Christine Kaku - Media Student Representative, Zetech University |
| 2:00 - 4:00 PM | Visual & Performing Arts Showcase | Hands-on learning with Internet of Things (IoT) by TME Education | |
| 4:00 - 4:30 PM | Visit to Exhibitions | | |
| 4:30 - 5:00 PM | Tea & Networking | | |

| Day 3 30 th May 2025 | | | |
|------------------------------------|---|---|---|
| 08:00 AM - 08:30 AM | Registration | | |
| 08:30 AM - 08:40 AM | Opening Prayers & Welcome Remarks | | |
| 08:40 AM - 10:00 AM | Thematic Area: Industry Innovation & Infrastructure University-Industry Partnerships: Fostering Innovation through Collaboration | Keynote Speakers | Eng. Shammah Kiteme - President, The Institute of Engineers of Kenya (IEK) |
| | | | Wangechi Wahome - Founder & CEO, Anza Village |
| | | | Enos Weswa - Country Director, UK - Kenya Tech Hub, British High Commission |
| | | Moderator | Dr. Benjamin Muindi - Dean, School of ICT, Media & Engineering, Zetech University |
| | | Rapporteur | Samuel Kinuthia |
| | | Panellists | <ul style="list-style-type: none"> Regina Summer - Co-founder & CEO, R.S Advisory AB Bryan Chesoli - Ye! Community, Regional Coordinator, International Trade Centre Charles Oduk - Founder & CEO, Beba Beggie & PAIC Limited Kenya Vincent Sipoi - Technical Project Manager, Power Learn Project Africa |
| 10:00 AM - 10:20 AM | Tea Break | | |
| 10:20 AM - 10:30 AM | BREAKOUT ROOM A Session Chair: Dr. Nicodemus Akech Rapporteur: Ms. Anne Mwangi | BREAKOUT ROOM B Session Chair: Prof. Peter Kibas Rapporteur: Raphael Mputhia | BREAKOUT ROOM C Session Chair: Dr. Ing. Wilfred Gikaru Rapporteur: Daniel Njeru |
| 10:30 AM – 10:45 AM | Product Innovation in Porter's Generic Strategies for African Startups Jane Muthoni Gatonye & Catherine Njoki Chege | Bridging the Education Gap: The Role of Community-Based Media in Empowering Local Learners Winnie Odwar | Examining The Prevalence Of Marital Violence & Their Influence On Household Security In Kiambu County Lucy Wamuyu Mwangi, Thaddeus Manwa, Judy Wambui Mwangi |
| 10:45 AM – 11:00 AM | Is Entrepreneurship A Career Or A Discipline? A Conceptual Perspective Ngoze Moses | Emerging Perspectives on Artificial Intelligence in Higher Education: A Comparative Study of South African & Kenyan Universities Chikezie E. Uzuegbunam, Benjamin Muindi, Alice Njuguna | To Assess the Influence of ERP-Driven Data Analytics on Strategic Decision-Making in Public Universities in Kenya. Joy Kibor |

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| 11:00 AM – 11:15 AM | Policy & Practice Towards Promoting Integration of AI in Pedagogy in University Kenya Simon Chege, Benjamin Muindi | Exploring The Relationship Between Course Design & University Student Satisfaction With Online Learning In Kenya: A Case Of Zetech University Catherine Njoki Chege | Fair AI for Biometrics: Reducing Bias in Multimodal Systems Cyrus Mayuya Baraza |
| 11:15 AM - 11:35 AM | Q & A | | |
| 11:35 AM – 11:50 AM | Mesoporous Adsorbents Immobilised with Schiff Base Ligands for Heavy Metal Extraction from Aqueous Solution George Nyamato, Ian Kabogo | Transport Management Practices & Safety Performance of Public Transport Organisations in Nairobi Bishar Mohamed Adan, Kamoni Peter | Mental Health Literacy Among Teachers In Public Schools In Kenya: Case Studies Of Nyeri Nyandarua & Murang'a Counties Catherine Chege & Owen Ngumi |
| 11:50 AM – 12:05 PM | Professional Perspectives of Implications of Artificial Intelligence on Journalism Practices in Media Houses in Kenya Simon Chege, Mary Nyamaingi | Strengthening Doctoral Research Culture: Reflections on Kenyan Experiences Benjamin Muindi, John Mwangi | Rethinking Higher Education Through AI: Ethical & Theological Reflections on Kenya's Competency-Based Curriculum James Karori |
| 12:05 PM – 12:20 PM | Ethical Quandary of Artificial Intelligence in University Examinations Plagiarism Nicodemus Aketch Ishmael, Dismas Ombuya | Exploring the Misuse of Public-Private Partnerships in Kenya's Public Procurement: A Study of Governance, Accountability, & Implementation Challenges Kiogora Thiga | Effect Of Crime Scene Surface On Latent Fingerprint Processing In Criminal Investigations In Kenya. Lucy Wamuyu Mwangi, Thaddeus Manwa, Judy Wambui Mwangi, Samuel Karenga |
| 12:20 PM - 12:40 PM | Q & A | | |
| 12:40 PM - 01:00 PM | Exhibitions Close | | |
| 01:00 PM - 02:00 PM | Lunch Break | | |
| | Closing Ceremony Moderator: John Mwai Rapporteur: Teclah Jebet | | |
| 2:00 PM - 2:05 PM | Welcome Remarks by Moderator | | |
| 02:05 PM - 02:15 PM | Recap by Prof. Alice Njuguna - Deputy Vice Chancellor, Academics, Research & Student Affairs, Zetech University | | |
| 02:15 PM - 02:35 PM | Remarks by: Prof. Njenga Munene J. - Vice Chancellor, Zetech University Prof. Harriet Kidombo - Chair of Council, Zetech University Prof. Susan Alfano Nkinyangi - Chancellor, Zetech University | | |

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| 02:35 PM - 03:05 PM | Closing Speech by Dr. -Ing. Calvin Onyango - Director General, Kenya Industrial & Research Development Institute (KIRDI) |
| 03:05 PM - 03:25 PM | Book Launch |
| 03:25 PM - 03:40 PM | Awarding Ceremony by Esther Mwangi - Director Research & Innovation |
| 03:40 PM - 03:50 PM | Vote of Thanks by Peter Osumba - Registrar, Academic Affairs, Zetech University |
| 03:50 PM - 04:00 PM | Prayer by Rev. Dr. Eric Irungu - University Chaplain |
| 04:00 PM - 05:00 PM | Tea & Networking |



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| Bachelor of Education Science | 66,500/- | 8 |
| Bachelor of Arts in Psychology with Technology | 54,650/- | 8 |
| Bachelor of Arts in Sociology & Technology | 54,650/- | 8 |
| Bachelor of Arts in Political Science with Technology | 54,650/- | 8 |

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Hospitality & Tourism Management

Information Technology

Journalism & Media Studies

Electrical Engineering

Digital Marketing

Cyber Security & Forensics



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