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ALL SET FOR THE SECOND EDITION OF THE TECHNOVATION DAY

Harare Institute of Technology
success through innovation

HIT Technovation Day

Technovation Day 2016 @ HIT Campus
Date: 22 July 2016
Time: 0900hrs-1600hrs
Theme:
Disruptive Thinking, Big Ideas!!!

Media Partner

INNOVATION | LEADERSHIP | INTEGRITY | COMMITMENT | PROFESSIONALISM
The Innovation and Technopreneurial University

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All is set for the the second edition of the Technovation Day on Friday 22nd July 2016 from 0930hours to 1600hours at the HIT Campus in Belvedere, Harare.

This year's edition is running under the theme "Disruptive Thinking, Big Ideas",and is being held in partnership with StarFm.

The Technovation Day showcases HIT's research and development outputs including intellectual property such as patents, industrial designs and utility models. This is a platform for academics, students, pupils, industry and commerce to interact, share ideas and motivate each other to proffer solutions to the various technological challenges and create an environment for rapid industrialisation and wealth creation.

The Technovation Day also provides companies/organisations in the science, engineering and technology sector with a platform to promote innovation and technoprenuership amongst Zimbabweans as a tool for economic revival and rapid industrialization as well as advancing and keeping alive the STEM initiative by showcasing the Careers of the Future. It also aims to raise technological awareness among students, pupils as well as industry and commerce.

The Harare Institute of Technology's Communications and International Relations Director, Mr. Tinashe Mutema said the Technovation Day is held to provide an opportunity for networking and building partnerships with organisations within the same sector, as well as providing a platform for identifying research problems.

"Specifically relating to high school pupils pursuing science subjects, the Technovation Day is held to expose them to various innovations and developments within the science

and technology sector with a view to motivating them to become innovators and wealth creators. The pupils are also given the opportunity to interact with individuals within the corporate sector and get information on career opportunities from HIT academics," said Mr. Tinashe Mutema.

HIT Vice Chancellor Engineer Quinton Kanhukamwe said the Technovation Day is meant to expose future scientists and technologists to the various dimensions that science and engineering can take. "This exposure will help them to make a firm commitment to take up engineering and technology as careers," he said.

HIT successfully hosted the inaugural Technovation Day on Friday 19 June 2015 at the Institute campus with over 1000 high school pupils from across Zimbabwe attending the event.

Most pupils who attended said they were inspired by the Technovation Day because they learnt about the value and importance of being innovative. They were also impressed with the various technologies on display at the various HIT departments.

HIT GETS ASSOCIATION OF COMPUTING MACHINERY (ACM) ACCREDITATION

The Harare Institute of Technology has been accredited as a professional and student chapter of the Association of Computing Machinery (ACM) to become the third chapter in Sub Saharan Africa.

ACM's Chief Operating Officer officially chartered the Harare Association of Computing Machinery Special Interest Group on Security, Audit and Control (SIGSAC) Chapter and the Harare Institute of Technology Student Chapter on June 06, 2016 joining the growing network of ACM Chapters worldwide.

The Association of Computing Machinery Special Interest Groups on Security, Audit and Control's (SIGSAC) aims to develop the information security profession by sponsoring high quality research conferences and workshops representing major areas of computing to address the interests of technical communities that drive innovation. SIGs offer a wealth of conferences, publications and activities focused on specific computing sub-disciplines. They enable members to share expertise, discovery and best practices.

Every ACM chapter offers members a wealth of benefits, including access to critical research and the opportunity to establish a personal networking system in the region.

ACM's Special Interest Group (SIG) chapters around the world host lectures by internationally known computer professionals. They also sponsor state of the art seminars on the most pressing issues in information technology, conduct volunteer training workshops, and publish their own newsletters.

Association of Computing Machinery In an effort to enhance Learning and Career Development ACM has established more than 680 student chapters throughout the world that give students opportunities to play active roles in the association and its activities. By organizing technical talks, workshops, field trips and programming contests, ACM Student Chapters facilitate communication and collaboration within a university's computer science community and with the computing community at large. Through its sponsorship of student chapters, ACM also enhances learning via the exchange of ideas among students, and between students and established professionals.

Student chapter members can also take advantage of ACM activities and services. Opportunities include the Distinguished Speakers Programme, the International Collegiate Programming Contest, and the Student Research Competition. Student chapters provide a natural setting to develop and demonstrate the leadership capabilities critical to students' career development. They also help students get involved in the business world with workshops, resume assistance, and career building initiatives.

Commenting on this latest development HIT'S Dean of the School of Information Scinces and Technology Dr. T. Padenga said ACM's Professional and Student chapters worldwide serve as hubs of activity for ACM members and the computing community at large. "Our academic staff and students are going to benefit from the seminars, lectures, learning forums and networking opportunities with peers and experts across the computing spectrum.

Participation in all these chapters will provide a unique combination of social interaction and professional dialogue for both academic staff and students as the ACM Chapter members reflect all facets of computing from academia, research, business, and industry", he said

ACM and its Special Interest Groups Host More Than 170 Events Worldwide. Their conferences, workshops and symposia unite innovators to push computing technology forward and to continue the legacy that unites like-minded thinkers and makers. It also recognizes excellence through its eminent awards for technical and professional achievements and contributions in computer science and information technology. It also names as Fellows and Distinguished Members those members who, in addition to professional accomplishments, have made significant contributions to ACM's mission.

ACM's educational activities, conducted primarily through the Education Board and Council, range from the K-12 space (CSTA) and two-year programs to undergraduate, graduate, and doctoral-level education, and professional development for computing practitioners at every stage of their career.

ACM provides independent, nonpartisan, and technology-neutral research and resources to policy leaders, stakeholders, and the public about public policy issues, drawn from the deep technical expertise of the computing community. It also encourages its members to take a direct hand in shaping the future of the association. This philosophy permeates every level of ACM, reaching to the top echelons of leadership where members fill vital positions on the councils, boards and committees that govern the organization and raise the visibility of ACM worldwide.

In its broader policy of internationalisation, HIT staff members joined the Association of Computing Machinery (ACM) and Institute of Electrical and Electronic Engineers (IEEE). These associations provide some of the benchmarks HIT uses in developing curriculum which have earned HIT international recognition and awards.

The Association of Computing Machinery, (ACM) is a US-based body founded in 1947. ACM is widely recognized as the premier membership organization for computing professionals, delivering resources that advance computing as a science and a profession; enabling professional development; and promoting policies and research that benefit society.

ACM hosts the computing industry's leading Digital Library, and serves its global members and the computing profession with journals and magazines, conferences, workshops, electronic forums, and learning centre.

In addition to student and regular members, ACM has several advanced membership grades to recognize those with multiple years of membership and "demonstrated performance that sets them apart from their peers".

http://campus.acm.org/public/chapters/geo_listing/index.cfm?region=sig&type=all&regions
http://campus.acm.org/public/chapters/geo_listing/index.cfm?region=worldwide&type=stu&regions

Association for Computing Machinery

HIT SOFTWARE ENGINEERING STUDENT SCOOPS THE ENERGY GLOBE NATIONAL AWARD 2016

Trevor Mandeya, First Prize Winner of the HIT 2016 Pre-National Engineering Students Awards Competitions (NESAC) Oral Presentations.

Clive Nyapokoto, a final year Software Engineering Student is this year's winner of the Energy Globe National Award after his Vermicompost - Vermi-Aquaponics (VA) System project was honoured by Advantage Austria the official Trade Promotion Organisation (TPO) which recognises success in green technologies and organisers of the Energy Globe Awards.

Clive Nyapokoto receiving his award from the Austrian Ambassador to south Africa Ambassador Brigitte Öppinger-WalchshoferClive was awarded the Energy Globe National Certificate Award at the prestigious 2016 Energy Globe Award Ceremony in Rosebank, South Africa on the 22nd of June 2016. Nine other winners from the African continent also received their National Awards among them Lesotho, Zambia, Tanzania, Morocco, Botswana, Namibia, South Africa and Gambia.

The Vermicompost – Vermi-Aquaponics (VA) System project is a students' run agro-based start up with its main focus being the improvement of organic agriculture.

The VA system is a smart integrated organic agricultural system which integrates Aquaponics, vermiculture, small livestock and ICT technologies in a controlled looping environment. It is a smart soilless farming system which can be modeled to suit any climatic region for food production and can be done as vertical indoor/ outdoor farming. Sensors are used to remotely monitor and control the system. Sensed data can be visualized on different web platforms.

The VA system uses worms as a waste management tool in order to convert kitchen and paper waste into rich organic fertilizer which can then be used for organic agriculture. The worms are used as nutrition for fish and chicken. Chicken droppings and small livestock waste is used to feed the fish supplementing the worms and to maintain PH levels in the fish tanks as well as bedding for the worms. Fish waste rich water is used to grow the plants in a soilless environment (Aquaponics). Fish waste rich water is used for Aquaponics which is a food production system that combines conventional aquaculture (raising aquatic animals such as snails, fish, crayfish or prawns in tanks) with hydroponics (cultivating plants in water) in a symbiotic environment.

The organic manure made by the worms (vermicompost) is used in no dig garden concepts and the liquid fertilizer used to supplement the nutrients in the grow beds for plant growth and to increase bacteria for the system.

The system needs only little space due to the closed loop system which was created where each element depends on each other. Nutritious food is provided for families and markets are created to sell the surplus coming from minimal resources. The soil fertility has increased since the implementation of the project and more organic crops are grown. 800 farmers are using the system and started to sell the worms to a local company which produces organic fertilizer. A functional model has been developed which is suitable for both outdoor and indoor farming

Clive developed a software application that monitors and maintains the units without having to go there, which reduces time and efforts. Vermicompost is four times more efficient than artificial fertilizer without the negative side effects of polluting water and the environment. It can be used in urban areas since it needs so little space. Two plots have been designated for the implementation of the project, in Harare and Wedza. Furthermore, one of the major hotel groups has adopted the system and composts all of their kitchen leftovers and office waste paper by worms. The manure is used to create a kitchen garden for the hotel.

"After developing a functional prototype in 2014 a local Non Governmental Organisation Panhari, assisted with a small grant to start a bigger system which is currently work in progress in Marondera Svosve communal lands. In July 2015 the system was among some of the top 40 innovations in Zimbabwe at the Innovation Baraza that was sponsored by the United States Embassy in Zimbabwe. The VA system was selected in the top 16 Agro- based innovations by the Idugu Institute in December 2015.

In April 2016 the Project was selected as part of the Zimbabwe Social Entrepreneurship Boot Camp, a six months intensive training programme funded by the United States Embassy for on how to run social enterprises in Zimbabwe", said Clive.

Growing up in a rural community and a family of farmers where Clive and his siblings were required to do field chores before going to school and later on being exposed to permaculture, the labour which was required to yield more produce was intense hence Clive embarked on researches and development of better and efficient ways and methods of practicing permaculture.

Clive cited lack of funding to acquire proper hardware and building of infrastructure as the major challenges being faced to put the project to large scale. This project is the future of farming especially in the ever changing climatic conditions and economically challenging environments. It is going to increase food productivity for both urban and rural farming communities", said Clive.

The Vermi-Aquaponics (VA) system has a lot of advantages as sustainable agricultural system. There is no need to be present at the unit every time as you can monitor and maintain your system remotely thus saving time and allowing one to carry out other tasks. Information and Communication Technologies are more efficient in the monitoring and maintenance of the system. The system is energy efficient as it requires less electrical energy to power the unity - a small solar unit can power up a very large system efficiently. The various produce is organic and very nutritious. Space utilization can be done anywhere even on places were the soil is said to be poor or on roof tops and allows for vertical farming. There is also no need for artificial chemicals thus saving money and no digging, no weeds, saves water by almost 90%. Vermiculture is a waste management technique that uses bacteria and it gives multiple revenue streams.

Clive Nyapokoto receiving his award from the Austrian Ambassador to south Africa Ambassador Brigitte Öppinger-WalchshoferThe National Energy Globe Awards distinguish best project submissions from a country and it aims to strengthen society's awareness of the necessity for ecological change, by honouring outstanding best practice projects in environmental sustainability from all parts of the world. With more than 177 participating countries, the Energy Globe Award is today's most prestigious environmental award worldwide. It is awarded annually to projects focusing on energy efficiency, renewable energies and the conservation of resources. The awards for these many projects are presented in their recipients' individual countries in cooperation with our partners, in particular with the international offices of the Austrian Chamber of Commerce.

National winners receive an Energy Globe Certificate highlighting applicant and project, signed by Energy Globe jury chairperson Maneka Gandhi and Energy Globe initiator Mr. Wolfgang Neumann.

The ENERGY GLOBE Certificate is an internationally recognized hallmark for sustainability

HIT @ SCHOOLS CAREER DAYS IN PICTURES

In pursuance of advancing and keeping alive the Science, Technology, Engineering and Mathematics (STEM) Initiative in secondary and high schools in Zimbabwe, the Harare Institute of Technology's Communications and International Relations Department and some of the Institutes departments are participating in provincial and district schools' Career and Guidance Days around the country the Careers of the Future through its undergraduate academic programmes.

HIT at the Chimanimani District Careers Day at Mutambara High School in Manicaland on 17 June 2016 where over 10 secondary and high schools from the District attended the event

The Bikita District Careers Day was at Mashoko High School in Masvingo on 24 June 2016 where over 20 secondary and high schools from the district attended the event.

Nyakuipa High School hosted the Makoni District Careers Day on 01 July 2016 in Manicaland where over 25 secondary and high schools from the district attended the event.

The Department of Biotechnology also participated at the Gateway High School Careers Day in Harare on 30 June 2016.