



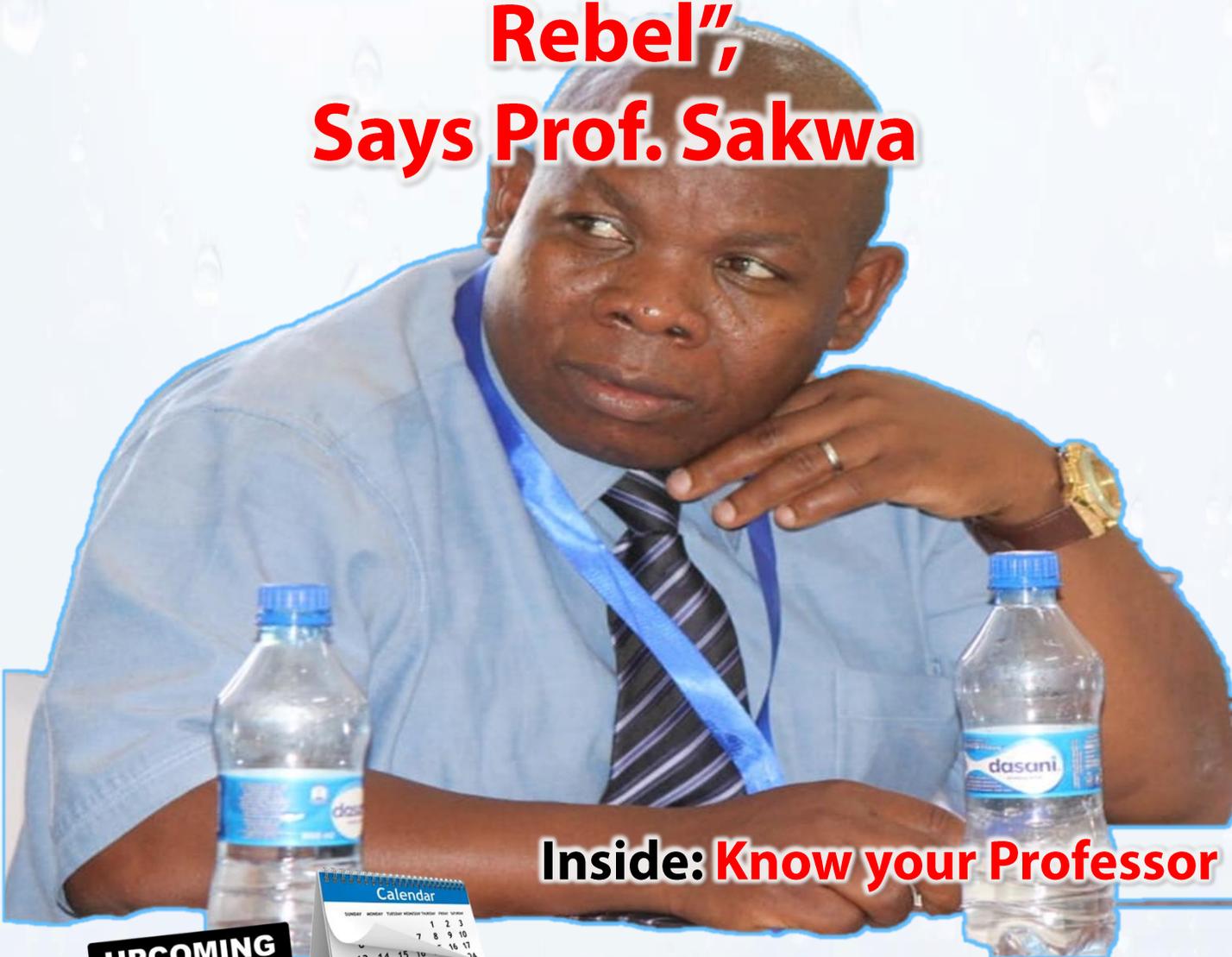
MMUST NEWS

Post

A Weekly Digital Publication of Masinde Muliro University of Science and Technology

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“A True Professor Cannot be a Rebel”, Says Prof. Sakwa



Inside: Know your Professor

UPCOMING

EVENTS



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Editor's Pen

Dear MMUST Community,

In this issue, read about Prof. Thomas Sakwa, a Professor of Condensed Matter Physics and the Acting Registrar (Academic Affairs) and his perspective on different issues.

We also bring you news on efforts by different members of staff reaching out to the community to provide a service. Above all, we applaud the African Women in Science and Engineering (AWSE), Western Chapter for highly representing the University in Bangkok, Thailand.

Enjoy the read!



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Prof. Thomas Sakwa

Prof. Thomas Sakwa is a Professor of Condensed Matter Physics at MMUST. He has more than 24 years of service as a university academic staff with about 15 years of service in university management positions. He has served as an academic Dean for 6 years, Webuye Campus Coordinator for 3 years, and now MMUST Acting Registrar (Academic Affairs).

**By Nashilluh Brendah Kabindio and
Wangari Mary Wambugu**

Q: You are among the oldest members of this University; please tell us about yourself and your family.

I will be celebrating my Jubilee around August, so as you can tell, I now belong to the old generation. I am happily married to a beautiful lady. She is a teacher by profession. I remember marrying her about 21 years ago through a church wedding which took place on a Sunday immediately after the service. We have four children whom we love and value so much. We are partly settled here in Kakamega but we have a farm in Trans Nzoia where our home is.



Q: How has been your academic journey so far?

I thank God that he has taken me through various stages of education. I pursued primary school education between 1976 and 1983 and scored very well with thirty one (31) points. I, then, proceeded to a national technical school by the name Kaiboi Technical Institute where I did my studies between 1984 and 1987. I did exams in KCE and got sixteen (16) points of Second Division; proceeded to do 'A' levels at the then Kibabii High School, did KACE and later went to Moi University where I met H.E, the Governor, Hon. Wycliffe Oparanya in the year 1990 having been the last 'A' level group. I was admitted into Bachelor of Science degree between 1990-1993; both of us graduated with First Class Honours.

Between 1994 and 1997, I was able to clear my Masters, but before I graduated, having seen my potential, I was enrolled for PhD. I graduated in the year 2003 with a Doctor of Philosophy in Physics (D. Phil.). Meanwhile, I had been working as a Graduate Assistant which was not easy on my part.

Q: You have held quite a number of academic and administrative positions in the service of the University, tell us about your journey.

I joined MMUST around November, 2003. At that time, it was still a Constituent College of Moi University. In the same year, I was made a Faculty Representative to the academic Board.

Thereafter, in the year 2006, I became the Chairman of the Department of Physical sciences.

I was the first Dean of the Faculty of Science, in the year 2008, which has now transformed into the School of Natural Sciences. During my two term tenure as a Dean, I played a multifaceted role in achieving the core objectives of the University by marketing the products (programmes), identifying the clients, nurturing and sustaining the clientele and ensuring quality service delivery. I provided sound leadership as the founder of the Faculty with three other Schools and a Research Centre namely Faculty of Science, School of Agriculture, Veterinary Sciences and Technology, School of Health Sciences, School of Nursing and Midwifery and the Centre for Kakamega Tropical Forest Studies. This contributed significantly to the growth of MMUST. As a result, I clearly demonstrated exemplary track record exhibiting transformative skills (successful change management) as well as competence in academic and administrative leadership.

Q: We are aware that you are the Secretary of the Professors Forum at the University. What is the mandate of this Forum?

You need to know that a professor is a leader in his or her own right and that is why we get Professorial Allowance. It is with the same reason that we are permanent members of Senate. We are actually officers of the University; a university is its professors and professors are the university.



We have a mandate of teaching, research, consultancy, providing pro-bono community services and mentorship. We are also involved in designing and developing innovative approaches to learning experience with the intension of challenging thinking.

We are also involved in writing national and international papers on topical issues and even on topics relevant to our specialist subject area. We do, occasionally, identify and initiate major research activities within ourselves, in our areas of specialties, and you have been seeing us commit in escorting the PhD students so that they are conferred with degrees. Most importantly, the Forum is more or less like an advisory committee to the University Management because we are part of Management. We shall always support the management that is in place. I do not think a professor, in his good senses, can become a rebel.

Q: What are the accomplishments the Forum has so far made?

MMUST Professors Forum is now well represented in the University organs such as the University Management Board and the Executive Committee of Senate. We have put in place plans to jointly publish books, lab manuals and other teaching materials. The Forum has also addressed the issue of exit strategy of Professors. It is for posterity not for purposes of taking care of just a few professors. We are involving ourselves in various research platforms such as Research Gate and Google Scholar to increase our visibility

as Professors. The Forum is in the process of establishing a Senior Staff Club.

Q: Any other posts you hold in service to the people of Kenya?

Yes. I am a member of other professional bodies, in particular, Physics Society of Kenya; I am the Secretary General. You may need to know that I am an ordained minister of the word of God. I preach the gospel of Jesus and I do ordination. I can officiate a wedding, conduct a burial ceremony and dedicate a building among other things.

Q: Recently, you were appointed the Acting Registrar (Academic Affairs), how has been your experience so far?

The appointment came as a surprise. In fact, I was on leave when I received a call that I had been considered for the position of the Acting Registrar, Academic Affairs. I took on the challenge and was requested to start work immediately. It was very challenging in the sense that there was nobody to hand over. As you know very well that the former Registrar passed on.

Having been a Dean gave me an added advantage and was able to adjust very quickly and I believe that I am managing it. The experience is good and the task is worth it. I am equal to the task; the challenges are there but I am ready to face them. I know, being a very central office in the University, I am committed to giving my best services so that the institution can grow to a higher level.



Q: What vision do you have for this section in view of the fact that it lies at the core of University operations?

My vision is to work on efficiency and effectiveness of certain functions in the Office of the Registrar (Academic Affairs). I think, of great interest, will be the issues of certification and admission. I want to see an Office with very few inquiries. If you minimise inquiries, it means that you are doing very well but when you have so many of them, it means things are not clear.



Prof. Sakwa making his contribution at a past Council meeting. (PHOTO: Courtesy)

Q: There has always been talk of hard, pure and/or natural sciences. Is there any difference among all these terminologies?

Hard, pure and/or natural sciences are nothing but semantics. They are all the same. If you are taking say, Physics or

Chemistry, one will say that is a pure science. It can also be referred to as a hard science. But it is a natural science because it is about issues or occurrences which are there in life, for example, light, sound, colours, frictional forces among others.

Q: There is a belief in some sections that incorporating social sciences may now become a necessary component in pure/hard sciences in order to have a holistic human being. What is your thought on this assertion?

As a person, you need to know who you are, where you are coming from, where you are and where you are going. You need to know who your parents were and what they believed in, what their values were and see whether those values are relevant or not. You need to know how things and the society evolved. All these are about Humanities and so Arts are very important because they help us to understand ourselves, to plan properly and to appreciate certain things in life.

Issues concerning Humanities and Arts are very important because they are about people. They strengthen the social aspect of the human being. We do not want to be robots, that is, reading science and not knowing who we are. We would rather blend science and some arts.



Q: While in secondary school, some students were not fond of Physics and were unable to relate the subject to their daily life. What can you say about this?

When you talk about Physics, you are referring to energy, matter and how they interact. In short, that is about our daily life. You are able to walk because there is friction between your feet and the ground; you are able to hear me because sound travels; able to sit because forces are balancing. So, Physics is the way of life. You can be innovative and come up with a gadget that can make work easier on the basis of Physics.

Q: In a recent Conference in South Africa, the Vice Chancellor of the University of Cape Town made a presentation on 'From language-as-problem to language-as-resource in mathematics teaching and learning,' do you think we should embrace other languages, apart from English, in the teaching of pure sciences?

Languages are not just for purposes of communication. They are a form of colonization. When you learn another person's language, you bring on board the culture of that community. You might not know that you are being

influenced culturally and that is something that we need to know. I personally appreciate what Tanzania did when they decided that they would teach in Swahili. I also appreciate the fact that *Ngugi wa Thion'go* seems to push for the use of native language.

Meanwhile, we have been learning English as a language of instruction which is good enough, although, I do not think that we need other languages. If anything, we need to strengthen our native language so that we uphold and we are able to appreciate our values.

Q: What more aspirations do you hold for yourself?

My greatest desire is to be an established scholar.

Q: Tell us one thing we do not know about you.

People do not know that I am very caring. It concerns me a lot to care and I do not know how to sustain enemies.

Q: Finally, how would you describe yourself in three words?

True to myself.



On-going Research by MMUST Team Seeks to Curb Jigger Infestation Menace

By Sandra Dorcas Awuor

Masinde Muliro University of Science and Technology (MMUST) was represented by a select members of staff and Postgraduate students during an anti-jigger campaign exercise which took place on Friday, 14th June in Hamisi Constituency, Vihiga County. The purpose of the campaign was to educate locals on removal of the jigger fleas, prevention of further infestation as well as issue shoes and clothes to those who were jigger infested.

The University team, led by Prof. Maurice Omollo, the Director, Quality Assurance, took part in the removal of the jigger fleas which they collected as specimen for their ongoing research project. The team also donated water, surgical blades and chemical supplies such as hydrogen peroxide required for the removal of the jigger fleas.

The project, which is funded by National Research Funds (NRF), seeks to find a better way of eradicating *Tungiasis*; a parasitic skin disease caused by jiggers. The ongoing research will explore the secondary infection associated with jiggers and different natural product chemistry to extract various plant bioactive compounds active against jigger fleas.

During the jigger removal exercise at Wawani Catholic Church in Hamisi Constituency, residents were urged to uphold high standards of personal hygiene and sanitation in their homes, classrooms and churches. Households were also fumigated to ensure complete eradication.

According to World Health Organization(WHO), *Tungiasis* thrives where living conditions are precarious such as villages located in remote beaches, communities in the rural areas and shanty towns of big cities. In these settings, the poorest of the poor carry the highest burden of disease.

Jigger infestation is a social-economic threat that has led to high rates of school drop outs and poor performance, stigmatization, spread of HIV/AIDS and even death. There is, therefore, need for mitigation measures against the disease.

Pictorial



The effects of the jigger menace in pictures and MMUST members of staff, together with Postgraduate students, at Wawani Catholic Church Centre, Vihiga County during the anti-jigger campaign



Prof. Hassan Were (in red) inspecting his potato together with his partners.

70-day Disease and Heat Resistant potato for Western Kenya

By Mary Wangari Wambugu

On Monday, 17th June 2019, Prof Hassan Were, Dean of the School of Agriculture, Veterinary Sciences and Technology (SAVET), organized a farmer's field day event for his *quikgro* potato project at Sang'alo Institute of Science and Technology (SIST), Bungoma. The project is geared towards researching on a potato variety that can grow in the Western region. Farmers from different parts of the region, together with Prof. Were's collaborators; MMUST, University of St. Andrews, James Hutton Limited, Rural Agro-economic Improvement Initiatives Programme (RAGIP), Biotechnology and Biological Sciences Research Council (BBSRC) and International Potato Centre (CIP), were present to witness the progress of the project.

According to Soko Directory, potato is the second most important crop in Kenya after maize in terms of consumption. This crop is very crucial towards contributing to the growth of the economy of Kenya, therefore, it requires attention both in terms of resources and long-term planning. The western region needs this project in order to address food insecurity, unemployment and low farm incomes.

To ensure that farmers within the region connect, Prof. Were came up with an idea of an SMS system to inform them of every function.

"From now onwards, we move forward in the potato production," he said.

The occasion was presided over by Mr. Wachira Kaguongo, the Chief Executive Officer, National Potato Council of Kenya (NPCK).



Growing a Generation of new Computational Material Scientists.

By Mary Wangari Wambugu

The Computational and Theoretical Physics (*CTheP*) research group met from 12th to 13th June, 2019 for an annual workshop to celebrate the group's fourth anniversary since its inception in 2015, as well as to introduce scientific concepts that will enrich the participant's knowledge in their projects.

CTheP, an idea introduced by Dr. George Manyali from the Department of Physics, aims at growing a generation of new computational materials scientists. Overtime, the research group has grown immensely in the number of staff and students and boasts of hands-on experience with Quantum Espresso, SIESTA and VASP computer codes. According to Dr. Manyali, his dream is to see the team develop into an institute. The team has also had quite a number of achievements including three female students joining the group.

"Many people think that Physics is not meant for women. On the contrary, they are embracing the idea of computational material sciences," said Dr. Manyali.

The group has also been able to attract much research funding, both locally and internationally. Students have been winning grants with some getting opportunities to travel outside the country. Recently, Dr. Manyali, together with his team, won a grant to set up a Computational Laboratory at the University. In 2017, the group managed to graduate the first Masters student on a less than a two year record.

However, *CTheP* has encountered some challenges which include; lack of resources in universities and in the country, some students have won grants but up to now no money has been received, lack of publication funds and insufficient human resource.

During the two-day workshop, participants were introduced to basic and advanced topics on computational physics, and, thereafter, underwent thorough practical sessions guided by skilled tutors.

The seminar was attended by collaborators from different Universities including Kabarak, Kaimosi, Rongo and the Technical University of Kenya, as well as Dr. Joseph Owino, the Associate Dean, School of Natural Sciences (SONAS) and Dr. Boniface Ndinya, the Chairman of the Physics Department.



The 2nd International Conference on the Future of Education 2019

By Dr Rose Opiyo and Dr Annette Okoth

The 2nd International Conference on Future of Education 2019 was held on 13th-14th June 2019 at the Windsor Suites Hotel in Bangkok, Thailand. The Conference anchored on the theme: “Empowering Learners in a Digital World” was hosted by the Faculty of Education, the University of Ljubljana, Slovenia and the School of Professional and Continuing Education (UTMSPACE), UniversitiTeknologi Malaysia, Malaysia. The Conference was organized by the International Institute of Knowledge Management (TIIKM), Sri Lanka in collaboration with De La Salle Araneta University, Philippines, Universidad De Las Fuerzas Armadas – ESPE, Ecuador and Masinde Muliro University of Science and Technology (MMUST), Kenya as the Academic Partners.

The Conference attracted international researches, academicians, policymakers, industry experts and educational professionals to look at new trends and transformations in education. It provided a unique international and intercultural experience with many networking opportunities for staff from MMUST. As a result, the Conference put MMUST into the international platform since it was the only delegation which represented Africa as a continent in Asia. The University was also honored with a token for having the highest delegation of vibrant researchers during the Conference.



MMUST was represented by a team of seven members from the academic section namely:

MMUST DELEGATE	SCHOOL
Dr. Elizabeth Omukunda	School of Natural Sciences
Dr. Catherine Aurah	School of Education
Dr. Selline Ooko	School of Natural Sciences
Dr. Rose Atieno Opiyo	School of Education
Dr. Annette Okoth	School of Natural Sciences
Dr. Mary Gorretti Kariaga	SAVET
Mr. Lianda Mauyo	SAVET

The team made ground breaking presentations under various sub-themes which were rated as highly beneficial to the Conference. Three members from the team were appointed to officiate and take up key roles as session chairs, a task they undertook with passion and perfectly delivered on. The Conference provided learning opportunities and borrowing of best practices adopted in **Revolutionizing Education in the world** and how people around the world leverage technology in creative ways that assist learners with accomplishing their goals.

The collaboration with the institutions in Thailand was coined by the Africa Women in Science and Engineering (AWSE), Western Chapter which comprises of Masinde Muliro University of Science and Technology and the Kibabii University. The team is grateful to the University Management Board for its support in funding the learning trip and also putting MMUST in an international forum.





MMUST RFC Reigns the Universities Sevens Circuit

By Meshack Nyambane

Masinde Muliro University of Science and Technology won the 4th leg of the Kenya Universities Sports Association (KUSA) Sevens Circuit held at Moi University between 29th - 30th June, 2019 by beating Kabarak 17-0 in a one sided encounter . This comes after lifting the 2nd and 3rd leg held in Mombasa (Shanzu) and Kakamega (MMUST) respectively. MMUST failed to honor the 1st leg of the Circuit that was held in Meru due to logistical challenges.

The scholars head for the final leg to be held at the University of Nairobi on 6th and 7th July, 2019. Team Captain Samwel Mbeche, a Fourth year student of Optometry and Vision Sciences , who was injured on the first day of the weekend expressed his excitement and confidence that the team shall lift the overall KUSA 7s trophy next weekend during the Nairobi outing.

“The KUSA Circuit is a great build up for the National Sevens Circuit that kicks off in two week time. We know we shall make the University proud’ Mbeche

Weekend Results;

MMUST 19-07 Dedan Kimathi

MMUST 14-14 MOI

Quarter Finals

MMUST 14-05 UOE

Semi Finals

MMUST 17-00 Daystar

Final

MMUST 17-00 Kbarak

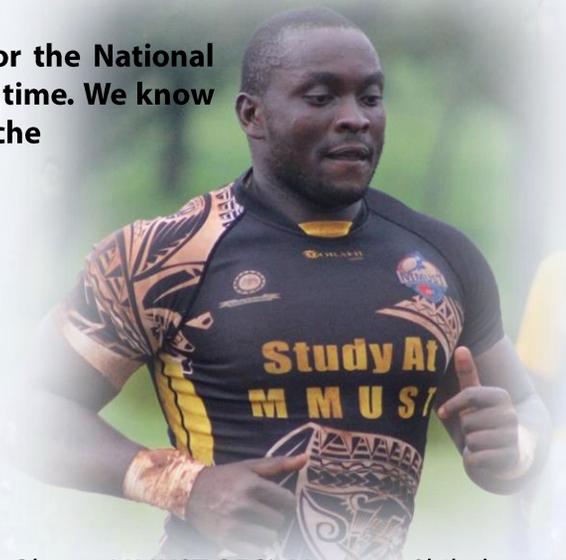


Photo: MMUST RFC's Venance Shikuba in action



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