

1 September–31 December 2018



Faculty of Science,  
Chancellor College

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# FACULTY OF SCIENCE BIMONTHLY BULLETIN

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## EDITORIAL

Welcome our esteemed readers to the 6th Issue of Volume 7 of the Faculty of Science bulletin. During the period under reporting, the Faculty remained active in teaching, research, outreach, internationalization and resource mobilization. Of particular interest, readers will be pleased to learn about graduation including PhD at a ceremony presided over by His Excellency, President of the Republic of Malawi, the Chancellor, Professor Arthur Peter Mutharika; research grants and meritorious awards; drilling and handover of boreholes to local communities; exhibitions; and international conference attendance and collaborations. The

Faculty is pleased to end the year on this note, having fulfilled University mandate. We trust that you enjoyed our bulletins in 2018, and that you will once again walk with us in 2019, which promises to be even more exciting. Happy New Year!



*Pic: Deputy Dean presents Best Science Student, Comfort Indunduzo Chauluka, Chemistry major at the NBM Awards. Congratulations to Indunduzo. ©2018.*

*Editorial Team: Dr. Levis Eneya (Dean), Dr. Chomora Mikeka (Deputy Dean), Fiskani Chirwa (Business Partner), Carol Mkandawire (Secretary). Email: deanscience@cc.ac.mw. Tel. +2651524222 / +265888321033*

## Department of Human Ecology 4th Year Family and Consumer Sciences Fashion Show

On 9th November, 2018, Family and Consumer Sciences students displayed a fashion show in the Great Hall, which aimed at showing their creativity and talent in designing various types of clothes. Below are the highlights.



*Pic: Dean of Science, Dr. Levis Eneya welcomes patrons to the fashion show and gives background and rationale before requesting the Principal, Prof. Richard Tambulasi, to speak. Also in attendance were the Vice Principal, Prof. Samson Sajidu, and Head of Human Ecology Department, Dr. Khama Chibwana.*

*Far Right Pic: Students showcase Elegant Look (top) and Dashik designs under this year's theme: Historic References.*



*Pic: The lecturers in clothing and textiles and designers, the brains behind this successful fashion show: Rose Kaleke and Mirriam Kumwenda, pose in fashion.*



**Viva Voce and Graduation*****Congratulations!*****Viva Voce for MSc in Informatics held on 28<sup>th</sup> November 2018 in the Senior Common Room from 9.00 am**

The following students successfully defended their Master of Science in Informatics.

- ⇒ Robert Chimalizeni: Evaluating how information systems projects affect quality and net benefits of business systems.
- ⇒ Annie Tionge Kaonga: Assessing the effectiveness of the Malawi Integrated Border Control System (IB-CS): A case of the Malawi Department of Immigration.
- ⇒ Humphry Jalani: Exploring opportunities and challenges of mobile money interoperability platforms: Case of Malawi
- ⇒ Matthew Kumbuyo: Electronic Medical Records (EMRs) usage challenges in Malawi: A case of Baobab Health Trust.

**Viva Voce for Master of Science in Water Resources Modeling and Governance held on 13<sup>th</sup> December 2018 in the Senior Common Room from 8.30am**

The following students successfully defended their Master of Science in Informatics.

- ⇒ Innocent Kamanga: Gender, leadership and irrigated farming: A case study of Kamwaza Irrigation Scheme, Ntcheu District.
- ⇒ Steve Kazembe: Public perceptions on the use of treated wastewater for domestic purposes: The case of Lilongwe City.
- ⇒ Levi Kalitsiro: The role of water point committees in the management of hand pump technology: A case of Balaka District.
- ⇒ Lusungu Nkhoma: Impact of climate change and land use change on river flow regime: Case of Wamkurumadzi river.

**Viva Voce for Master of Science in Geography and Earth Sciences by Research held on 13<sup>th</sup> December 2018 in the Senior Common Room from 8.30am**

The following student successfully defended his Master of Science in Geography and Earth Sciences by Research.

- ⇒ Jabulani Nyengere: Geographical Analysis of Informal Fish Trade Routes in Malawi and Neighbouring Countries.

**Viva Voce for Master of Science in Biostatistics held on 20<sup>th</sup> December 2018, in the Senior Common Room from 8.30 am**

The following students successfully defended their Master of Science in Biostatistics.

- ⇒ Grace Makhalira: Modelling the effects of household food security status on primary education indicators.
- ⇒ Emmanuel Banda: Investigating causal and mediating risk factors for under-nutrition (stunting) in under five children in Malawi using structural equation modelling techniques on 2015-16 Demographic and Health Survey (DHS).
- ⇒ Evarista Kudowa: Application of multiple imputation inverse probability weighting and double robustness in determining blood donor deferral characteristics in Malawi.
- ⇒ Rejoice Msiska: A meta-analysis of prevalence of childhood diarrhea in Sub-Saharan Africa using observational data.

**Graduation During the 4th Congregation on 14 November 2018 at BICC**

- ⇒ BSc: **75** graduates
- ⇒ MSc Biostatistics:
  - ◇ Kamkhwala Gausi
  - ◇ Jessie Jane Khaki
  - ◇ Fiskani Jane Kondowe
  - ◇ Shadreck Mota
- ⇒ MSc Informatics:
  - ◇ Shadreck Kuleti
  - ◇ Eli Mapulanga
- ⇒ PhD in Chemistry:
  - ◇ Kumbukani Kafwirangachi Nyirenda

*Pic: The Dean of Science congratulates Dr. Kumbukani Nyirenda (Right) after being conferred with PhD in Chemistry by His Excellency, President of the Republic of Malawi, the Chancellor, Professor Arthur Peter Mutharika.*

**Faculty of Science Partners ASU on a USAID/Malawi Higher Education Project: 72061218NFO00002**

We are pleased to announce that Arizona State University (ASU) and Malawi public HEIs have been awarded the USAID/Malawi Higher Education Project. In his words, Associate Professor **Samuel A. DiGangi** of ASU said, "The strength of this project is truly a testament to our dedication, creativity and innovation toward increasing access to higher education opportunities in Malawi. A kick-off call by ASU with USAID is planned soon, and then hope to plan an ASU consortium kick-off thereafter." Faculty of Science will benefit through provision of expert resource personnel in the development of online delivery instruments and fabrication of standalone digital libraries called SolarSPELLS.



**TECHNICAL  
APPLICATION**  
May 19, 2018

Arizona State University | Higher Education Activity in Malawi

Funding Opportunity Number: RFA-720-612-18-NFO00002

*Pic: Cover page of the winning proposal.*



## Mathematical Sciences and CATS Departments win NORAD Project: NORPART-2018/10178

The Department of Mathematical Sciences in the Faculty of Science, and Department of Curriculum and Teaching Studies in the Faculty of Education at Chancellor College, in collaboration with University of Stavanger (UiS) in Norway have won a five-year NORAD grant (2019-2023) under NORPART project to implement a collaborative project named *Malawi-Norway Mobility Programme in Mathematics and Mathematics Education (MaNoMME)* coordinated by Dr. Levis Eneya on the Malawi side, and Professor Arne Jakobsen on the Norway side.

The project builds on two other NORHED projects, namely, *Improving Quality and Capacity of Mathematics Teacher Education in Malawi* (2013 - 2018); and *Strengthening Numeracy in early years through professional development of teachers* (2017 - 2021) coordinated by Prof. Mercy Kazima-Kishindo on the Malawi side and Professor Arne Jakobsen on the Norway side. Among other activities MaNoMME project will give scholarships to MSc (Mathematics) and MEd (Mathematics Education) students to spend part of their training in Norway during course work and research, respectively. Announcing the award, the Norwegian Agency for International Cooperation and Quality Assurance in Higher Education (Diku) indicated that they received 86 applications of which 20 were successful.

The project will go a long way in building capacity in Mathematics and Mathematics Education in Malawi particularly for females, who are few in the field. Congratulations!

More information about NORPART, can be found on the website below:

<https://www.siu.no/front-page/Programme-information/Cooperation-outside-the-EU/norpart/0%28view%29/26185>



File photo (L-R): Dr. Levis Eneya, Prof. Arne Jakobsen and Prof. Mercy Kazima-Kishindo during one of their project meetings

## Introducing to Drones For Urban Planning Under Afri-City Project

There was a training under AfriCity (Adaptability, Food security, Risk and the Right to the city in Sub-Saharan Africa: Towards Sustainable livelihood and Green infrastructure) project on introduction to drones for urban planning held on 5th and 6th October, 2018 at T & D Guest House, Zomba. AfriCity is a four year collaborative project implemented in partnership by LEAD and Chancellor College, Malawi; Rhodes University, South Africa; Sokoine University of Agriculture (SUA), Tanzania; and University of Erlangen-Nurnberg, Germany. It intertwines research, teaching and trainings for capacity building of project stakeholders and relevant practitioners in respective study areas.

For this cause, the training participants were not only from academia but also practitioners from both public and private sector like Zomba city council, Department of Forestry, Department of Fisheries, and Malawi Housing Corporation (MHC).

The training was facilitated by Dr. Steffen Vogt, a CEO at svGeosolutions Company, a Germany private partner in the AfriCity project. The two day training span around how to fly a drone and capture aerial images, and the use and analysis of the images for sustainable urban development. Following the theory on drones, a session on flying of the drone was scheduled at Chirunga stadium. The training ended with a note on how to analyze the captured aerial images for use in planning.



In pictures: Dr. Steffen Vogt, with a drone in his hands, demonstrating to staff and students how to fly a drone at Chirunga Stadium, Chanco.



## The Faculty of Science, Chancellor College Hosts Lecturers from University of Erlangen-Nurnberg, Germany under Afri-City Project

From 8th to 10th October, 2018, the Faculty of Science at Chancellor College hosted two lecturers from University of Erlangen-Nurnberg, Germany: Prof. Fred Krüger and Dr. Alexandra Titz on staff exchange programme under AfriCity project. AfriCity (Adaptability, Food Security, Risk and the Right to the City in Sub-Saharan Africa: Towards Sustainable livelihood and Green infrastructure) is a four year collaborative research, teaching and training project implemented in partnership by LEAD and Chancellor College, Malawi; Rhodes University, South Africa; Sokoine University of Agriculture (SUA); College of Business Education (CBE) from Tanzania; and University of Erlangen-Nurnberg, Germany since 2017 and with funding from the Federal Ministry of Education and Research (BMBF) and German Academic Exchange Service (DAAD).



*In picture: The Masters students engaging in a discussion with Prof Krüger and Dr. Titz during the course.*

During their stay, the two staff members delivered a three days short course on urban development, food security and methodology to 14 Masters Students from the Faculty of Science. The short course created a platform for Postgraduate students from different departments to interact and share ideas. The course was integrated with a research field work on food security to Zomba Market where students had hands-on experience on research techniques such as interviews.



*Pic: Prof Krüger and Dr. Titz from German and masters students after the course at Biology department, Chancellor College.*



## Chanco Capacity Building in Hydrogeophysics Project (CBHP) Benefits Local Communities

CBHP is a two-year Project implemented by the University of Illinois (USA) and Chancellor College at the Natural Resources and Environment Centre (NAREC), a research centre for the Faculty of Science. The research is led by Drs Z. Dulanya (a geologist) and E. Mwathunga (a development geographer) in the Department of Geography and Earth Sciences. Through this project, Chancellor College has drilled and commissioned four new boreholes along the Lake Chilwa Basin at Jimu and Kuchilimba villages in T/A Chikowi; Kimu village in T/A Nkagula; and Likapa village in T/A Mwambo; and rehabilitated an existing borehole in Kuchilimba village, as part of its outreach programmes. The College officially handed over the boreholes to the communities on 4/10/18. Other activities under the project include curriculum review of the MSc in Water Resources Modelling and Governance programme; workshops, purchase of geophysics equipment including an ABEM Terrameter 1000 with LUND switching configuration to allow for VES or ERT resistivity measurements.



The Principal, Prof. R. Tambulasi hands over a borehole to local communities at Kuchilimba village as the Dean of Science Dr. L. Eneya looks on.

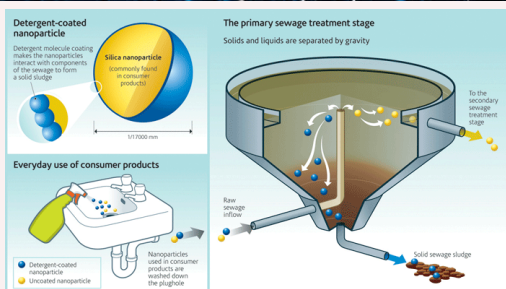
## Nanotechnology and its Applications for Wastewater Treatment: For the African Continent

From 15th October to 21th October 2018, Dr. Ephraim Vunain of the Chemistry Department, Faculty of Science at Chancellor College, visited Jaramogi Oginga Odinga University of Science and Technology, (JOUST), Kenya, to assist in finalizing a curriculum on a Bachelors Degree Program (BSc) in Petroleum Chemistry with assistance from the Excellence Center for Development Cooperation (EXCEED) teacher exchange program.

During his stay, he also delivered lectures to undergraduate and postgraduate students of the University. The Faculty of Science is pleased with the scholarly and academic leadership that Dr. Ephraim Vunain demonstrates in Malawi and across the borders.



Pic: Dr. Ephraim Vunain giving a presentation titled: "Nanotechnology and its Applications for Water/wastewater treatment: The way forward for the African Continent."



Dr Silas Lagat (left), Dr Ephraim Vunain (middle) and Dr Solomon Omwoma (right) at the museum of the first Vice President of Kenya (Late Jaramogi Oginga Odinga and father of opposition leader Dr Raila Odinga).



## MUST Awards Kaleke: USAID-Sponsored Innovation Scholars Program

Mrs Rose Kaleke (lecturer in Human Ecology Department, Faculty of Science) is one of the beneficiaries of Malawi University of Science and Technology Innovation Scholars Program (MUST-ISP) of the 2018/2019 MUST-ISP Fellows! This is an important honor commensurate with her past accomplishments and future potential as an innovator.

Commenting on the award, the spokesperson for MUST said, “Malawi University of Science and Technology (MUST) has built a reputation as a higher learning institution of excellence in teaching, training, research, entrepreneurship and outreach. MUST is interested in investing in Mrs Kaleke as part of the first generation of scholars to continue this important legacy.”

The award will provide a 2-year long experience which will include trainings, workshops, regional excursions for experiential learning and symposiums. Mrs Kaleke will also engage in field-based work or case study to support her STI efforts in a location of her choice. Financial resources for the MUST Innovations Scholar Programme are provided by USAID.

The Faculty congratulates Mrs Rose Kaleke and wishes her well as she pursues her professional goals.



*Pic: Mrs Rose Kaleke sitting with fourth year students - Clothing and Textiles class.*



## Faculty of Science Exhibits at the C10 Summit at BICC, Umodzi Park, Lilongwe



Chancellor College through the technical leadership of Patrick Mzaza, a member of the Physics Department, Faculty of Science was accepted to exhibit at the C10 Summit, and the exhibits included the following: Science Demonstrations for Malawian Schools, Lights for Malawian Rural Communities, Vehicle Road Speed Detector, IoT Heart Rate Measurement System, Poultry Incubators, Mushroom House Control System and Internet of Things, mHealth4Afrika App, Community Health Tracker, Applying Virtual Reality to Education, Nitrofix - Soybean Inoculant for Smallholder Farmers in Malawi: The Role of Partnerships in Boosting Crop Production in Malawi Through Biofertilizers, Plant Growth Promoting Rhizobacteria (PGPR) for sustainable agricultural intensification in Malawi, Solar tent drier technology, Two-Section Moulding for Ceramic Tile Forming/ Press Moulding Technique, Mdindo Ecofriendly Stove, Makono Ceramic Cooler (Mak Cooler).

The Government of the Republic of Malawi organized the 2018 Summit of the Committee of 10 Heads of State and Government Championing Education, Science, Technology and Innovations (C10) in Africa which was held from Friday 2nd November to Saturday 3rd November 2018 at BICC, Lilongwe-Malawi. The Summit was a high-level gathering of national and international leaders of governments, policy makers, research scientists, development practitioners and business leaders. The Summit's theme was “Enhancing Education, Science, Technology and Innovation (ESTI) for African Development.” During this Summit, Heads of State and Government discussed and reflected on the role of Education, Science, Technology and Innovation for national, regional and global development. A paper dubbed, “Lilongwe Declaration,” has been released and could be cited. One key statement in the Declaration is that, “all teachers should undergo some ICT training.”



*Pic: The Principal, Prof Richard Tambulasi motivates the Faculty team.*

## Faculty of Science Orientation for Postgraduate Students – September 2018 Intake



*Pic: PG students listening to talks by Dean of Science and Heads of Departments on PG training at Chancellor College.*

The Faculty of Science welcomed postgraduate students for the September 2018 intake into various programs. The orientation took place on 13th September 2018 in the Biology Education Laboratory. Led by the Dean of Science, Heads and Deputy Heads of Departments, took turns to welcome postgraduate students and to explain the various aspects of the postgraduate programmes that are offered in the Faculty of Science which may not have been clearly highlighted in the course of the general orientation programme. The function was also attended by two members of staff from Polytechnic which work jointly with Computer Science Department in teaching and supervising students in the Master of Science in Informatics.

The orientation was followed by visits to various laboratories in the Faculty. In his closing remarks, the Dean thanked all members for their time and contributions to the orientation programme. He also wished the postgraduate students successful studies.



*Pic: Deputy Head of Chemistry Ms Chikondi Shaba presenting on Master of Science in Applied Chemistry.*

## Earth Science Student, Rachel Kumwenda at FOSS4G/ HOT 2018 Conference



*In picture: Day one of the FOSS4G/HOT summit 2018.*

Rachel was selected as one of the speakers for the FOSS4G/HOT summit in October, 2018. Free Open Source Software for Geospatial (FOSS4G) annual conference is the largest global gathering focused on open source geospatial software. Through six days of workshops, presentations, discussions, and cooperation, FOSS4G participants created effective and relevant geospatial products, standards, and protocols. FOSS4G has been held all over the world and draws attendees from over 40 countries. Rachel was awarded a grant worth \$500 for her travel to Tanzania and received support for food and lodging. This was her first time to cross borders and interact with over 1000 open data enthusiasts from over 40 countries including US, UK, Uganda, Japan, China, Indonesia, India, Zambia to mention a few. The first event in the beautiful city of Dares salaam was the Geo-Chicas event. She also met amazing women in Tech and interacted with several hearing amazing projects and work that are being done for OpenStreet Map and OSGeo.

Rachel Kumwenda had also a chance to attend and volunteer for the mapping with flying Robots: 3D reconstruction through photogrammetric alchemy workshop and also attended the map box web map development. She presented her undergraduate project in which she is applying GIS and OpenStreetMap in Earthquake mitigation. This was an opportunity for her to speak in front of different professionals. Finally, she attended the Esri-Youthmappers workshop at Ardhi University and learnt to create story maps.

These events are very important for students as they connect and learn from people coming from different parts of the world as such students should be encouraged to apply and attend such events. The Faculty congratulates Rachel Kumwenda.



### Tsilizani Kaombe wins the 2018 Best PhD Award at the Sub-Saharan Africa Biostatistics Consortium (SSACAB) Conference and AGM held in Nairobi, Kenya

The sub-Saharan Africa Consortium of Advanced Biostatistics Training (SSACAB) under Developing Excellence in Leadership and Training in Advanced Statistics (DELTAS) initiative has its overall aim of enhancing and sustaining Biostatistics Capacity in the region.

The SSACAB-DELTAS project is headquartered at University of Witwatersrand in South Africa, with partner Institutions from across Africa and Europe. It holds an annual conference for postgraduate students funded by the consortium, in addition to presentations by faculty members at participating institutions. This year's meeting was held in Nairobi, Kenya from 10-14 September, 2018. As part of this event, best poster and oral presentations from among Masters and PhD students presentations as judged by a panel of Statistics Professors were awarded with prizes. Tsilizani Kaombe's presentation "Identification of Outlying and Influential Districts in Modelling Child Survival in Malawi" was judged the best oral presentation by a PhD student. Tsilizani is a member of staff and PhD student in the Mathematical Sciences Department, Faculty of Science at Chancellor College.

This was part of the application of the statistics methods developed in his PhD study funded by the World Bank's Skills Development Project (SDP) at the University of Malawi. Tsilizani's supervisor is Professor Samuel Manda of Medical Research Council of South Africa. The research started in 2015 and is in its final stages. Both the candidate and the supervisor felt greatly honoured with the award. It was a timely and great feedback and motivation to the candidate as he winds up his PhD work. Congratulations!



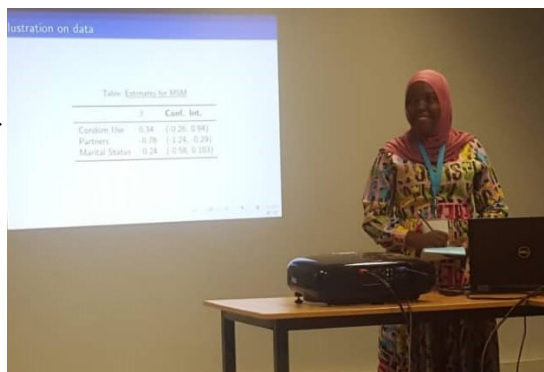
*Pic: Tsilizani Kaombe (3rdL), with his supervisor Prof. Samuel Manda (L) and other awardees and their supervisors.*



*Pic: Tsilizani (2ndL) with SSACAB director Prof. Tobias Chirwa (3rdL) and other awardees plus judges.*

### Mathematical Sciences Department Members Attend SAMSA 2018 Conference and MASAMU Institute

From 16-25 November, four members from the Mathematical Sciences Department, Faculty of Science, were in Palapye, Botswana, attending the 2018 Masamu Advanced Study Institute (MASI) and Workshops in Mathematical Sciences, which ran concurrently with the 2018 Southern African Mathematical Sciences Association (SAMSA) held from 19-22 November. During the MASI, the four members, Mrs Halima Twabi Mdala, Mr. Elias Mwakilama, and Drs. Millward Maliyoni and Levis Eneya worked on various research projects in separate collaborative research groups with members from American and African Universities; and also presented during the conference. The conference and institute provided a platform for the exchange of knowledge, research dissemination, provoking of new ideas, networking and learning. The next SAMSA conference and MASAMU Institute will be held in Malawi in November 2019, and will be co-hosted by the Malawi public universities: MUST, UNIMA, LUANAR, and MZUNI.



*Above (L-R): Dr. Maliyoni, Mrs Halima Twabi Mdala, Dr. Eneya and Mr. Mwakilama during excursion.*

*Left: Halima responds to questions during her presentation on "Application of Multivariate Causal Inference in Observational Studies", which is part of her ongoing PhD work*



## Chanco's Advocate, Dr. Chomora Mikeka Relates and Engages the Crowd at Katoto © Nov., 2018



### Goodbye Dr. Matthew Kittelberger

Dr. Kittelberger was a Fulbright Scholar in the Biological Sciences Dept., teaching Cells and Microscopy, Animal Physiology and Biochemistry courses. Staff and students will greatly miss him.



Head and Deputy of Biological Science Dept. present a gift.



Dean and Deputy Dean of Science Faculty pose with Matthew.

*Pic: Dr. Chomora Mikeka markets and promotes the University of Malawi, Chancellor College's academic programmes and interests the 2018/19 candidates for the Public Universities Selection (<https://pus.nche.ac.mw>) within the framework of National Council for Higher Education (NCHE) Sensitization Clinics. Over 3,000 qualifying candidates assembled at Katoto.*

**INNOVATION INSIDER SPECIAL:** Scottish University in Glasgow donates state of the art equipment to Chancellor College's Principal, Prof Richard Tambulasi.



*Pic: Dr. Chomora Mikeka is the leader for the Affordable Internet Access ESPRC Grant, coordinated from the White Space Communications Center, Strathclyde University.*



The equipment received has potential to build a Chanco Mobile/Cellular Network based on 5G, lightweight, reconfigurable base station using SDR techniques. Some of the electronic boards include the Field Programmable Gate Arrays (FPGAs) to increase our students design and experimentation capacity in the frontiers of electronic communications research.



## Recent Publications (Book Chapters, Conference Papers, Journal Articles)

### Journal Articles

1. **Ephraim Vunain\***, Dégningou Houndedjihou, **Maurice Monjerezi**, Adolp Anga Muleja, Barthélémy Tomkouani Kodom "Adsorption, kinetics and equilibrium studies on removal of catechol and resorcinol from aqueous solution using low-cost activated carbon prepared from sunflower (*Helianthus annuus*) seed hull residues." *Journal of Water, Air and Soil Pollution*, September 2018. DOI: 10.1007/s11270-018-3993-9
2. **Martin Charles Likongwe**, William Kasapila, **Mangani Katundu**, **Placid Mpeketula**, Microbiological quality of traditional and improved kiln smoked catfish (*Clarias gariepinus*; Pisces; Clariidae) in Lake Chilwa Basin, *Food Science & Nutrition*, Wiley, Periodicals, Inc., DOI: 10.1002/fsn3.885.
3. Beaton Kapito, **Patrick Ali**, **Levis Eneya**, "Privacy Preserving User Authentication Scheme based on Smart Card," *International Journal on Cryptography and Information Security*, Vol. 8, No. 3, pp. 15-25, 2018.
4. **Msiska, Brown C.** (2018) "Cultivating Third Party Development in Platform-centric Software Ecosystems: Extended Boundary Resources Model," *The African Journal of Information Systems*: Vol. 10: Iss. 4, Article 6.
5. Chisenga, C. **Dulanya, Z.**, Jianguo, Y. The structural re-interpretation of the Lower Shire Basin in the Southern Malawi rift using gravity data. *Journal of African earth Sciences*, <https://doi.org/10.1016/j.jafrearsci.2018.08.013>.
6. Ordiz MI, Wold K, **Kaimila Y**, Divala O, Gilstrap M, Lu HZ, Manary MJ. Detection and interpretation of fecal host mRNA in rural Malawian infants aged 6–12 months at risk for environmental enteric dysfunction. *Experimental Biology and Medicine*. 2018 Aug 12;1535370218794418.
7. Kumwenda G, Chipungu G, Sloan D, **Kaimila Y**, Chiumya K, Pangani H. The occurrence and frequency of genomic mutations that mediate Isoniazid and Rifampicin resistance in *Mycobacterium tuberculosis* isolates from untreated pulmonary Tuberculosis cases in urban Blantyre, Malawi. *Malawi Medical Journal*. 2018;30(1):1-5.

## Return from Further Studies: *First Beneficiary of the World Bank Skills Development Project*



Pic: Dr. Milliward Maliyoni, Senior Lecturer in Mathematics  
Research interests: Mathematical Biology.

**Name:** Milliward Maliyoni, First beneficiary of the World Bank Skills Development Project (SDP).

**Degree:** Doctor of Philosophy in Applied Mathematics

**Area of Specialization:** Mathematical Biology

**Thesis title:** *Stochastic Epidemic Models for a Tick-Borne Disease: The Role of Wildlife as Reservoirs of Tick-Borne Pathogens*

**Institution:** University of KwaZulu-Natal, South Africa

**Commencement date:** 19 November, 2015

**Completion/award date:** 29 November, 2018

**Statement:** "I am grateful to the Principal and management of Chancellor College for selecting me as one of the beneficiaries of the World Bank SDP. In particular, I thank the SDP's team leader, Dr. J.F. Mwatseteza for supporting me unconditionally during the entire duration of my studies. I am back to the College now and I look forward to rejoining my department."

The Faculty congratulates Dr. M. Maliyoni for successfully completing his doctoral studies in a record time and returning to serve the University in the Department of Mathematical Sciences, Chancellor College.

### Faculty Announcements

The Faculty of Science is pleased to announce newly recruited staff members.



Pic: Mr. Benard Mmame (MSc Physics) 2018, University of Kwa Zulu Natal Assistant Lecturer in Physics.

**Research interests:** Studying the interaction between the geomagnetic field and field lines from the Sun.

PHY



Pic: Dr. Omowunmi Mary Longe, Senior Lecturer in Physics

**Qualification:** Doctor Ingenieriae (D. Ing) 2017, Electrical and Electronics Engineering Science, University of Johannesburg, Johannesburg, South Africa.

**Research interests:** Optimisation Algorithms for Energy Management in the Smart Grid, Mitigating household energy poverty through energy expenditure affordability algorithm in smart grids, Distributed Optimisation Algorithm for Demand Side Management in Grid-Connected Smart Microgrids, Comparative Analysis of GSM Signal Strength, Solar Energy Converter with Battery Back-up.

From  
PHY  
to  
COM



Pic: Mr. Vincent Peheliwa: Staff Associate in Physics

**Research interests:** Atomic Physics: Quantum States and Dynamics of Photons.



Pic: Ms Akuzike Banda: Staff Associate in Computer Science.



Pic: Mr. Lawrence Byson: Staff Associate in Computer Science.