



# COLLEGE OF NATURAL SCIENCES (CoNAS)



# 2023 ANNUAL REPORT

✕ MakCoNAS  
f MakCoNAS  
🌐 <https://cns.mak.ac.ug>



## VISION

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To be a thought leader of knowledge generation for societal transformation and development



## MISSION

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To create and impart knowledge in basic and applied sciences to society through training, research and extension services for development



## Core Values

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The College in pursuit of its mandate is guided by the five core values of Makerere University listed below:

- Accountability
- Professionalism
- Integrity
- Respect
- Inclusivity

# LIST OF ACROYNMS

BETB	Bachelor of Science in Ethnobotany
BSBT	Bachelor of Science in Biotechnology
BSC	Bachelor of Science
BSCB	Bachelor of Science in Conservation Biology
BSFA	Bachelor of Science in Fisheries and Aquaculture
BASIC	Bachelor of Science in Industrial Chemistry BSPC Bachelor of Science in Sports Science
BSPG	Bachelor of Science in Petroleum Geosciences and Production
CoNAS	College of Natural Sciences
CoTRA	Collaborative Training in Fisheries & Aquaculture in East, Central and Southern Africa
EU	European Union
ISP	International Science Programme
Mak-RIF	Makerere University-Research and Innovations Fund
MSc.	Master of Science
MUELE	Makerere University E-learning Environment
NORAD	Norwegian Agency for Development Cooperation
ODEL	Open Distance and E-learning
PMB	Plant Sciences, Microbiology and Biotechnology
SBS	School of Biosciences
SPS	School of Physical Sciences
ZEFS	Zoology, Entomology and Fisheries Sciences,

# LIST OF TABLES

<b>1</b>	Table 1: Student enrolment 2023/2024	<b>13</b>
<b>2</b>	Table 2: 73rd Graduation statistics	<b>15</b>
<b>3</b>	Table 3: First Class Degrees 2023	<b>15</b>
<b>4</b>	Table 4: CoNAS PhD graduates	<b>16</b>
<b>5</b>	Table 5: PhD Defenses 2023	<b>17</b>
<b>6</b>	Table 6: Ongoing research projects – MakRIF	<b>27</b>
<b>7</b>	Table 7: Projects supported by International Partners	<b>30</b>
<b>8</b>	Table 8: Appointments, promotions, confirmations, resignations	<b>73</b>
<b>9</b>	Table 9: CoNAS staff establishment	<b>74</b>
<b>10</b>	Table 10: CoNAS staff list	<b>77</b>

## CONAS LEADERS



**Prof. Winston Tumps Ireeta**  
Principal



**Prof. Juma Kasozi**  
Deputy Principal

## DEANS



**Prof. Michael Owor**  
Dean, School of Physical Sciences



**Prof. Arthur Tugume**  
Dean, School of Biosciences

## HEADS OF DEPARTMENT



**Dr. Denis Okello**  
Head, Dept. of Physics



**Dr. John Wasswa**  
Head, Dept. of Chemistry



**Prof. Godwin Kakuba**  
Head, Dept. of Mathematics



**Dr. Arthur Batte**  
Dept. Geology & Petroleum Studies



**Prof. Eric Sande**  
Head, Dept. of Zoology,  
Entomology & Fisheries Sciences



**Dr. Samuel Ojelel**  
Head, Dept. of Plant Sciences  
Microbiology & Biotechnology



**Dr. Agnes Nandutu M.**  
Head, Dept. of Biochemistry  
& Sports Science

# NEWLY APPOINTED HEADS OF DEPARTMENT



Dr Emmanuel Tebandeke,  
Head, Department of Chemistry,  
effective 1/03/2024



Dr Geoffrey Ismail Mirumbe,  
Head, Department of Mathematics,  
effective 1/03/2024



Dr Jamilu Ssenku,  
Head, Department of Plant Sciences, Microbiology and Biotechnology,  
effective 1/03/2024



Dr Godfrey Kawooya Kubiriza,  
Head, Department of Zoology, Entomology, and Fisheries Science,  
effective 1/03/2024

# Congratulations

*from the staff and Management at* **CoNAS**

# CONTENTS



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<b>INTRODUCTION</b>	11
<b>TEACHING AND LEARNING ACHIEVEMENTS</b>	
Student enrolment	13
73rd Graduation statistics	15
Formation of the Biology Society of Uganda	18
Popularisation of the Bachelor of Science Programme	18
University Dialogue on Harnessing Biotechnology	19
Mak, MUBS develop Web Portal to Track Masters' Research Processes	19
Mak ICT-4MRPQ Project Preparatory Meeting for the Launch of the E-Supervision Platform	20
CoNAS participates in Mak Youth & Innovation Expo 2023	20
<b>RESEARCH AND INNOVATIONS</b>	
NutriFish Project Products launch	22
Project Launch: "Strengthening Makerere University's Research, Grant Writing and Publication Capacity	24
The First Wind Turbine installation on Makerere University Campus	25
Makerere University Hosts 6th Workshop of the UNET Project	25
ABS Project Inception Meeting	26
Mak, COSL Uganda collaboration	26
Ongoing research projects – MakRIF	27
Projects supported by International Partners	30
<b>AWARDS AND RECOGNITIONS</b>	
Dr Julius Mulindwa Wins DFG Research Grant	36
Dr. Alice Nabatanzi Wins Best Innovator Position at the Appropriate Technologies Centre Expo 2023	36
Dr Anywar Selected to Join the Highly Prestigious Global Young Academy	37

Dr Anywar Appointed to the PLOS ONE Editorial Board 38

Dr. Anywar Selected as 2023 Carnegie Corporation of New York Fellow 38

Dr Betty K. Nannyonga gets Independence Medal 38

Mr. Abubakar Mustafa's research paper rated best in the Phytofrontiers Journal 38

CoNAS student Dorothy Akoth Wins 2023 GBIF Graduate Researchers Award 39

NutriFish wins Fisheries Innovations Award 2023 39

**ELECTION INTO LEADERSHIP POSITIONS**

Prof. Arthur Tugume elected Vice Chairperson, Mak Deans' Forum 41

Prof. Tugume appointed Chairperson Mak Deans' Forum 41

Dr. Shahasi Athman Vice President of the American Phytopathological Society 42

Prof. James Kalema appointed Chair of the new Board of Trustees of Uganda Wildlife Authority 42

**CONFERENCES & TRAINING WORKSHOPS** 43

**KNOWLEDGE SHARING & TRANSFER PARTNERSHIPS**

EnergyNET Project Annual Meeting 45

Public Talk on Opportunities in Academia in USA and Europe 45

Induction of CoNAS leaders 46

COTRA Annual Partners Meeting in Malawi 46

DRGT engagement with CoNAS leaders and programme coordinators 47

PESCA support towards Internship for BSc Fisheries & Aquaculture Students 47

Skilling for Sustainable Aquaculture: Mak, ARDC-Kajjansi Train 200 Fish Farmers 48

The Joint African- Nordic conference in Mathematics: Mak honours Prof Leif Abrahamsson 49

The 2023 Eastern Africa Algebra Research Group Workshop 50

30 Trained in Solar Photovoltaic Installation, Biogas Production 50



Women in Sage: Global Scholars Meet at Makerere to Deliberate the Development of Mathematics 51

CoNAS Participates in the 2023 National Science Week Exhibition 52

Makerere University Council Members Visit to CoNAS 53

**OUTREACH ACTIVITIES** 55

Promoting the subject of Mathematics 55

International Mathematics Olympiad - IMO 2023 57

Mathematics Teachers Conference - 2023 59

**PUBLICATIONS** 60

Appointments, promotions, confirmations, resignations 73

CoNAS staff establishment 74

CoNAS staff list 77



# FOREWORD



It gives me great pleasure to share with you our annual report, a summary of what we achieved together in 2023.

On behalf of Management at the College, I extend our appreciation to all staff who work tirelessly to ensure our students acquire quality education and graduate in time. I am happy to report that at the 74th graduation, we presented 331 students for the award of degrees of Makerere University in various disciplines of science. Of these, 12 graduated with PhDs (1 female and 11 male), 35 with Masters (12 female and 23 male), and 284 with BSc (79 female and 205 male). At the same occasion, Makerere University awarded Prof. Leif Abrahamsson an Honorary Doctor of Science for his contribution to the development of Mathematics in the East African region. Formerly Programme Director at the International Science Programme (ISP), Uppsala-Sweden, and Coordinator of the Bilateral Programme of Sida at Makerere University, Prof Abrahamsson, started the network of Eastern African Universities Mathematics Program (EAUMP) to improve the state of mathematics through Masters and PhD training. After setting up the network, mathematics became one of the ISP core programmes. Because of Prof Abrahamsson's efforts, to date, ISP support to Mathematics in the region ranges from visible capacity built at various graduate levels. With his support, the ISP has supported the training of over 30 PhD students, over 20 Master

students, and over 15 Postdocs in Mathematics and its Applications in Uganda since 2002. We are grateful to Makerere University Senate for endorsing the award.

In the course of the year, the College undertook numerous projects and registered a number of achievements. The College in partnership with Makerere University Business School (MUBS) developed an E-Supervision Web Portal (<https://mastersresearch.ug/>) to support the tracking of Masters Research supervision processes. The portal is a product of an EU-funded project - ICT-4MRPQ that aims to address quality assurance problems/gaps encountered by Higher Education Institutions (HEIs) in Uganda. At Makerere, the project is led by Dr John Mary Kiberu from the Department of Geology and Petroleum Studies. Additionally our members of staff from the Department of Zoology, Entomology and Fisheries Sciences in collaboration with officials from the Aquaculture Research and Development Centre, Kajjansi (ARDC) trained over 200 fish farmers in different aspects of aquaculture. The trainings were part of the activities in the contract awarded to Makerere University under the European Union-funded project: **Promoting Environmentally Sustainable Commercial Aquaculture (PESCA)** to provide training services. The overall objective of the assignment was to support training that would improve knowledge, skills, and practices that enhance aquaculture production and productivity in Uganda.

It is also pleasing to note that through the NutriFish Project, our researchers led by Dr Jackson Efitre from the Department of Zoology, Entomology and Fisheries Sciences, Makerere University developed five high-value nutritious products (baby food, sauce, maize meal, snacks, and seasoning) using Mukene. The researchers also developed a Mukene recipe book, and an application (eCAS system) for tracking fish catches. By September 2022, 8,960 records of catch data had been collected and transmitted through the eCAS system by trained local enumerators. Over 200 stakeholders are using the application, including the Directorate of Fisheries Resources and the Fisheries Protection Unit, which uses the data to help prevent overfishing. Other achievements registered under the project included the development of solar tent driers - greenhouse-like structures that reduce the risk of contamination - provide clean and efficient storage and drying, especially during the wet season subsequently reducing post-harvest losses. Indeed, with these achievements, NutriFish won the Fisheries

Innovations Award 2023 at the Sustainable Fisheries and Aquaculture Awards (SFA). We extend our appreciation to the International Research Development Centre (IDRC) and the Australian Centre for International Agricultural Research (ACIAR) for the support. Furthermore, the College spearheaded the formation of the Biology Society of Uganda (BioSU) and embarked on the process to popularise the Bachelor of Science programme in schools around the country.

With support from the Renewable Energy Research Group (RERG), the Department of Physics trained 30 students and members of the general public in solar photovoltaic installation and maintenance, biogas production, and solar thermal systems. The training programmes are designed to equip participants including our students with competencies and skills needed in the installation and maintenance of solar energy Photovoltaic systems and biogas plants. It is also gratifying to note that the College, through the Department of Mathematics, successfully hosted the Joint African- Nordic conference in Mathematics, as well as the 2023 Eastern Africa Algebra Research Group and Women in Sage workshops.

Through various departments, the College continues to receive numerous research grants that are significantly contributing to the aspiration of transforming Makerere into a research-led University. Key among these is the grant aimed at strengthening Makerere University's Research, Grant Writing and Publication Capacity that was launched in March 2023. Supported by the US State Department and led by Prof. Fredrick Muyodi from the Department of Zoology, Entomology and Fisheries Sciences at CoNAS, the grant supported the training of research managers from different units of the University. It is also expected to support the establishment of a Writing Centre. Others include a grant to strengthen institutional capacities for effective implementation of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Uganda (ABS)- led by Dr Esther Katuura from the Department of Plant Sciences, Microbiology and Biotechnology; and the DFG Research Grant won by Dr Julius Mulindwa and colleagues for a study at the Department of Biochemistry and Sports Science about understanding cell to cell heterogeneity in African trypanosome field isolates. Our members of staff continue to engage in cutting-edge research in the areas of space science, energy technology, environmental health, environmental chemistry, plant sciences, microbiology, biotechnology, fisheries sciences, zoology, entomology, geology and petroleum studies as well as mathematics.

I once again take this opportunity to congratulate our members of staff and students who continue to make us proud through various academic achievements. These include; Dr Godwin Anywar who was appointed to the

PLOS ONE Editorial Board, and selected to Join the Highly Prestigious Global Young Academy for a period of 5 years; Dr Betty Nannyonga who received the National Independence Medal – Diamond Jubilee in recognition of her distinguished service to the country; and Dr. Alice Nabatanzi who won the Best Innovator Position at the Appropriate Technologies Centre Expo 2023. Others are Dr. Shahasi Athman- elected Vice President of the American Phytopathological Society; Prof. James Kalema- appointed Chair of the new Board of Trustees of Uganda Wildlife Authority; Prof. Tugume – appointed Chairperson Makerere University Deans' Forum; Dr Abubakar Mustafa recognised for the best research paper in the *Phytofrontiers* Journal; and Ms. Dorothy Akoth (student) who won the 2023 GBIF Graduate Researchers Award.

I also congratulate the five members of staff from CoNAS who received the Vice Chancellor's Research Excellence Award namely; Prof. Charles Masembe, Prof. Godwin Kakuba, Prof. John Mango Magero, Prof. Robert Byamukama, Dr Godwin Anywar, and Dr Patrick Ssebuge.

I once again convey our appreciation to all development partners and the Government of Uganda for the support extended towards different projects at the College. I also thank the University Council and Management for creating a conducive environment for both staff and students to explore their full potential.

**As We Build for the Future.**

**Prof. Winston Tumps Ireeta**  
**Principal, CoNAS**



Makerere University  
COLLEGE OF NATURAL SCIENCES

01

# INTRODUCTION

The College of Natural Sciences (CoNAS) is one of the 10 constituent Colleges of Makerere University with over 2000 students and 153 members of staff spread across 2 schools and seven departments namely: School of Physical Sciences (Physics, Chemistry, Mathematics, Geology and Petroleum Studies) and School Biosciences (Departments of Plant Sciences, Microbiology and Biotechnology; Department of Zoology, Entomology and Fisheries Sciences; and Department of Biochemistry and Sports Sciences). The College is the cradle of basic sciences at Makerere University providing a foundation for all applied sciences offered at the University. It offers programmes at undergraduate and graduate level. CoNAS services other Colleges including the College of Health Sciences and College of Veterinary Medicine, Animal Resources and Biosecurity. Staff at the College also teach students from the College of Education and External Studies (CEES), College of Computing and Information Sciences (CoCIS), College of Engineering, Design, Art and Technology (CEDAT), and the School of Statistics and Applied Economics. This report is a presentation of the performance of the College of Natural Sciences in 2023. It covers developments in teaching and learning, research and innovations, community engagements, local and international collaborations, awards and recognitions, and human resource management.



**02**

**TEACHING &  
LEARNING  
ACHIEVEMENTS**

## TEACHING & LEARNING

### 2.1 Student enrolment

2.1.1 Table 1: Students registration status 2023/2024

Programme name, and Gender	Year 1	Year 2	Year 3	Year 4	Grand Total
Bachelor of Science	60	90	106		256
Female	9	39	25		73
Male	51	51	81		183
Bachelor of Science (External)	38	7	11	24	80
Female	3	1	1	1	6
Male	35	6	10	23	74
Bachelor of Science in Biotechnology	18	35	46		99
Female	3	20	9		32
Male	15	15	37		67
Bachelor of Science in Conservation Biology	7	15	17		39
Female	1	5	9		15
Male	6	10	8		24
Bachelor of Science in Fisheries and Aquaculture	18	34	31		83
Female	2	10	9		21
Male	16	24	22		62
Bachelor of Science in Industrial Chemistry	34	59	53		146
Female	10	30	22		62
Male	24	29	31		84
Bachelor of Science in Petroleum Geoscience and Production	7	38	34	69	148
Female	2	19	16	17	54
Male	5	19	18	52	94
Bachelor of Sports Science	9	10	11		30
Female	2	2	4		8
Male	7	8	7		22
Doctor of Philosophy (School of Biological Sciences)	3	1	1	1	6
Female	1				1
Male	2	1	1	1	5
Doctor of Philosophy (School of Physical Sciences)	3	2	2	1	8
Female	1			1	2
Male	2	1	2		5

Master of Science in Applied Mathematics	1	1			2
Female	1				1
Male		1			1
Master of Science in Biochemistry	11	7			18
Female	1	2			3
Male	10	5			15
Master of Science in Botany	2	2			4
Female	1	1			2
Male	1	1			2
Master of Science in Chemistry	11	9			20
Female	1	2			3
Male	10	7			17
Master of Science in Geology	7	1			8
Female		1			1
Male	7				7
Master of Science in Mathematics		1			1
Female		1			1
Master of Science in Petroleum Geosciences	5	3			8
Female	2	1			3
Male	3	2			5
Master of Science in Physics	6	4			10
Female		1			1
Male	6	3			9
Master of Science in Zoology	13	9			22
Female	4	6			10
Male	9	3			12
MSc Applied Mathematics (Biomathematics)	2				2
Male	2				2
MSc Applied Mathematics (Financial Mathematics)	1				1
Male	1				1
MSc Applied Mathematics (Mathematical Statistics)	1				1
Male	1				1
MSc Mathematics (Algebra and Geometry)	1				1
Male	1				1
<b>Grand Total</b>	<b>258</b>	<b>328</b>	<b>312</b>	<b>95</b>	<b>993</b>

## TEACHING AND LEARNING ACHIEVEMENTS

### 3.1 73rd Graduation statistics

CoNAS presented 275 graduands, 84 female and 192 male at the 73rd graduation ceremony held on 13th February 2023. Of these, 7 graduated with PhDs (3 female, 4 male), 38 with MSc (7 female, 31 male) and 230 with BSc (74 female, 156 male).

3.1.1 Table 2: 73rd Graduation statistics

No	Programme	F	M	Total
1.	PhD	3	4	7
<b>Masters programmes</b>				
1.	Master of Science in Zoology	3	3	6
2.	Master of Science in Botany		4	4
3.	Master of Science in Physics		7	7
4.	Master of Science in Petroleum Geoscience	1	3	4
5.	Master of Science in Mathematics		2	2
6.	Master of Science in Chemistry	2	9	11
7.	Master of Science in Biochemistry	1	2	3
8.	Master of Science in Geology		1	1
9.	Master of Science in Applied Mathematics	1		1
<b>Undergraduate programmes</b>				
1.	Bachelor of Science in Petroleum Geoscience Production	5	30	35
2.	Bachelor of Science in Industrial Chemistry	18	40	58
3.	Bachelor of Science	34	66	100
4.	Bachelor of Sports Science		7	7
5.	Bachelor of Science in Conservation Biology	1	9	10
6.	Bachelor of Science in Biotechnology	28	14	42
7.	Bachelor of Science in Fisheries and Aquaculture	6	30	36

3.1.2 Table 3: First Class Degrees 2023

Students who graduated with First Class Degrees on 13 <sup>th</sup> February 2023				
No.	Name	Gender	Programme	CGPA
1.	Rackara Denish	M	BSCI	4.72
2.	Mugonza Moses	M	BSCI	4.67
3.	Ngobi benjamin	M	BBPG	4.66
4.	kabenge Denis	M	BSCI	4.62
5.	Aleer David Leek	M	BBPG	4.62
6.	Muliika Belcher Kelly	M	BSCI	4.52
7.	Kayondo Ishaak Sserwadda	M	BSCX	4.50
8.	Ntambi Jil Biyinzika	M	BSBT	4.50
9.	Namuswe Magdalene	F	BSCI	4.47
10.	Kikonyogo Julius	M	BSBT	4.45
11.	Muwanguzi Joel	M	BSCI	4.43
12.	Magezi Joshua	M	BSCI	4.42

### 3.1.3 Table 4: CoNAS PhD graduates

No.	Name	Gender	Department	Thesis title
1.	Kajumba Pamela Katalihwa	F	Physics	Development and Assessment of a Cooking Unit Integrated with Solar Thermal Energy Storage System
2.	Mukalazi Hebert	M	Mathematics	A Mathematical Model for Dynamic Stochastic Asset Liability Management of Uganda's Retirement Benefit Schemes
3.	Nayebare Gumoteyo Jacintha	F	Geology and Petroleum Studies	Loading and Mobility of Faecal and Chemical Contaminants to Shallow Groundwater: Evidence from Lukaya Town, Central Uganda
4.	Ojelel Samuel	M	Plant Sciences, Microbiology and Biotechnology	Ethnobotany, nutritional value and floristic diversity of wild edible plants in selected central forest reserves of North Eastern Uganda
5.	Okello Alex	M	Physics	Performance of Selected Natural Dyes in Dye Sensitized Solar Cells
6.	Kimuli Philly Ivan	M	Mathematics	The Morpnic Property in Modules and Near-Rings
7.	Nankinga Loy	F	Mathematics	Mathematical Modelling of Harvesting of a Stage and Size-Structured Fish Population: The Case of African Catfish and Nile Tilapia



*Left: Some of the BSc students at the 73rd graduation ceremony. Right: Dr Samuel Ojelel, former Head, Department of Plant Sciences, Microbiology and Biotechnology was one of the PhD graduates from CoNAS.*



**3.2 Table 5: PhD Defenses 2023**

No.	Name	Department	Thesis title	Date of Defense
1.	Janan Loum	Chemistry	Natural dyes from selected indigenous plants in Uganda: the phytochemical profiling, optimization of extraction and application on cotton and silk fabrics	13th January 2023
2.	Douglas Ochora Onger	Plant Sciences, Microbiology, Biotechnology	Antiplasmodial Activities of Extracts and Pure Compounds from <i>Securidaca Longipedunculata</i> Fresen (Polygalaceae)	19th January 2023
3.	Oloya Benson	Chemistry	Phytochemistry, Anti-mycobacterial Activity, and Acute Toxicity of Selected Plant Species Used for the Treatment of Tuberculosis in Uganda	20th January 2023
4.	Bwayo Edward	Physics	Characterization of Optical Parameters of Zinc Sulphide and Silver Metal Film Coated on Glass at Different Deposition Angles	24th January 2023
5.	Mr. Walusansa Abdul	Plant Sciences, Microbiology and Biotechnology	Dug-resistant bacterial contamination and efficacy of selected herbal medicines sold in Kampala City, Uganda	18th July 2023
6.	Mr. Collins Anguzu	Mathematics	Mathematical Methods for Computing Centrality Measures Based on Powers of the Adjacency Matrix for Changing Networks	21st July 2023
7.	Mr. Olokotum Mark	Zoology, Entomology and Fisheries Sciences	The dynamics of cyanobacteria and potential threats of cyanotoxins in Uganda: A case of Murchison Bay and Napoleon Gulf, Northern Lake Victoria	25th July 2023
8.	Mr. Fred Bwayo Masika	Plant Sciences, Microbiology and Biotechnology	Constraints, characterization and incidence of viruses affecting watermelon and pumpkin production in Uganda	30th August 2023,
9.	Ms. Nagayi Kalule Jane Yawe	Zoology, Entomology and Fisheries Sciences	The Physiological and growth responses of <i>Oreochromis esculentus</i> (Graham, 1929) populations at different temperature regimes	9th November 2023
10.	Mr. Abubakar Mustafa	Plant Sciences, Microbiology and Biotechnology	ELISA-based quantification & role of callose in the development of BXW disease in bananas	16th August 2023
11.	Mr. Biryomumaisho Justus Murokore	Plant Sciences, Microbiology and Biotechnology	Aflatoxin ingestion assessment in southwestern Uganda and ameliorative effects of selected Ugandan plant spices on experimentally induced aflatoxicosis in rats	23rd November 2023

### 3.3 Formation of the Biology Society of Uganda

The School of Biosciences, College of Natural Sciences (CoNAS) is spearheading the formation and operationalization of the Biology Society of Uganda (BioSU). BioSU is founded on Uganda's aspirations for a strong bio-economy to spur national development under National Development Program III (NDPIII). Cognizant of the importance of Biology applications that account for over 60% of Uganda's science, technology and innovations (STI) ecosystem, it is envisaged that bringing together biology professionals will augment and consolidate their

contribution to national development. On 5th May 2023, the School of Biosciences held an inception meeting for BioSU. The meeting brought together Biology professionals who deliberated on a number of issues in line with the formation of the BioSU, and the continued failure of the subject of Biology. The meeting featured a panel discussion in which a number of factors undermining performance in Biology were highlighted and possible solutions proposed.



*Participants at the BioSU inception meeting held at Makerere University on 5th May 2023*

### 3.4 Popularisation of the Bachelor of Science Programme

Basic biological research offered by the School of Biosciences at the College of Natural Sciences (CoNAS), more so at the Department of Zoology, Entomology and Fisheries Sciences (ZEFS) requires continuous recruitment of trainees to ensure its sustainability at Makerere University. Over the years, there has been a decline in the number of

students admitted to offer biological courses at the School of Biosciences due to poor performance, but also the negative perception about the courses. These courses are often termed as "FLAT" during career guidance at high school, an indication that even the career teachers do not have a clear understanding of the Bachelor



*Left: Dr. Kubiriza briefs Biology teachers about the research activities at CoNAS. Right: CoNAS staff from the School of Biosciences in a career guidance session at Gayaza High*

of Science degree programme. The perception that the programme is flat with no job prospects makes it unpopular, yet basic sciences are a pivot for several other applied sciences that significantly contribute to the wellbeing of humans and the economy of the country. To increase uptake, CoNAS has embarked on a programme to popularize the courses offered at the School of Biosciences among high school science teachers and learners by deciphering the myths associated with the Bachelor of Science degree. Broadly, the

action aims at arousing the interest and improve academic performance among high school students in biology, and ultimately increase the students applying for the courses offered at the Department of Zoology, Entomology and Fisheries Sciences. The Department of Zoology, Entomology and Fisheries Sciences will engage selected schools to share progressive research, experiences and lessons learnt to cultivate/arouse interest among the biological students in high schools. On 26th July 2023, the CoNAS through the Department of Zoology, Entomology and Fisheries Sciences held a

seminar for Secondary School teachers from selected schools around the country. The one-day seminar funded by the Carnegie Corporation of New York, through the Directorate of Research and Graduate Training at Makerere University was intended to bridge the gap between the School of Biosciences, Makerere University and high school biology teachers in Uganda. It was also aimed at sensitising the teachers about the programmes at CoNAS, the importance of the Bachelor of Science programme and the opportunities it presents.

### 3.5 University Dialogue on Harnessing Biotechnology

Organized by NARO Uganda, UBBC and the Biology Society of Uganda, the seminar was held at Makerere University Yusuf Lule Central Teaching Facility on 25th September 2023. It featured discussions on measures the country can undertake to build a vibrant Bio-economy for Accelerated Development in Uganda.



*The Dean, School of Biosciences, Prof. Arthur Tugume (C) with other panelists during the meeting*

### 3.6 Mak, MUBS develop Web Portal to Track Masters' Research Processes

The outbreak of COVID19 and the subsequent measures taken to curb the spread of the pandemic, including prolonged lockdowns and limitations to physical contact, aggravated the already existing problems faced by Higher Education Institutions (HEIs) in Uganda, specifically, the deteriorating quality of the masters' research processes. Over 20,000 masters' students who must undertake a supervised research project could not access their supervisors, a factor that greatly compromised the quality of their work. Through a project titled, "Strengthening Capacity for ICT Usage and Policy Reforms for Relevant and Quality Masters Research Process Management in Uganda's HEIs (ICT-4MRPQ)", Makerere University Business School (MUBS) in partnership with Makerere University and other

HEIs intends to address quality assurance problems/gaps encountered by HEIs during masters' research processes. The project is funded by the EU under Erasmus projects for the period 2023-2026. It is led by Assoc. Prof. David Katamba from MUBS. At Makerere, the project is coordinated by Dr John Mary Kiberu from the Department of Geology and Petroleum Studies. On 27th June 2023, the Project team held a Stakeholders' engagement at Senate Building, Makerere University to introduce and receive feedback on the E-supervision platform being developed to track Masters' Research processes in HEIs in Uganda. The Web Portal was developed by ICT specialists led by Dr Shakirah Nagujja, Head, E-Learning Centre at MUBS.



*Left: Prof. Edward Bbaale, Director, DRGT at Makerere addressing participants. Right: The Project team with participants during the workshop*

### 3.7 Mak ICT-4MRPQ Project Preparatory Meeting for the Launch of the E-Supervision Platform

In 2023, Makerere University Business School (MUBS) in partnership with Makerere University developed an E-Supervision Web Portal (<https://mastersresearch.ug/>) to support tracking of Masters Research supervision processes in Higher Education Institutions (HEIs) in Uganda. The portal was developed by ICT specialists from partner institutions led by Dr Shakirah Nagujja, Head, E-Learning Centre at MUBS. The E-Supervision Platform is part of the achievements registered by the ICT-4MRPQ Project-Strengthening Capacity for ICT Usage and Policy Reforms for Relevant and Quality Masters Research Process Management in Uganda's HEIs. The project is supported by the EU under Erasmus projects for the period 2023-2026 with the aim of addressing quality assurance gaps encountered

by HEIs during masters' research processes. These include; absence of student-supervisor interaction records management, increased redundancies in supervisor-student skills transfer, research turn-around time redundancy, decreased transparency in conducting viva-voce, and duplication of research outputs/plagiarism. The main objective of the ICT-4MRPQ project is to strengthen higher education institutions capacity to use ICT in Masters' research journey quality management processes and devise policy reforms for relevant high-quality research outputs at HEIs in Uganda. On 14th November 2023, the Project team at Makerere University led by Dr Kiberu held a meeting to check and clear the gaps in the E-Supervision portal in preparation for the University-wide launch.



The project team during the meeting



### 3.7 CoNAS participates in Mak Youth & Innovation Expo 2023

CoNAS Staff and students participated in the 2-day (6th-7th October) Youth & Innovation Expo 2023 at Makerere University, showcasing the different innovations in the Departments at the College. The Expo was organized by Makerere University in partnership with UNDP and MTN Uganda.





**04**

**RESEARCH &  
INNOVATIONS**

## RESEARCH AND INNOVATIONS

### 4.1 NutriFish Project Products launch

Through a project titled NutriFish, researchers from Makerere University together with their partners from the National Fisheries Resources Research Institute (NaFIRRI) - National Agricultural Research Organization (NARO), NUTREAL Limited and McGill University, Canada in 2019 set out to increase the availability, accessibility and consumption of SPFs for sustainable food and nutrition security and better livelihoods of vulnerable groups in Uganda. Led by Dr Jackson Efitre from the Department of Zoology, Entomology and Fisheries Sciences, Makerere University, and supported by the International Research Development Centre (IDRC) and the Australian Centre for International Agricultural Research (ACIAR) through their joint programme, Cultivate Africa's Future Fund (CultiAF), the researchers developed five high-value nutritious products



(baby food, sauce, maize meal, snacks, and seasoning) using Mukene. A 50g portion of the baby food flour provides more than one-third of a child's daily protein, iron, zinc, and folic acid requirements. The researchers also developed a Mukene recipe book, containing 16 recipes rich in protein, calcium, zinc, and iron. The cookbook was endorsed by the Minister of State for Fisheries, Hon. Hellen Adoa. Through the NutriFish Project, fishers have been helped to access loans to purchase boats and fish containers which improve hygiene and quality by improving drainage and reducing compaction of fish. Two enterprise fishing groups with over 70 boats have been established and are working together – an approach which ensures more consistent supply and standards, and results in over 3.7 tons of fish caught each month. The research team also developed an application (eCAS system) for tracking fish catches. By September 2022, 8,960 records of catch data had been collected and transmitted through the eCAS system by trained local enumerators. Over 200 stakeholders are using the application, including the Directorate of Fisheries Resources and the Fisheries Protection Unit, which uses the data to help prevent overfishing. Other achievements registered under the project include the development of solar tent driers – greenhouse-like structures that reduce the risk of contamination – provide clean and efficient storage and drying, especially during the wet season subsequently reducing post-harvest losses. The increased fish quality has doubled fishers' incomes, from US\$1 to US\$2/kg, and tripled the shelf-life of dried small fish to almost five months. On 27th February 2023, the College of Natural Sciences (CoNAS), Makerere University in collaboration with the National Fisheries Resources Research Institute (NaFIRRI) and partners - International Development Research Centre (IDRC) held the NutriFish project product launch and dissemination event. The event was presided over by the Minister of State for Fisheries, Hon. Hellen Adoa represented by the Ag. Director, Directorate of Fisheries Resources, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Mr. Tom Mukasa Bukenyia.



*Left: The Project PI addresses participants at the launch. Right: On behalf of the Minister of State for Fisheries, Hon. Hellen Adoa, the Ag. Director, Directorate of Fisheries Resources, Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Mr. Tom Mukasa Bukenya (3rd L) launched the products made under the project*



*Some of the participants at the launch*

## 4.2 Project Launch: “Strengthening Makerere University’s Research, Grant Writing and Publication Capacity”

In 2022, Makerere University received a grant from the US State Department to implement a project titled: “Towards a Research-led University: Strengthening Makerere University’s Research, Grant Writing and Publication Capacity”. Makerere University is implementing the project in collaboration with Michigan State University’s Writing Centre and Alliance for African Partnership (AAP). The project was officially launched by the US Ambassador to Uganda, H.E. Natalie Brown represented by Ms. Amy Peterson, Cultural Affairs Officer at the US Embassy in Kampala on 21 March 2023 at the Yusuf Lule Central Teaching Facility. The project aims to

strengthen Makerere University’s capacity in research, grant writing and publication. It will support the training of research managers from different units of the University and the establishment of a Writing Centre. The project team at Makerere University is led by Prof. Fredrick Muyodi from the College of Natural Sciences (CoNAS). Other members are Prof. Ronald Bisaso (Co-PI), Deputy Principal, College of Education and External Studies; and Ms. Stella Kakeeto (Co-PI) from the College of Health Sciences. The Michigan State University team is led by Prof. Trixie G. Smith, Director, MSU Writing Centre (WC).



*The project team in a meeting with the Vice Chancellor, Prof. Barnabas Nawangwe prior to the launch*



*Left: The Vice Chancellor, Prof. Barnabas Nawangwe (3rd L) with the project team, Prof. Trixie G. Smith (3rd R), Prof. Fredrick Muyodi (2nd L), Dr Grace Pregent (R), Prof. Ronald Bisaso (L), and Ms. Stella Kakeeto (2nd R) after their meeting on 20th March 2023. Right: Ms. Amy Peterson, Cultural Affairs Officer at the US Embassy in Kampala represented the Ambassador, H.E Natalie E. Brown at the launch of the project*



### 4.3 The First Wind Turbine installation on Makerere University Campus



Mr. Jimmy Chaciga, a Ph.D. Student at the Department of Physics, Makerere University, installed a small-Scale Photovoltaics Solar Plant at the Department of Physics to supply clean renewable energy for a cooking technology being developed with a 2 kW Wind turbine generator added as a backup energy to the solar PV daily generation under the mentorship of Dr. Karidewa Nyeinga, Dr. Denis Okello & Professor Ole J. Nydal. The system is both important step to the project work and to the students at the department to facilitate hands on practical skilling, installations and for further testing, and

data logging to evaluate the performance of the system and improve on its current capacity and application to solve existing challenges in our society such as lack of fuel for clean cooking and clean lighting homes.

### 4.4 Makerere University Hosts 6th Workshop of the UNET Project

Makerere University Department of Physics hosted the 6th Workshop of the UNET Project. The five-day workshop (27th November- 1st December 2023) that took place at Senate Building, Makerere University built on Workshop 5 held in Addis Ababa, Ethiopia and was intended to finalize the development of course materials in energy and plan for the remaining implementation part of the project. It was coordinated by Dr. Nyeinga Karidewa and Mr. Jimmy Chicanga from the Department of Physics, Makerere University, as well as Prof. Ole Jorgen Nydal from NTNU. In attendance were representatives from partner institutions. UNET is a project focused on taught PhD programmes in energy especially in science and engineering fields among universities in the partner countries. It is co-funded by the Erasmus+ Programme of the European Union. The project supports collaborating universities to migrate from purely research-based PhD programmes towards taught based PhD programmes with mandatory coursework, similar to EU standards. The reform aims to improve the quality of research output and facilitate the successful completion of the PhD studies within their nominal study period.



*The UNET Project team during the workshop at Senate Building, Makerere University*

#### 4.5 ABS Project Inception Meeting

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Without the necessary institutional capacity, Uganda may not fully benefit from access to, and utilization of its genetic resources as provided for by the Nagoya Protocol on ABS. It is for this reason that NEMA on "Institutional Capacity Strengthening for Implementation of the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing in Uganda (ABS)" supported by the Global Environment Facility (GEF) under GEF6 window has undertaken a collaboration with Makerere University. The project will strengthen institutional capacities for the effective implementation of the Nagoya Protocol and develop curriculum covering ABS issues and concerns in Uganda. Makerere will pilot this project in training and producing professionals with knowledge on ABS in Nagoya protocol. The project is hosted in the Department of Plant Sciences, Microbiology and Biotechnology in the School of Biosciences at the College of Natural Sciences (CoNAS). On 7th November 2023, Makerere University held an inception meeting for the project to, among other issues, expose participants to the Nagoya Protocol on ABS and its implementation in Uganda the Role of higher institutions of learning in ABS Mechanisms; and the national regulatory mechanisms. The meeting also aimed to define the required training level for ABS programme and teaching Resources (Physical, human, logistical, and financial), develop or update the curriculum content to include ABS competencies, enrich/update the teaching notes to reflect ABS competencies in case of topics already available in the present curriculum, and to provide an approved draft curriculum by the University administration.



*The project team during the meeting at Makerere*

#### 4.6 Mak, COSL Uganda collaboration

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Officials from COSL Uganda led by the Deputy GM, Zhai Liang on 17th August 2023 held a meeting with members of staff from the Department of Geology and Petroleum Studies at CoNAS to strategize on the implementation of the MoU signed between the Company & Makerere on 30th/05/2023. In the MoU, COSL Uganda seeks to cooperate with Makerere University in the areas of internship and training, research, employment opportunities, and Sino-Africa exchanges. COSL Uganda SMC-Limited is a subsidiary of China Oilfield Services Limited (COSL).



**4.7 Table 6: Ongoing research projects – MakRIF**

No.	Project title	Principal Investigator	Department
1.	Using Astronomy and Space Science to Promote Science Education in Schools	Prof. Florence Mutonyi D'ujanga	Department of Physics
2.	Influence of Gut Microbiome on Nutritional and Disease status of children in Schistosomiasis endemic region of Albert Nile, Pakwach district	Dr. Julius Mulindwa	Department of Biochemistry and Sports Science
3.	Stochastic model for Sustainable Harvesting of Nile tilapia ( <i>Oreochromis niloticus</i> ) and Nile Perch ( <i>Lates niloticus</i> ) Fish Populations on Lake Victoria for Optimal Financial Returns and Monitoring	Assoc. Prof. Juma Kasozi	Department of Mathematics
4.	Valorisation of Waste Chicken Feathers for Water Purification: Designing and Constructing Low- Cost Keratin Based Nanofilters as Adsorbents of Heavy Metals and Nanosized Contaminants	Dr. Alice Nabatanzi	Department of Plant Sciences, Microbiology and Biotechnology
5.	Providing Clean and Safe Water to Low-Income Communities using Activated Carbon-Cellulose membrane-based Water filters derived from Disposed Waste	Dr. Ibrahim Karume	Department of Chemistry
6.	Using the Internet to Incentivize Healthy Lifestyle Choices in Uganda	Dr. Rhona Baingana	Department of Biochemistry and Sports Science
7.	Production of Novel Eco-Charcoal Fuel for Urban dwellers using Municipal Vegetative Solid Waste and Volcanic Rocks	Dr. Robert Gumisiriza	Department of Biochemistry and Sports Science
8.	Exploring forage resources for stingless bees in Uganda: The case of <i>Meliponula bocandei</i>	Dr. Perpetra Akite	Department of Zoology, Entomology and Fisheries Sciences
9.	Grant amount UGX 100,000,000, from Government of Uganda and Makerere University, Research and Innovation Fund –RIF Extension, to support soil remediation studies in artisanal and small-scale gold mining areas of Uganda	Dr Emmanuel Tebandeke	Department of Chemistry
10.	Capacity of <i>Moringa oleifera</i> and <i>Eichhornia crassipes</i> in removal of Endocrine Disrupting Chemicals from wastewater: Towards improved water quality and wastewater management	Dr Patrick Ssebugere	Department of Chemistry

11.	Edible Insect Farming for Improved Household Income and Food Security among the Refugees and Host Communities in Northern Uganda. Funded By Gov. Of Uganda/Makrif: IMSc Student Supported-A Dissertation is under Examination. – Dr Rutaroh Carlmax	– Dr Rutaro Karlmax	Department of Biochemistry & Sports Science
12.	Biomethane Production from Biomass-Matooke Peels for Sustainable Energy – Total funding - UGX 74,791,000. Partner - International Fertilizer Development Center	Dr Patrick Ssebugere	Department of Chemistry
13.	Alloimmunization and Vascular Thrombosis In Sickle Cell Disease (avart Scd) UGX98,000,000	Dr Dennis Kasozi	Department of Biochemistry and Sports Science
14.	Development of bacterial systems for the production of industrial enzymes: proteases and levansucrase. UGX 104,575,57	Dr Apollo Simon Peter Balyeidhusa, Co-PI: Dr Joseph Fuuna Hawumba Research Scientists: Dr Samuel Wasibala Wamutu; Robert Dr Gumisiriza & Dr Moses Okol	Department of Biochemistry and Sports Science
15.	Presenting new approaches to the teaching & learning of Mathematics - UGX169,180,000	Dr David Ssevviiri	Department of Mathematics
16.	Positioning Mathematics as a Tool for Sustainable Fisheries Management: A Mathematical Model for Fish Stock Assessment in LakeVictoria. UGX49,992,000	Dr Nathan Muyinda	Department of Mathematics
17.	Practicals to the Home for a Rural Student. Makerere University Research and Innovation Fund 4 (Government of Uganda). Budget -UGX166,720,000	Dr Taddeo Ssenyonga	Department of Physics
18.	Building a Laboratory System for Quality Checks of Solar Panels in Uganda. Makerere University Research and Innovation Fund 2. Budget - UGX156,010,000	Prof. Winston T. Ireeta	Department of Physics
19.	Solar Power; Training for Change, Transforming Skills and Attitudes Among Rural Communities in Northern Uganda. Makerere University Research and Innovation Fund 2 (Government of Uganda). Budget - UGX154,313,000	Prof. Willy Okullo	Department of Physics
20.	Biological and Chemical contamination of herbal medicine (UGX74,500,000)	Dr Jane Namukobe	Chemistry

### RIF Round 5 grant recipients

No	Project title	PI	Department
1	Assessing feasibility, acceptability and utility of tuberculosis-molecular bacterial load assay for monitoring TB treatment in three HIV Clinics in Kampala	Dr Agnes Nandutu Masawi	Biochemistry and Sports Science
2	Exploitation of Azolla as a renewable Climate Smart Agricultural resource for restoration of degraded soils and improvement soil productivity in Uganda	Ms. Nabyonga Lydia	Plant sciences, Microbiology and Biotechnology
3	Designing efficient, inexpensive, and Eco-friendly Plant- Derived Nanoparticles Adsorbents For Removal Of Pharmaceutical Residues From Effluent Water	Dr Florence Nantaba	Chemistry
4	Knowledge, Attitudes And Conservation Of Commonly Traded Medicinal Plants In A Climate Changing Environment In Eastern Uganda	Dr Tugume Patience	Plant sciences, Microbiology and Biotechnology
5	The Forgotten Tropical Peat Swamp Forests of Lake Victoria Basin, Uganda: A Treasure for Restoration and Conservation	Mr. John Omara	Biochemistry and Sports Science
6	Developing Blight Resistant Tomato Varieties to Reduce Excessive Use of Fungicide and Generation of Tomato Shelf-life Extension Technologies for Smallholder farmers in Uganda	Ozimati Alfred Adebo	
7	Immersive Technology for Physics	Dr Elizabeth Naluminsa	Physics
8	Development of Poly-Herbal mosquito repellent from Marigold, Lemon grass and Eucalyptus plant cocktail for malaria control	Dr Ambrose K. Mukisa	Biochemistry and Sports Science

### Commercialization grants

No.	Project title	PI	Department
1	Accessibility of science practical's to both public and private schools in Uganda	Dr Taddeo Ssenyonga	Physics
2	Commercialization of Affordable Value-added Phyto-Nutra Chicken Concentrate Feeds	Dr Alice Nabatanzi	Plant sciences, Microbiology and Biotechnology
3	Commercialization of Phytoplus nutraceuticals for pregnant women and School children	Dr Alice Nabatanzi	Plant sciences, Microbiology and Biotechnology

**4.8 Table 7: Projects supported by International Partners**

No.	Project title	Purpose	Duration	Principal Investigator
1.	African Water Resource Mobility Network (AWARMN)	Makerere University in collaboration with Rhodes University, South Africa; University of Technology, Nigeria; Higher School of Hydraulics, Algeria; Delfts University, Netherlands and University of Kinshasa, DR Congo, are implementing a project to address water-related pressing needs on the African continent worth EUROs 139,000,000 funded by European Union Commission. The grant was awarded under the Intra-Africa Academic Mobility Scheme. The project is intended to support both African scholars for PhD and MSc	2020-2024	Assoc. Prof. George William Nyakairu, Department of Chemistry
2.	Capacity building in Environmental Sciences	Makerere University in partnership with Slovak University of Technology, Bratislava, is training MSc. And PhD scholars supported by a research grant from ICM Erasmus+.	2020 to 2023	Dr. Patrick Ssebugere, staff from the Department of Chemistry
3.	Environmental Chemistry for Sustainable Development	Makerere University with financial support of € 373,050.15 from the Austrian Partnership Programme in Higher Education and Research for Development is implementing a three-year project on Environmental Chemistry for Sustainable Development. Partners are: University of Natural Resources and Applied Life Sciences, Austria; Jaramogi Oginga Odinga University of Science and Technology, Kenya	2022-2024	Dr. Patrick Ssebugere, staff from the Department of Chemistry
4.	Mathematics for Sustainable Development	Makerere University in collaboration with University of Bergen, Norway and University of Dar es Salaam, Tanzania won a grant of NOK19,900,000 to train five (5) PhDs at Makerere University and six (6) PhDs at University of Dar es Salaam between 2021-2026.	2021-2026	Assoc. Professor John M. Mango, Department of Mathematics

5.	Energy Technology Network (EnergyNET)	EnergyNET project is funded by the Norwegian Agency for Development Cooperation (NORAD) under NORHED II. "The project is a network of African universities collaborating on education and research in Energy Technology. EnergyNET project is coordinated by NTNU-Trondheim and the project partners are: University of Dar es Salaam (Tanzania), Makerere University (Uganda), Mekelle University (Ethiopia), Addis Ababa University (Ethiopia) and Eduardo Mondlane University (Mozambique)	2021-2026	Dr. Karidewa Nyeinga, the Department of Physics
6.	University Network on Energy Technology (UNET)	UNET is co-funded by the Erasmus + Program of the European Union. "The main objectives of UNET include: Jointly develop PhD courses in support of the existing PhD programs in energy at the partner universities; Improve on specialized facilities at each university to offer Training Sites for PhD researchers; Conduct a pilot phase with PhD candidates benefiting from the Course Catalogue and the Training Sites.	2021-2023	Dr. Karidewa Nyeinga, Department of Physics
7.	Dry Rifting in the Albertine Rhino (DRIAR) Project	Makerere University is collaborating with the US universities including Virginia Tech and University of Kansas to conduct research in the Albertine Graben under the Dry Rifting in the Albertine Rhino (DRIAR) Project. The DRIAR Project involves a geophysical, geochemical, geological, and geodynamic investigation of the Albertine-Rhino Graben in western and northwestern Uganda to improve understanding of continental rifting in areas where volcanic activity is minimal. Several field activities are being carried out. These activities include collecting water samples, collecting rock samples, temporary deployment of seismic, magnetotelluric, and gravity instruments, permanent installations or Global Navigation Satellite System (GNSS)	2021-2025	Dr. J.M. Kiberu, Department of Geology and Petroleum Studies

		instruments, temporary deployment of GNSS instruments at specific locations, and geological mapping. PhD students include Mr. Hillary Mwongyera and Ms. Asenath Kwagalakwe.		
8.	ISP Grant of 313,590 SEK to EAUMP	Eastern Africa Universities Mathematics Programme (EAUMP) - objectives of the network are: Enhancement of postgraduate training with special emphasis to PhD training; Establishing and strengthening collaborative research in Mathematics areas of interest in the region; Strengthening the collaborating Mathematics departments in terms of equipment and literature; Development of resources for the collaborating Mathematics Departments; Postdoctoral training of academic staff	2022-2024	Dr Juma Kasozi, Department of Mathematics
9.	IST Grant of 598,000 SEK -	Grant to support women in Mathematics and Gender Outreach Activities		Dr B. K. Nannyonga, Department of Mathematics
10.	Dispersal of Antibiotic Resistance and antibiotics in Water ecosystems and Influence on livestock and aquatic wildlife (PAIRWISE)"	The project is funded by Swedish International Development Agency (Sida), in partnership with: The European Union - Horizon 2020 Framework Programme Aquatic Pollutants, Joint Programming Initiative on Anti-microbial Resistance (JPIAMR), <a href="http://www.waterjpi.eu">www.waterjpi.eu</a> ; and JPI Oceans - <a href="http://www.jpi-oceans.eu">www.jpi-oceans.eu</a> Grant amount: USD 285,000	September 2021- August 2023	The Makerere University PI. is Assoc. Prof. Charles Masembe, Assisted by Dr. Robinson Odong
11.	PESCA project	Provision of training services to the PESCA project	March 2022- 2023	Team Leader - Dr Jackson Efitre, Department of Zoology, Entomology and Fisheries Sciences
12.	Understanding cell to cell heterogeneity in African trypanosome field isolates	Funded by DFG (German Research Fund), Project No. 444811942; Amount Eur 179,735	2023- 2025	Dr Julius Mulindwa - Department of Biochemistry and Sports Science
13.	Value Chain Hygiene Practices And Microbial Contamination Of Street And Market Vended Ready-To-Eat Grasshoppers, <i>Ruspolia</i> Spp. In Uganda.	Funded by International foundation for Science (IFS). Output-Manuscript submitted.	2021-2023	Dr Rutaro Karlmax - Department of Biochemistry and Sports Science



14. Project title: Funders: US Mission, USA. 01/10/2022 PI: Fredrick Jones  
Towards a Research-led University: Funding Amount: US \$200,000.00 to 31/09/2023. to Muyodi, Makerere  
Strengthening Makerere University's Research, Grant Writing and Publication Capacity. Partners: Michigan State University, Michigan, USA.





**05**

**AWARDS AND  
RECOGNITIONS**



## AWARDS AND RECOGNITIONS

### 5.1 Vice Chancellor's Research Excellence Award - Congratulations to the 5 recipients from CoNAS



*Prof. Charles Maseembe from the Department of Zoology, Entomology and Fisheries Sciences and Assoc. Prof. Godwin Kakuba from the Department of Mathematics receiving their awards from the Chief Justice, His Worship Alfonse Chigamoy Owiny-Dollo at the 74th Graduation Convocation dinner held on 29th January 2024.*



*Assoc. Prof. John Mango Magero,  
Department of Mathematics*



*Dr Godwin Anywar,  
Department of Plant*



*Prof. Robert Byamukama  
Department of Chemistry*



*Dr Patrick Ssebugere  
Department of Chemistry*

## 5.2 Dr Julius Mulindwa Wins DFG Research Grant

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*Dr Julius Mulindwa*

Dr Julius Mulindwa, Lecturer in the Department of Biochemistry and Sports Science, CoNAS, Makerere University, together with colleagues Prof. Nicolai Seigel at the University of Munchen, Germany and Dr Kevin Marucha at Kisii University, Kenya were awarded a research grant by the German Research Foundation (DFG) amounting to 290,985 Euro. Out of this, 179,735 Euro is for the research activities that will be conducted at the Department of Biochemistry and Sports Science, CoNAS. The research study is about, **“Understanding cell to cell heterogeneity in African trypanosome field isolates”**.

The benefits of this study to Makerere University will include:

1. Capacity building in trypanosome single cell transcriptomics. This technic can be further exploited in other fields of research including cancer biology and it will be a great breakthrough if it is established at CONAS.
2. Training of a Ugandan PhD student and MSc students.
3. Building research networks and fostering collaborative research between Makerere University, LMU, Germany and Kisii University, Kenya.

## 5.3 Dr. Alice Nabatanzi Wins Best Innovator Position at the Appropriate Technologies Centre Expo 2023

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*Dr Alice Nabatanzi*

Dr. Alice Nabatanzi, a Lecturer from the Department of Plant Sciences, Microbiology and Biotechnology, School of Biosciences, College of Natural Sciences (CoNAS) emerged as best innovator at the Appropriate Technologies Centre (ATC) Expo 2023. Out of over 50 innovations that were showcased by different Universities, Industries, and Tertiary institutions, Dr Nabatanzi’s innovation emerged best putting Makerere University in the first position. The Appropriate Technologies 2023 Expo was a three-day event (2nd, 3rd, 4th February 2023) organized by the Ministry of Water and Environment in collaboration with Makerere University and UNICEF to showcase innovative solutions directed toward positively impacting the communities. Dr. Alice Nabatanzi’s innovation was developed under the project entitled: Valorisation of Waste Chicken Feathers for Water Purification: Designing and Constructing Low-Cost Keratin Based Nanofilters as Adsorbents of Heavy Metals and Nanosized Contaminants (MAKRIF/CH/02/21). This project was funded by the Government of Uganda through the Makerere University Research and Innovations

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The project developed a keratin-based nanofilter using waste chicken feathers. This is a new technology and one of its kind in Uganda and Africa at large

”

Fund under RIF 3. The project developed a keratin-based nanofilter using waste chicken feathers. This is a new technology and one of its kind in Uganda and Africa at large. The project aimed at efficiency and sustainability while promoting a circular economy. The developed filter can clean and purify water through the removal of microorganisms, heavy metals, and other nanosized contaminants. The project's purpose is to control environmental pollution through the recycling of waste chicken feathers while contributing to improved health, food safety, food security, and environmental safety.

#### 5.4 Dr Alice Nabatanzi recognized among the Top 40 Under 40 Achievers of the Year

Dr Alice Nabatanzi was recognized by Vision Group Uganda among the **Top 40 Under 40 (20 Women, 20 Men)** Achievers of the Year. Judges selected and declared 40 winners from a pool of 192 nominations. Stars exhibited ingenuity, community impact, and the X factor. She was recognized among the 20 women achievers. *Ref. Sunday Vision, November 5th 2023.*

#### 5.5 Dr Anywar Selected to Join the Highly Prestigious Global Young Academy



**Dr Godwin Anywar**

Dr Godwin Anywar, Lecturer in the Department of Plant Sciences, Microbiology and Biotechnology, College of Natural Sciences (CoNAS), Makerere University was selected to join the highly prestigious Global Young Academy (GYA) for a period of 5 years beginning June 2023. Dr Anywar is the only Ugandan in the new cohort selected to join the Academy. The GYA develops, connects and mobilizes young talent from six continents, and empowers young researchers to lead international, interdisciplinary and intergenerational dialogue. The GYA aims to elevate the voice of young scientists in evidence-informed and inclusive global, regional and national decision making. The vibrancy of this global community is a result of the energy of its members, who are passionate about the role of science in creating a better world. The GYA has 200 members, comprised of passionate young scientists, typically 3-10 years after their PhD, between 30 to 40 years of age, and in the early stages of their independent academic careers. Members are selected for their scientific excellence and commitment to engage with society, and serve five-year terms. The GYA also has an engaged body of 366 alumni (as of 2022) spread around the globe. Members and alumni together represent 100 countries. The vision of the Global Young Academy (GYA) is science for all; science for the future, and its mission to give a voice to young scientists around the world.

## 5.6 Dr Anywar Appointed to the PLOS ONE Editorial Board

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Dr Godwin Anywar was appointed to the PLOS ONE Editorial Board as an Academic Editor. The PLOS ONE Editorial Board is powered by thousands of academic experts from all over the world. The board comprises working scientists who are established principal investigators/group leaders with extensive publication records. Academic Editors oversee the peer review process for the journal, including

evaluating submissions, selecting reviewers and assessing their comments, and making editorial decisions. Together with fellow Editorial Board Members and internal staff, Academic Editors uphold journal policies and ethics standards and work to promote the PLOS ONE mission to provide free public access to scientific research.

## 5.7 Dr. Anywar Selected as 2023 Carnegie Corporation of New York Fellow

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Godwin Anywar (cohort 6 graduate, Makerere University) was selected as a 2023 Carnegie Corporation of New York (CCNY) Fellow at the American Studies Association (ASA) on June 16, 2023. The fellowship comes with a two-year ASA and Emerging Scholars Network Membership. ASA plans to host 15 of the Carnegie fellows to present their work at the ASA's annual meeting in San Francisco, California, from November 30 – December 2,

2023. He will be presenting a paper on 'Antiviral activity of Ugandan medicinal plants against human immunodeficiency virus type-1 (HIV-1)'. He will also participate in a panel discussion with three other Carnegie Fellows where they will discuss 'Afro-Futures: Science, Technology, and Innovation in Practice and Imagination'.

## 5.8 Dr Betty K. Nannyonga gets Independence Medal

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Dr Betty Nannyonga

Dr Betty Nannyonga, Associate Professor in the Department of Mathematics at CoNAS, Makerere University received the National Independence Medal – Diamond Jubilee in recognition of her distinguished service to the country.

## 5.9 Dr Abubakar Mustafa's research paper rated best in the Phytointiers Journal

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Dr Abubakar Sadik Mustafa

Dr Abubakar Sadik Mustafa's research paper *Xanthomonas campestris pv. musacearum Bacterial Infection Induces Organ-Specific Callose and Hydrogen Peroxide Production in Banana* was rated the best student paper of the year 2022 in the Phytointiers Journal. Abubakar is a PhD student in the Department of Plant Sciences, Microbiology and Biotechnology, Makerere University.

## 5.10 CoNAS student Dorothy Akoth Wins 2023 GBIF Graduate Researchers Award



*Dorothy Akoth*

Dorothy Akoth, a Master's student in the College of Natural Sciences (CoNAS) at Makerere University in Uganda, has been named one of two winners of the 2023 GBIF Graduate Researchers Award. An expert jury selected Akoth, who was nominated by the Uganda National Council for Science and Technology together with National Fisheries Resources Research Institute (NaFIRRI), for the instrumental role of her research in improving the knowledge of the distribution and imperilment status of 110 native fish species outside the iconic Haplochromine tribe of East African cichlids. The student was supervised by Prof. Fredrick Muyodi and Dr Jackson Efitre from the Department of Zoology, Entomology and Fisheries Sciences at CoNAS, Makerere University, as well as Dr Vanny Natugonza of Busitema University. Since its inception in 2010, the annual GBIF Graduate Researchers Award (previously the Young Researchers Award) has sought to promote and encourage innovation in biodiversity-related research using data shared through the GBIF network.

## 5.11 NutriFish wins Fisheries Innovations Award 2023



*The NutriFish Project team led by Dr Jackson Efitre (3rd Left) after receiving the Award*

The NutriFish Project under the Department of Zoology, Entomology and Fisheries Sciences, College of Natural Sciences (CoNAS), Makerere University was announced winner of the Fisheries Innovations Award 2023 at the Sustainable Fisheries and Aquaculture Awards (SFA) ceremony held on 30th June 2023 at Fairway Hotel, Kampala. Organized by the Sustainable Fisheries Initiative (SFI), the Sustainable Fisheries and Aquaculture Awards (SFA) seek to celebrate East Africans (individuals, projects, institutions, and organizations) who devote their time, expertise and passion to a sustainable fisheries and aquaculture sector. Across 15 categories, this annual event celebrates and acknowledges regional champions working in fisheries as well as nature protection, climate action and care for communities while supporting food security and nutrition, sustainable economies, sustainable societies, sustainable environment, gender equity and equality. The SFA Awards look at major categories which include; Best Fisher of the Year, Best Landing Site of the Year, Innovations Award, Blue Heroes Award, Life time Achievers award, Young Fisheries Entrepreneur Award, Sustainable Fisheries Community Award, Green Cities of the future Award, and Women Achievers award.

Supported by the International Development Research Centre (IDRC) and the Australian Centre for International Agricultural Research (ACIAR) through their joint programme, Cultivate Africa's Future Fund (CultiAF), NutriFish aims to address the nutritional needs of vulnerable groups that cannot afford expensive commercial fish but are in critical need of high quality nutritious diets.



**06**

**ELECTION INTO  
LEADERSHIP  
POSITIONS**





## ELECTION INTO LEADERSHIP POSITIONS

### 6.1 Prof. Tugume appointed Chairperson Mak Deans' Forum



Prof. Arthur Tugume, Dean, School of Biosciences at CoNAS was in September 2023 elected as new Chairperson of the Dean's Forum, replacing Prof. Rhoda Wanyenze.

### 6.2 Prof. Arthur Tugume elected Vice Chairperson, Mak Deans' Forum



Prof. Arthur K. Tugume, Dean School of Biosciences at CoNAS was elected Vice Chairperson, Makerere University Dean's Forum. The Forum brings together Deans from the 10 colleges of Makerere University to lay strategies for improving academic performance. Congratulations to Dr Tugume.

### 6.3 Dr. Shahasi Athman Vice President of the American Phytopathological Society

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Dr. Shahasi Athman from the Department of Plant Sciences, Microbiology and Biotechnology was elected Vice President of the American Phytopathological Society (APS) - African Division. APS is a more than a century old society of Plant Pathology and here we get the first Vice President on the African Continent. Congratulations to Dr SA.

### 6.4 Prof. James Kalema appointed Chair of the new Board of Trustees of Uganda Wildlife Authority

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The Minister of Tourism, Wildlife & Antiquities, Col. Hon. Tom Butime appointed Prof. James Kalema Chair of the new Board of Trustees of Uganda Wildlife Authority.

### 6.5 Dr Julius Mulindwa

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Dr Julius Mulindwa was appointed a member of the Institutional Biosafety Committee (IBC) hosted at COVAB, Makerere University.

### 6.6 Dr Florence D'ujanga

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Dr Florence D'ujanga was appointed to the Uganda National Commission for UNESCO on the Man and Biosphere Committee. She was also appointed member to the Busitema University Audit Committee, from January 2023 for 4 years, and Coordinator to the rejuvenation of the Grants Office, in CONAS, and Mentor for Early Career Researchers in CONAS in the Makerere University and Michigan State University (Mak - MSU) collaboration, 2023.



**08**

**CONFERENCES &  
TRAINING WORKSHOPS**



## CONFERENCES & TRAINING WORKSHOPS

### 8.1 Prof. Fredrick Jones Muyodi – Department of Zoology, Entomology and Fisheries Sciences

1. **The United States - Africa University Partnerships Initiative Summit and visit to Humanities Writing Center at the University of Pretoria (UP), February 2023.** Prof. Muyodi attended the United States-Africa University Partnerships Initiative Summit in Pretoria on invitation by the US Embassy in South Africa. As members of the team, they extended their stay to connect with the Coordinator for the Humanities Writing Center at the University of Pretoria. Furthermore, Makerere and Pretoria are both members of the African Research Universities Alliance (ARUA).
2. **The Writing Place at the University of KwaZulu-Natal (UKZN), February 2023.** Prof. Muyodi was a member of the Makerere University-MSU team that visited the Writing Place at the University of KwaZulu-Natal. Like Makerere University, UKZN belongs to the African Research University Alliance (ARUA) along with 15 other institutions across Africa.
3. **The East Central Writing Centers Association Conference and the Writing Lab and the Purdue Owl at Purdue University, April 2023** – Prof. Muyodi was a member of the Makerere University team that traveled to MSU and Purdue University in April 2023 to participate in the East Central Writing Centers Association Conference. The Writing Centers at Purdue and Michigan State University (MSU), USA belong to the Big Ten Writing Center Alliance and have collaborated on research and benchmarking through that structure for years. As the Makerere-MSU team, they had an opportunity to participate in the conference along with MSU consultants. They also got an opportunity to learn from the writing expertise at MSU's Writing Center and did visit the spaces of the Writing Lab and the Purdue Owl and learned more about their work through various conference presentations.
4. Attended the International Network of Research Management Societies (INORMS) and visited The Writing Centre at Mangosuthu University of Technology (MUT) –Participated in the 2023 INORMS Congress, in Durban, South Africa from **May 30 – June 2, 2023**. At this congress, the team had an opportunity to showcase the progress they have made in the Grant Writing Program (GWP). In addition, Prof. Muyodi had benchmarking visits to two universities in Durban.
5. **The Writing Center at Lansing Community College (LCC), October 2023.**  
<https://www.lcc.edu/services/writingcenter/> - Attended a seminar at LCC in Michigan State, United States on how to start a writing center, how that works at a smaller institution, key conversation around Faculty Writing Consultants and professional tutors (all staff currently, though some consultants are usually students too).
6. **Fred Meijer Center for Writing & Michigan Authors at Grand Valley State University (November 18th – 22nd 2023)** <https://www.gvsu.edu/wc/> -There is long time relationship between writing centers and institutions. Consultants from GVSU attend MSU. It has a Four-year regional comprehensive, student enrollment. The Makerere team had conversations on their needs, the people they work with in the writing center and how to collaborate with them.
7. **ARUA – University of Lagos, Nigeria (November 18th – 22nd 2023)** - Attended the ARUA biannual conference hosted by the University of Lagos, Nigeria. He presented a poster paper on grants office and writing centers. Funded by IREX / UASP funded by the Carnegie Corporation of New York.

### 8.2 Dr Patience Tugume – Department of Plant Sciences, Microbiology and Biotechnology

1. **17th– 21st July 2023**- Participated in the training of Trainers (ToT) Academic, Professional and Administrative Staff (APAS) workshop, Makerere University.
2. **13th – 17th November 2023**: Participated in the 5th International Training on Ecohydrology in Tanzania: Nature-based and Bankable Nature Solutions for Environmental Sustainability. National Carbon Monitoring Centre, Sokoine University of Agriculture, Morogoro, Tanzania.



**09**

**KNOWLEDGE  
SHARING &  
TRANSFER  
PARTNERSHIPS**

## KNOWLEDGE SHARING & TRANSFER PARTNERSHIPS

### 9.1 EnergyNET Project Annual Meeting

Makerere University College of Natural Sciences (CoNAS) through the Department of Physics on 9th January 2023 hosted the 2023 Annual Meeting for the Energy Technology Network (EnergyNet) Project. The three-day meeting that took place at the School of Food Technology, Nutrition and Bio-Engineering was attended by partners from the Norwegian University of Science and Technology (NTNU), University of Dar es Salaam (Tanzania), Makerere University (Uganda), Mekelle University (Ethiopia), Addis Ababa University (Ethiopia) and Eduardo Mondlane University (Mozambique). EnergyNet is a six-year (2021-2026) project supported by the Norwegian Agency for Development Cooperation (NORAD) under NORHED II. The project is a network of African universities collaborating on education and research in Energy Technology. Prof. Ole Jorgen Nydal from NTNU is the main coordinator of the Project. At Makerere University, the project is coordinated by Dr Nyeinga Karidewa, Lecturer in the Department of Physics. The workshop was convened to share reports on the progress of the project at each of the partner institutions, complete the project activity report for 2022, and to develop a work plan and budget for 2023. The workshop featured several presentations covering both technical and social aspects of research in energy. The research tasks have been solution oriented, with the exploration of new and innovative technical solutions for small scale energy components and systems related to hydro and wind power, solar and bio energy for cooking and solar refrigeration technology. Focus is on thermal energy solutions (heating, cooling, cooking) and the integration of heat batteries with electrical batteries in micro grid systems. Emphasis is on qualifying and implementing new technical solutions emerging from university research, in collaboration with relevant stakeholders. The educational part includes a new multidisciplinary PhD programme combining technical, socioeconomic and environmental studies.



Left is Dr Nyeinga Karidewa, Coordinator of the project at Makerere at the meeting. Right: The main Coordinator of the Project, Prof. Ole Jorgen Nydal addresses participants

### 9.2 Public Talk on Opportunities in Academia in USA and Europe

On 15th March 2023, Princess Margaret-Anne Mazzi Wampamba from the National Science Foundation, USA delivered a public talk to staff and students of CoNAS on **Opportunities in Academia in USA & Europe**. During the talk, Princess Wampamba exposed participants to the different academic and research opportunities in Europe and USA and how they can be obtained. Princess Wampamba is a retired civil servant of the United States Government at the National Science Foundation (NSF).



She also worked at other U.S. government agencies - Overseas Private Investment Corporation (OPIC) and the Internal Revenue Service (IRS). At NSF, she worked with scientists in various directorates

supporting scientific research funding. During her retirement she continues to support those who seek funding for scientific research especially in materials science.



*CoNAS staff and students at the Public Talk delivered at JICA Building on 15th March 2023*

### 9.3 Induction of CoNAS leaders

CoNAS Management on 14th February 2023 held an induction for all new leaders at the College. The meeting held at Kampala Kolping Hotel was attended by University officials from the Directorates of Human Resources,

Legal Affairs, Research and Graduate Training, and the Academic Registry who briefed the team on the University policies.



*Officers from the DRGT and the Directorate of Human Resources briefing CoNAS leaders on the different policies*

### 9.4 COTRA Annual Partners Meeting in Malawi

The Project team at Makerere University attended the COTRA Annual Partners Meeting in Malawi on 4th-7th April 2023. Funded by the EU, Collaborative Training in Fisheries & Aquaculture in East, Central and Southern Africa (COTRA) aims to achieve sustainable fisheries management & aquaculture Resources. At Makerere University, the project is coordinated by Dr Peter Akoll from the Department of Zoology, Entomology and Fisheries Sciences. Partner institutions include; Makerere University, University of Rhodes - South Africa, Mzuzu University - Malawi, University of Bukavu (DRC), and the University of Eldoret, Kenya. Activities under the project include staff and student mobility.



## 9.5 DRGT engagement with CoNAS leaders and programme coordinators

Officials from the Directorate of Research & Graduate Training, Makerere University led by the Director Prof. Edward Bbaale on 11th April 2023 interacted with CoNAS leaders and graduate programme coordinators on strategies for strengthening research and graduate training at the College and University in general.



*Prof. Edward Bbaale (front row, 5th R) with CoNAS leaders and programme coordinators after the meeting*

## 9.6 PESCA support towards Internship for BSc Fisheries & Aquaculture Students



*The students presenting their internship reports to their supervisors at Makerere University led by Dr Robinson Odong*

In 2022, the Department of Zoology, Entomology, and Fisheries Sciences, College of Natural Sciences, Makerere University, was awarded a contract under the European Union-funded project: Promoting Environmentally Sustainable Commercial Aquaculture (PESCA) to provide training services. The overall objective of the assignment was to support training that will improve knowledge, skills, and practices that enhance aquaculture production and productivity in Uganda. This would be achieved through the following specific objectives: i)

Support the placement of undergraduate students to work (internships) with fish farmers or other suitable aquaculture value chain actors; ii) Conduct inclusive customized short-term training with gender considerations (women, men, youth, people with disabilities) including farmers, Producer Organizations (POs), feed and seed producers, service providers, and other aquaculture stakeholders; and iii) Support MSc research and training. The main outcomes of Objective 1 will include: a) enhanced capacity of Fisheries and aquaculture graduates with skills relevant to



aquaculture and fisheries sector needs of the country; b) fit-for-purpose proactive graduates to support aquaculture; and c) strengthened partnerships among the industry, research, and academia in the production of quality graduates in the aquaculture value chain, relevant for economic development. With funding from the EU, through the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), a total of 36 Second Year students under the Bachelor of Fisheries and Aquaculture programme at Makerere University were supported to undertake

training (internship) at various fish farms across the country for a period of 8 months. At the training sites that included Yalelo Fish Farm in Jinja, Kampala Capital City Authority (Ggaba Landing Site), Kigungu Landing Site in Entebbe, Pearl Aquatics-Garuga, ARDC-Kajjansi, SON Fish Farm in Buikwe, Ugachick Poultry Breeders Ltd, and Ssenya Fish Farm in Masaka, the students gained hands on experience for professional career path, obtained an understanding of work ethics, employment demands, responsibilities and opportunities, and attained opportunities to engage and interact with key stakeholders, and potential employers.

### 9.7 Skilling for Sustainable Aquaculture: Mak, ARDC-Kajjansi Train 200 Fish Farmers

Makerere University staff from the Department of Zoology, Entomology and Fisheries Sciences (ZEFS) in collaboration with officials from the Aquaculture Research and Development Centre, Kajjansi (ARDC) conducted countrywide short-term trainings in different aspects of aquaculture. The trainings were part of the activities in the contract awarded to Makerere University under the European Union-funded project: Promoting Environmentally Sustainable Commercial Aquaculture (PESCA) to provide training services. The overall objective of the assignment is to support training that would improve knowledge, skills, and practices that enhance aquaculture production and productivity in Uganda. Overall, the team trained 200 farmers in Northern, Eastern, Western and Central Uganda. The farmers were equipped with theoretical and practical skills on establishing a commercially viable aquaculture enterprise, fish seed production and hatchery management, fish feed formulation and production, fish feeding and feed management, aquaculture production systems, value addition to farmed fish, fish diseases and health management, aquaculture business planning, and extension services.



*The farmers being equipped with skills in different aspects of aquaculture*

## 9.8 The Joint African- Nordic conference in Mathematics: Mak honours Prof Leif Abrahamsson

Makerere University honored Prof Leif Abrahamsson, for his contribution to the development of Mathematic in the East African region. This was during the opening ceremony of the four-day Joint African- Nordic conference in Mathematics, an event organized to share research findings and take stock of the Nordic support for Mathematics in the region in the past two decades. The conference took place at Makerere University from 1st-4th August 2023 under the theme: "Celebrating 20 Years with ISP/EAUMP/SIDA, 10 Years with CIMO/HEI-ICI and Commencing the NORHED II-Funded Mathematics for Sustainable Development Project". It was officially opened by the Minister of Science, Technology and Innovation, Hon. Dr. Monica

Musenero Masanza and graced by the Vice Chancellor of Makerere University Prof. Barnabas Nawangwe. Prof Abrahamsson, from the Department of Mathematics, Uppsala University started the network of Eastern African Universities Mathematics Program (EAUMP) to improve the state of mathematics, through Masters and PhD training. After setting up the network, mathematics became one of the International Science Programme (ISP) core programs. Because of Prof Abrahamsson's efforts, to date, ISP support to Mathematics in the region ranges from visible capacity built at PHD, Masters and Postdoc levels.



*Hon. Dr. Monica Musenero Masanza (C) presents a plaque to Prof Leif Abrahamsson*



*Some of the participants with the Minister and Vice Chancellor of Makerere at the opening ceremony*

## 9.9 The 2023 Eastern Africa Algebra Research Group Workshop

On 14th-18th August 2023, the Department of Mathematics, Makerere University hosted the 2023 Eastern Africa Algebra Research Group Workshop on some Topics in Algebra and Geometry with participants from Belgium, Italy, Germany, Netherlands, Uganda, Kenya & Rwanda.



## 9.10 Training in Solar Photovoltaic Installation, Biogas Production

The Department of Physics, College of Natural Sciences (CoNAS), Makerere University through the Renewable Energy Research Group (RERG) has trained 30 students and members of the general public in solar photovoltaic installation and maintenance, biogas production, and solar thermal systems. The five-day hands-on training that started on 21st August 2023 has been conducted at the Physics Department premises at Makerere University. Topics covered include; Introduction to Basic Electronics, Photovoltaic Systems (PV system components, sizing, installation, maintenance and system safety), Biogas Technology (design, construction, operation and maintenance), and Solar Heating Systems (basic principles, design, construction, operation and maintenance). Facilitators included; Prof. Ole Jorgen Nydal, overall Coordinator of the Energy Technology Network (EnergyNET) Project, as well as lecturers and technical staff from

the Department of Physics and Department of Biochemistry and Sports Science at Makerere University led by Dr Denis Okello, Head, Department of Physics, also overall coordinator of RERG, Dr Karidewa Nyeinga, and Mr. Michael Musoke. The training programme is supported by the EnergyNET Project funded by NORAD, Norway, and the International Science Program (ISP), Project UGA -01, funded by SIDA, Sweden.



**Left:** Dr Denis Okello (L), Head, Department of Physics at Makerere University, and Mr. Musoke Michael, Technician in the same Department guiding the students through the process of solar installation. **Right:** The trainees during the training at the Department of Physics, Makerere University

## 9.11 Women in Sage: Global Scholars Meet at Makerere to Deliberate the Development of Mathematics

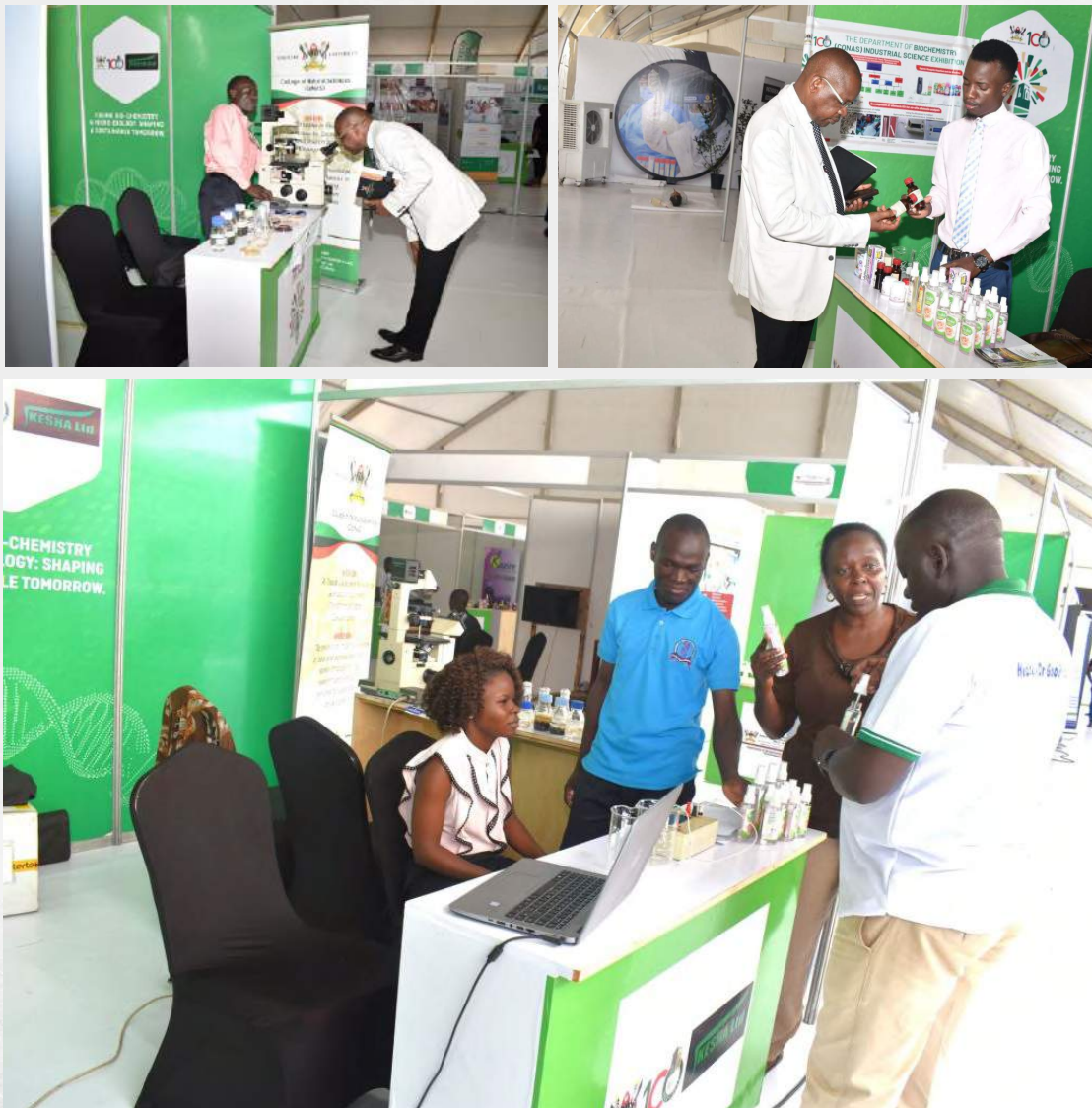
Scholars from Africa and beyond on 4th-8th September 2023 met at Makerere University to deliberate on innovations, solutions and developments that facilitate the growth and expansion of Mathematics. Held under the auspices of Women in SAGE on the theme “SageMath: Free for all Mathematicians”, the meeting drew participants from Uganda, The Netherlands, Switzerland, Germany, Burundi, Ethiopia, Kenya, Nigeria, and Burkina Faso. Women in Sage is part of the long tradition of conferences on Mathematics with SageMath Software. Since 2007, more than 100 Sage Days have been organized around the world. During these days, participants discover the SageMath software, develop their programming skills and contribute to the development of the software. The Women in Sage days organised at Makerere University with support from the African Women in Mathematics Association (AWMA), and the Eastern Africa Network for Women in Basic Sciences – Uganda Chapter (EANWoBAS-U)/ Uganda Women Mathematicians (UGAWOM) bring together African mathematicians to work as a team, share their motivation, and discover women that can be considered as role models. Other activities include launching new programming skills and research projects and collaborations between mathematicians from different African countries; creating mentoring networks for young women embarking on mathematical research; and teaching new programming skills to African women mathematicians.



*The President of Uganda Women Mathematicians, Prof. Betty Nannyonga Kivumbi (Up Right), Prof. Elisha Lorenzo Garcia from Switzerland, and Dr Olivia Nabawanda from MUST addressing participants at the workshop*

## 9.12 CoNAS Participates in the 2023 National Science Week Exhibition

Makerere University College of Natural Sciences (CoNAS) participated in the 2023 National Science Week exhibition that took place at Kololo Independence Grounds from 6th-11th November 2023. The week-long exhibition officially opened by the President of the Republic of Uganda, H.E Yoweri Kaguta Tibuhabwe Museveni on 9th November 2023 was held under the theme; **“Uganda Tusimbudde: Our Science-Led Journey towards Socio-Economic Transformation”**. The Annual event launched in 2021 is organized by the Science, Technology, and Innovation (STI) Secretariat under the Office of the President. It serves a pivotal platform, strategically designed to showcase the milestones Uganda has achieved in science, technology and innovation, not only at the national scale but also at the global stage.



Above: The Deputy Principal of CoNAS, Prof. Juma Kasozi checking on the products that were exhibited by CoNAS

### 9.13 Makerere University Council Members Visit to CoNAS

Makerere University Council members led by the Chairperson, Mrs. Lorna Magara on 28th February 2023 visited the College of Natural Sciences (CoNAS) to get acquainted with its operations and establish whether the College's mandate is linked to the vision, mission and Strategic Plan of the University. The current Strategic Plan (2020-2030) aims to transform Makerere into a research-led University, responding to national, regional and global development challenges, as well as contributing to global knowledge generation.



*Left: The Principal of CoNAS, Prof. Winston Tumps Ireta briefs Council members on the operations of the College. Right: CoNAS leaders with Council members after the meeting*





**10**

**OUTREACH  
ACTIVITIES**

## 10.1 Department of Plant Sciences, Microbiology, and Biotechnology

Dr Alice Nabatanzi, a Lecturer in the Department of Plant Sciences, Microbiology, and Biotechnology founded ALICE MABIRA FOUNDATION (AMAF) in Najjembe sub-county, Buikwe District. This foundation empowers the local community through the provision of entrepreneurial skills and funding for starting up local enterprises. It is made up of 50 locals and still growing majority of whom are women.

## 10.2 Promoting the subject of Mathematics

### 10.2.1 The National Mathematics Contest and the Awards

The National Mathematics contests for the levels of primary, O' Level and A' Level were conducted in April 2023 and the prizes were awarded to best performers in July 2023.

Table: The best performers at the different levels were;

Primary Schools Category 2023			
Name	School	District	Rank/position
Iraka Donald Elijah Namanya	Greenhill Academy Kibuli	Kampala	1
Nanyonjo Maria Valeria	Namagunga Primary Boarding School	Mukono	2
Ayoki Julia	Hormisdallen Primary School Kyebando	kampala	3
O' Level Category 2023			
Name	School	District	Rank/position
Kamya Lucille	Mt. St. Mary's College Namagunga	Mukono	1
Tugumisirize Jeremiah	Ntare School	Mbarara	2
Amanya Christine	Trinity College Nabbingo	Wakiso	3
A' Level Category 2023			
Name	School	District	Rank/position
Agaba Kelvin Sunday	Ntare School	Mbarara	1
Mohammed Shabbir	Greenhill Academy	Kampala	2
Adongu Emmanuel Odaka	Ngora High School	Ngora	3
University Category 2023			
Name	School	District	Rank/position
Ssemwogerere Sperito	Makerere University	Kampala	1
Lugasa Farahaat	Kyambogo University	Kampala	2
Odida Joel	Gulu University	Ggulu	3



Primary Regional Winner Category 2023			
Name	School	District	Region
Okello Morgan	St. Kizito Primary School	Lira	Northern
Chemayek David	Mbale Tower Primary School	Mbale	Eastern
Arinda Derrick	Bweranyangi Junior Primary School	Bushenyi	Western
Nabbanja Florence Purity	Victory Learning Primary School	Masaka	Central
Miss Mathematics Primary 2023			
Nanyonjo Maria Valeria	Namagunga Primary Boarding School	Mukono	
Miss Mathematics O' Level 2023			
Kamya Lucille	Mt. St. Mary's College Namagunga	Mukono	
Miss Mathematics A'Level 2023			
Nalule Pearl Mwebaza	Mengo Senior School	Kampala	



*One of the winners after receiving their prize*

## 10.2.2 International Mathematics Olympiad - IMO 2023

### IMO 2023 training camp

The Uganda Mathematical Society selected a group of 150 exceptionally talented young mathematicians from both Ordinary and Advanced Levels (O and A level) to participate in the IMO 2023 training camp. The selection was based on the results of the UMS National Mathematics Contest of 2022. The camp was residential. It started on 6th December 2023 and ended on 17th December 2023. It was held at Light Academy Secondary School – Lweza.



## Uganda's performance at the IMO 2023

Uganda's performance at the IMO 2023 was relatively lower than the previous one. Uganda was ranked 108 out of 112 countries that participated in 2023. The IMO was hosted in Chiba, Japan. Below is the individual performance of the five participants who managed to represent the country at this Olympiad.

No.	Name	Points
1.	Jonathan Ralph Felix Wandera	03
2.	Emmanuel Odaka Adongu	02
3.	Mugagga Antonio Muganzi	02
4.	Isaac Matsiko	-
5	Andrina Asingura	-

## IMO 2023 Team of participants comprised of;

1. **Team Leader:** Joseph Ssebuliba, President of Uganda Mathematical Society (UMS).
2. **Deputy Team Leader:** Medi Ssesanga, UMS Secondary School Representative.
3. **Observer C:** Karen Kebirungi, Teacher of Ndejje Senior Secondary School.
4. **Observer C:** David Aiden Rujumba

## Sponsorship of the IMO 2023

1. The Romanian Society for Mathematical Sciences under the leadership of Prof. Dr. Radu Gologan.
2. Makerere University
3. Institute of Certified Public Accounts of Uganda (ICPAU)
4. Prof. Sergiu Moroianu of Romania in collaboration with the friends of Uganda Mathematical society worldwide.
5. Uganda Mathematical Society
6. Parents and school administrators of the Contestants/Olympiads



### 10.2.3 Mathematics Teachers Conference - 2023

Uganda Mathematical Society organizes a teachers' conference for all Mathematics teachers in the country annually. This year's conference was held on 21st July 2023 at the Yusuf Lule Central Teaching Facility. The participants shared experiences and were exposed to new teaching techniques that would make them better Mathematics Educators.





**10**

**PUBLICATIONS**

## DEPARTMENT OF CHEMISTRY

1. Benson Oloya, Jane Namukobe, Matthias Heydenreich, Willy Ssengooba, Johannes Martin, Heiko Michael M<sup>o</sup>ller, Bernd Schmidt, Robert Byamukama. (2023). Two new compounds and the anti-mycobacterial activity of the constituents from *Zanthoxylum leprieurii* root bark. *Phytochemistry Letters* 54 (2023), 107–113. doi:10.1016/j.phytol.2023.02.002.
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4. Egesa, D., Chuck, C. J., & Plucinski, P. (2023). Catalytic hydrothermal liquefaction of magnetically separated microalgae: effect of reaction conditions on bio-crude yield and composition. *Biomass Conversion and Biorefinery*, 1-17.
5. Emmanuel Tebandeke, Irene O. Atuko, Betty Naziriwo, Reine Wallenberg, Ola F. Wendt, One pot synthesis of styrene carbonate from carbon dioxide and styrene in water catalyzed by nano-silver modified polyoxometalates, *Sustain. Chem. Environ.* (2023) 100016. <https://doi.org/https://doi.org/10.1016/j.scenv.2023.100016>.
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7. Florence Nantaba, John Wasswa, Henrik Kylin c,d , Hindrik Bouwman, Wolf-Ulrich Palm, Klaus Kümmerer, (2023) Spatial trends and ecotoxic risk assessment of selected pharmaceuticals in sediments from Lake Victoria, Uganda, East Africa, *Science of The Total Environment*, Volume 906, 1 January 2024, 167348
8. George William Atwoki Nyakairu; Job Kasule; Oris Ouma; Godfrey Bahati (2023). Origin and hydrogeochemical formation processes of geothermal fluids from the Kibiro area, Western Uganda. *Applied Geochemistry* Volume 152, May 2023, 105648. Doi <https://doi.org/10.1016/j.apgeochem.2023.105648>
9. George William Atwoki Nyakairu; Pachris Muamba Kapanga; Ntale Muhammad; Séraphin Ntumba Lusamba; Raphael Muamba Tshimanga; Abdelhadi Ammari; Zaccheus Shehu (2024) "Synthesis, Characterization and Application of Zeolite/Bi<sub>2</sub>O<sub>3</sub> Nanocomposite in Removal of Rhodamine B dye from Wastewater" *Cleaner Water* 2024-01 doi: <https://doi.org/10.1016/j.clwat.2024.100004>
10. George William Nyakairu; Muhammad Ntale; Mariam Onize Usman (2023) Adsorption of Phosphate by Synthesized Silver/Calcium Oxide-Activated Carbon Nanocomposite. *Adv Environ Eng Res* 2023; 4(2): 033; doi: <https://doi.org/10.21926/aeer.2302033>
11. Godwin Aturagaba, Dan Egesa, Edward Mubiru and Emmanuel Tebandeke, Catalytic Hydrothermal Liquefaction of Water Hyacinth to form Biofuels Using Fe<sub>3</sub>O<sub>4</sub>/NiO Nanocomposite: Optimization of Reaction Conditions by Response Surface Metho-dology, (2023), *Journal of Sustainable Bioenergy Systems*, 13, 73-98. <https://doi.org/10.4236/jsbs.2023.133005>.
12. Ibrahim Karume, Nature of support system and enzyme as key factors in immobilized biocatalyzed processes, *Sustainable Chemistry for the Environment*, 2023, 4, 100048.
13. Ibrahim Karume, Simon Bbumba, Moses Kigozi, Alice Nabatanzi, Is'harq Z. T. Mukasa, and Solomon Yiga. One-pot removal of pharmaceuticals and toxic heavy metals from water using xerogel-immobilized quartz/banana peels-activated carbon, *Green Chemistry Letters and Reviews*, 2023,16, 2238726.

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# 12 HUMAN RESOURCES

## HUMAN RESOURCES

**8.1 Table 8: Appointments, promotions, confirmations, resignations**

Promotions			
NO	Name	Department	Rank
1.	Dr Eric Sande	Zoology, Entomology & Fisheries	Associate Professor
2.	Dr Jane Namukobe	Chemistry	Senior Lecturer
3.	Dr Rhona K. Baingana	Biochemistry and Sports Science	Senior Lecturer
4.	Dr Julius Mulindwa	Biochemistry and Sports Science	Senior Lecturer
5.	Dr Nicholas Ssebiyonga	Physics	Senior Lecturer
6.	Dr Jamilu Edrisa Ssenku	Plant Sciences, Microbiology and Biotechnology	Senior Lecturer
7.	Dr Daniel Mukiibi	Physics	Senior Lecturer
8.	Dr Robert Gumisiriza	Biochemistry and Sports Science	Lecturer
9.	Dr Florence Nantaba	Chemistry	Lecturer
10.	Dr Solomon Yiga	Chemistry	Lecturer
11.	Dr Madina Mohamed Adia	Chemistry	Lecturer
12.	Dr Innocent Ndikubwayo	Mathematics	Lecturer
13.	Dr Hassan Kayondo Wasswa	Mathematics	Lecturer
14.	Dr Anywar Godwin	Plant Sciences, Microbiology and Biotechnology	Lecturer
15.	Dr Eneku John Paul	Physics	Lecturer
16.	Dr Bernadette Nakabazzi	Biochemistry and Sports Science	Lecturer
Confirmations			
NO.	Name	Department	Rank
1.	Dr Barbra Nerima	Biochemistry and Sports Science	Lecturer
2.	Dr Mahadi Ddamulira	Mathematics	Lecturer
3.	Ms. Peggy Kulyanyingi Kalegga	Geology and Petroleum Studies	Lecturer
4.	Dr Elizabeth Nalumansi	Physics	Lecturer
5.	Dr Nelson Ndugu	Physics	Lecturer
6.	Dr Ivan Mukiibi Ssewanyaga	Geology and Petroleum Studies	Assistant Lecturer
7.	Ms. Joan Nakajigo	Geology and Petroleum Studies	Assistant Lecturer
8.	Ms. Joanita Stella Atugonza	Geology and Petroleum Studies	Assistant Lecturer
Appointments			
No.	Name	Department	Rank
1.	Dr Emmanuel Tebandeke	Chemistry	Head
2.	Dr Geoffrey Ismail Mirumbe	Mathematics	Head
3.	Dr Jamilu E. Ssenku	Plant Sciences, Microbiology & Biotechnology	Head
4.	Dr. Godfrey Kawooya Kubiriza	Zoology, Entomology & Fisheries Sciences	Head
Resignations			
1.	Dr Annet Nankwanga	Biochemistry & Sports Science	Senior Lecturer
2.	Dr Vincent Sembatya	Mathematics	Senior Lecturer
3.	Dr Willy Okullo	Physics	Senior Lecturer

**8.2 Table 9: CoNAS staff establishment**

<b>DEPARTMENT OF GEOLOGY AND PETROLEUM STUDIES</b>				
	<b>Position</b>	<b>Establishment</b>	<b>Filled</b>	<b>Vacant</b>
	PROFESSOR	4	0	4
	ASSOCIATE PROFESSOR	4	1	3
	SENIOR LECTURER	5	2	3
	LECTURER	5	4	1
	ASSISTANT LECTURER	5	7	-2
	TEACHING ASSISTANT	2	0	2
	RESEARCH FELLOW	2	0	2
	CHIEF TECHNICIAN	1	1	0
	PRINCIPAL TECHNICIAN	1	1	0
	SENIOR TECHNICIAN	1	0	1
	TECHNICIAN	3	0	3
	ASSISTANT TECHNICIAN	3	0	3
	LABORATORY ATTENDANT	3	2	1
	STENOGRAPHER SECRETARY	1	1	0
	OFFICE ATTENDANT	1	0	1
	<b>TOTAL</b>	<b>41</b>	<b>19</b>	<b>22</b>
<b>DEPARTMENT OF PHYSICS</b>				
	<b>Position</b>	<b>Establishment</b>	<b>Filled</b>	<b>Vacant</b>
	PROFESSOR	4	1	3
	ASSOCIATE PROFESSOR	4	2	2
	SENIOR LECTURER	4	5	-1
	LECTURER	8	7	1
	ASSISTANT LECTURER	7	4	3
	TEACHING ASSISTANT	2	0	2
	RESEARCH FELLOW	2	0	2
	CHIEF TECHNICIAN	1	0	2
	PRINCIPAL TECHNICIAN	1	2	-1
	SENIOR TECHNICIAN	1	1	0
	TECHNICIAN	3	0	3
	ASSISTANT TECHNICIAN	3	2	1
	LABORATORY ATTENDANT	3	1	2
	STENOGRAPHER SECRETARY	1	1	0
	OFFICE ATTENDANT	1	0	1
	<b>TOTAL</b>	<b>45</b>	<b>26</b>	<b>20</b>

<b>DEPARTMENT OF MATHEMATICS</b>				
	<b>Position</b>	<b>Establishment</b>	<b>Filled</b>	<b>Vacant</b>
	PROFESSOR	6	1	5
	ASSOCIATE PROFESSOR	7	5	2
	SENIOR LECTURER	17	3	14
	LECTURER	28	11	17
	ASSISTANT LECTURER	28	2	26
	TEACHING ASSISTANT	2	0	2
	RESEARCH FELLOW	2	0	2
	ASSISTANT TECHNICIAN	2	0	2
	LABORATORY ATTENDANT	3	0	3
	STENOGRAPHER SECRETARY	1	1	0
	OFFICE ATTENDANT	1	1	0
	<b>TOTAL</b>	<b>97</b>	<b>23</b>	<b>74</b>

<b>DEPARTMENT OF CHEMISTRY</b>				
	<b>Position</b>	<b>Establishment</b>	<b>Filled</b>	<b>Vacant</b>
	PROFESSOR	4	2	2
	ASSOCIATE PROFESSOR	4	1	3
	SENIOR LECTURER	10	6	4
	LECTURER	10	9	1
	ASSISTANT LECTURER	10	6	4
	TEACHING ASSISTANT	2	0	2
	RESEARCH FELLOW	2	0	2
	CHIEF TECHNICIAN	1	9	1
	PRINCIPAL TECHNICIAN	1	1	0
	SENIOR TECHNICIAN	1	3	-1
	TECHNICIAN	3	5	-2
	ASSISTANT TECHNICIAN	3	3	0
	LABORATORY ATTENDANT	3	4	-1
	STENOGRAPHER SECRETARY	1	1	0
	OFFICE ATTENDANT	1		
	<b>TOTAL</b>	<b>55</b>	<b>47</b>	<b>8</b>

<b>SCHOOL OF BIOSCIENCES</b>				
<b>DEPARTMENT OF PLANT SCIENCES, MICROBIOLOGY AND BIOTECHNOLOGY</b>				
	<b>Position</b>	<b>Establishment</b>	<b>Filled</b>	<b>Vacant</b>
	PROFESSOR	4	1	3
	ASSOCIATE PROFESSOR	4	2	2
	SENIOR LECTURER	4	2	2
	LECTURER	8	11	-3

ASSISTANT LECTURER	4	6	-2
TEACHING ASSISTANT	2	0	2
RESEARCH FELLOW	2	0	2
PRINCIPAL HERBARIUM CURATOR	2	1	1
SENIOR HERBARIUM CURATOR	3	1	2
CHIEF TECHNICIAN	1	0	1
PRINCIPAL TECHNICIAN	1	1	0
SENIOR TECHNICIAN	1	1	0
TECHNICIAN	3	1	2
ASSISTANT TECHNICIAN	3	2	1
LABORATORY ATTENDANT	3	0	3
STENOGRAPHER SECRETARY	1	1	0
OFFICE ATTENDANT	1	0	1
<b>TOTAL</b>	<b>21</b>	<b>30</b>	<b>17</b>

#### DEPARTMENT OF ZOOLOGY, ENTOMOLOGY AND FISHERIES SCIENCES

Position	Establishment	Filled	Vacant
PROFESSOR	4	1	3
ASSOCIATE PROFESSOR	4	3	1
SENIOR LECTURER	4	4	0
LECTURER	8	8	0
ASSISTANT LECTURER	4	2	2
TEACHING ASSISTANT	2	0	2
RESEARCH FELLOW	2	0	2
SENIOR HERBARIUM CURATOR	1	1	0
CHIEF TECHNICIAN	1	1	0
PRINCIPAL TECHNICIAN	1	1	0
SENIOR TECHNICIAN	2	1	1
TECHNICIAN	2	1	1
ASSISTANT TECHNICIAN	3	3	0
LABORATORY ATTENDANT	3	0	3
STENOGRAPHER SECRETARY	1	1	0
OFFICE ATTENDANT	1	1	0
<b>TOTAL</b>	<b>43</b>	<b>28</b>	<b>15</b>

#### DEPARTMENT OF BIOCHEMISTRY AND SPORTS SCIENCE

Position	Establishment	Filled	Vacant
PROFESSOR	4	0	4
ASSOCIATE PROFESSOR	4	1	3
SENIOR LECTURER	8	8	0
LECTURER	11	7	4

ASSISTANT LECTURER	11	9	2
TEACHING ASSISTANT	2	0	2
RESEARCH FELLOW	2	0	2
CHIEF TECHNICIAN	1	1	0
PRINCIPAL TECHNICIAN	1	1	0
SENIOR TECHNICIAN	1	1	0
TECHNICIAN	3	1	2
ASSISTANT TECHNICIAN	3	1	2
LABORATORY ATTENDANT	3	1	2
STENOGRAPHER SECRETARY	1	1	0
OFFICE ATTENDANT	1	0	1
<b>TOTAL</b>	<b>58</b>	<b>32</b>	<b>26</b>

# CoNAS Staff List

8.3 Table 10: CoNAS staff list

College / Administrative Unit	Name of College Principal or Head or Administrative Unit	
College of Natural Sciences	Professor Winston Tumps Ireeta	
<b>Mathematics Department</b> <b>School of Physical Sciences</b> <b>Head of Department: Dr. Godwin Kakuba</b>		
S/N	Name of Staff	Position
1.	Prof. Joseph Y. T. Mugisha	Professor
2.	Prof. John Magero Mango	Associate Professor
3.	Prof. Juma Kasozi	Associate Professor ( <i>Deputy Principal</i> )
4.	Prof. David Ssevviiri	Associate Professor
5.	Prof. Betty Kivumbi Nannyonga	Associate Professor
6.	Prof. Godwin Kakuba	Associate Professor / HoD
7.	Dr. Saul Hannington Nsubuga	Lecturer
8.	Dr. Ismail Geoffrey Mirumbe	Senior Lecturer

9.	Dr. Joseph Ssebuliba	Senior Lecturer
10.	Dr. Hassan Ddumba	Lecturer
11.	Dr. Henry Kasumba	Lecturer
12.	Dr. Alex S. Bamunoba	Senior Lecturer
13.	Dr. Fred Mayambala	Lecturer
14.	Dr. Alex Behakanira Tumwesigye	Lecturer
15.	Dr. Onesfole Kurama	Lecturer
16.	Dr. Mahad Ddamulira	Lecturer
17.	Dr. Juliet Nakakawa Nsumba	Lecturer
18.	Dr. Denis Wokiyi	Lecturer
19.	Mr. Wilber Grace Naigambi	Lecturer
20.	Mr. Yasin Kikabi	Assistant Lecturer
21.	Mrs. Betty Nabiyonga Kirenga	Assistant Lecturer
22.	Dr. Hassan Wasswa Kayondo	Lecturer
23.	Mr. David Ddumba Walakira	Assistant Lecturer
24.	Dr. Nathan Muyinda	Assistant Lecturer
25.	Dr. Innocent Ndikubwayo	Lecturer
<b>SUPPORT STAFF</b>		
26.	Nakku Goretti	Secretary
27.	Habarurema Andrew	Cleaner/Messenger
28.	Nassuuna Jennifer	Cleaner/Messenger
29.	Namembwa Agnes	Cleaner/Messenger
30.	Kabanda Fredrick	Messenger
31.	Abel Wandera	Book bank Librarian
Chemistry Department School of Physical Sciences Head of Department: Dr. John Wasswa		
32.	Prof. Robert Byamukama	Professor
33.	Prof. Muhammad Ntale	Professor
34.	Dr. George William Nyakairu	Assoc. Professor
35.	Dr. John Wasswa	Senior Lecturer (HoD)
36.	Dr. Gabriel Kasozi	Senior Lecturer
37.	Dr. Betty B. Naziriwo	Senior Lecturer
38.	Dr. Emmanuel Tebandeke	Senior Lecturer
39.	Dr. Patrick Ssebugere	Senior Lecturer
40.	Dr. Hussein Kisiki Nsamba	Lecturer
41.	Dr. Jane Namukobe	Senior Lecturer
42.	Mr. James Sekamatte	Lecturer
43.	Dr. Ibrahim Karume	Lecturer
44.	Dr. Job Samuel Kasule	Lecturer
45.	Dr. Edward Mubiru	Lecturer
46.	Dr. Dan Egesa	Lecturer
47.	Mr. Peter Ernest Maiki	Assistant Lecturer
48.	Dr. Madina Mohammed Adia	Lecturer
49.	Dr. Solomon Yiga	Lecturer
50.	Mr. Richard Ochieng	Assistant Lecturer
51.	Dr. Florence Nantaba	Lecturer
52.	Mr. Fahad Matovu	Assistant Lecturer
53.	Ms. Ruth Mbabazi	Assistant Lecturer
54.	Mr. Patrick Mulindwa	Assistant Lecturer
55.	Mr. Timothy Omara	Assistant Lecturer
56.	Mr. Herbert Kivumbi Ssemwanga	Assistant Lecturer
57.	Mr. Ivan Kiganda	Assistant Lecturer
<b>SUPPORT STAFF</b>		
58.	Mr. Bonny Balikuddembe	Principal Technician

59.	Ms. Patience Natumanya	Senior Technician
60.	Mr. Ibrahim Nalukuba	Senior Technician
61.	Mr. Jjagwe Nkalubo Geoffrey	Senior Technician
62.	Mr. Tindyebwa Sam	Technician I
63.	Mr. Brian Kusiima	Technician
64.	Mr. Benson Openy	Technician
65.	Mr. Kavuma Peter	Technician II
66.	Mr. Ssensamba Dan	Technician II
67.	Mr. Barasa Godfrey Mussitwa	Laboratory Assistant
68.	Ms. Nabachwa Margaret	Copy Typist
69.	Mr. Kasozi John	Laboratory Assistant
70.	Mr. Amany Jackson	Laboratory Assistant
71.	Mr. Mukasa Edward	Technical Assistant
72.	Mr. Medron Balengesya	Technical Assistant
73.	Mr. Mutenyo M.	Laboratory Attendant

**Geology and Petroleum Studies Department**  
**School of Physical Sciences**  
**Head of Department: Dr. Arthur Batte**

75.	Dr. Michael Owor	Associate Professor/Dean
76.	Dr. Betty Nagudi	Senior Lecturer
77.	Dr. Arthur Batte	Senior Lecturer/ HoD
78.	Dr. John Mary Kiberu	Lecturer
79.	Dr. Kevin Aanyu	Lecturer
80.	Dr. Simon Echegu	Lecturer
81.	Ms. Peggy Kalegga Kulyanyingi	Lecturer
82.	Mr. Lauben Twinomujini	Assistant Lecturer
83.	Mr. Wycliff Kawule	Assistant Lecturer
84.	Mr. Ivan Mukiibi Ssewanyaga	Assistant Lecturer
85.	Ms. Stella Joanita Atugonza	Assistant Lecturer
86.	Ms. Joan Nakajigo	Assistant Lecturer
87.	Mr. Denis Mutebi	Assistant Lecturer
88.	Mr. Hillary Mwongyera	Assistant Lecturer
89.	Ms. Susan Kigozi	Chief Technician
90.	Mr. Moses Kasaka	Principal Technician

**SUPPORT STAFF**

91.	Ms. Jeninah Tumwebaze	Senior Copy Typist
92.	Ms. Grace Ssekamanya	Laboratory Attendant
93.	Mr. Enock Emodock	Laboratory Attendant

**Physics Department**  
**School of Physical Sciences**  
**Head of Department: Dr. Denis Okello**

92.	Winston Tumps Ireeta	Associate Professor/Principal
93.	Nannungi Eva	Administrative Secretary III
94.	Taddeo Ssenyonga	Associate Professor
95.	Kibingo Bridget	Technical Assistant
96.	Asasira Abias	Chief Custodian
97.	Zawedde Annet Eva	Lecturer
98.	Musoke Michael	Principal Technician
99.	Kawumba Moses	Laboratory Assistant
100.	Ssebiyonga Nicolausi	Senior Lecturer
101.	Eneku John Paul	Lecturer
102.	Nayibinga Mercline	Principal Technician
103.	Kobusingye Stella	Cleaner



104.	Namusisi Yowanina	Cleaner
105.	Nteziyaremye Ronald	Senior Technician
106.	Florence Mutonyi Dujanga	Professor
107.	Ayugi Gertrude	Lecturer
108.	Oruru Bosco	Senior Lecturer
109.	Muyimbwa Dennis	Lecturer
110.	Mukiibi Daniel	Senior Lecturer
111.	Karidewa Nyeinga	Senior Lecturer
112.	Okello Denis	Senior Lecturer/HoD
113.	Twinamasiko Benon Fred	Assistant Lecturer
114.	Kwarikunda Nicholas	Lecturer
115.	Okello Alex	Assistant Lecturer
116.	Sembito Alex	Assistant Lecturer
117.	Tusiime Swaleh	Assistant Lecturer
118.	Elizabeth Naluminsa	Lecturer
119.	Nelson Ndugu	Lecturer
120.	Mr. Ronald Bwambale	Technical Assistant

Biochemistry and Sports Science Department  
School of Biosciences  
Head of Department: Dr. Agnes Nandutu Masawi

121.	VUZI Peter California	Senior Lecturer
122.	KYAMBADDE Joseph	Senior Lecturer
123.	HAWUMBA Joseph Fuuna	Associate Professor
124.	ALIBU Pius Vincent	Senior Lecturer
125.	MASAWI Agnes Nandutu	Senior Lecturer/HoD
126.	KASOZI Denis Matovu	Senior Lecturer
127.	ISABIRYE Dan	Lecturer
128.	BAINGANA Rhona	Senior Lecturer
129.	ISANGA Joel	Lecturer
130.	BALYEIDHUSA Apollo Simon Peter	Lecturer
131.	RUTARO Karlmax	Lecturer
132.	NERIMA Barbara	Lecturer
133.	MULINDWA Julius	Senior Lecturer
134.	GUMISIRIZA Robert	Lecturer
135.	BUTUNGI Hellen	Assistant Lecturer
136.	AGUTTU Clare	Assistant Lecturer
137.	OKOL Moses	Assistant Lecturer
138.	OMARA John	Assistant Lecturer
139.	MUKISA Ambrose	Chief Technician
140.	NIWAGABA Stuart	Principal Technician
141.	MUGENYI Godfrey	Senior Technician
142.	MUKAMA William	Technician

**SUPPORT STAFF**

143.	NAMANDE Prossy	Laboratory Assistant
144.	KALEERA George	Cleaner
145.	KHAINZA Beatrice Shillah	Cleaner
146.	SSEMUJU Francis	Laboratory Attendant

Sports Science Unit  
School of Biosciences  
Head of Department: Dr. Agnes Nandutu Masawi

147.	KASOMA Sandra Sarah	Senior Lecturer
148.	WANDERA Besweri	Assistant Lecturer

149.	BAMWEYANA Deogratiuous	Assistant Lecturer
150.	OOLA Stephen Kidega	Assistant Lecturer
151.	MUGISHA Lillian	Assistant Lecturer
152.	NAKAZIBWE Winifred	Assistant Lecturer
153.	NAKABAZZI Benedette	Lecturer
<b>SUPPORT STAFF</b>		
154.	KYOMUKAMA Robinah	Cleaner
<b>Zoology, Entomology and Fisheries Sciences Department</b> <b>School of Biosciences</b> <b>Head of Department: Dr. Godfrey Kubiriza Kawooya</b>		
155.	Prof. Muyodi Fredrick Jones	Professor
156.	Dr. Anne Margaret AKOL	Associate Professor
157.	Dr. Charles Maseembe	Associate Professor
158.	Dr. Efitre Jackson	Senior Lecturer
159.	Dr. Bwanika Gladys Namuswe	Senior Lecturer
160.	Dr. Sande Eric	Associate Professor (HoD)
161.	Dr. Kisakye John Joseph Mbago	Lecturer
162.	Dr. Akoll Peter	Senior Lecturer
163.	Dr. Chemurot Moses	Lecturer
164.	Dr. Ronald Semyalo	Lecturer
165.	Dr. Robinson Odong	Lecturer
166.	Dr. Perpetra Akite	Lecturer
167.	Dr. Nalwanga Rosemary	Lecturer
168.	Dr. Godfrey Kawooya Kubiriza	Senior Lecturer
169.	Dr. Nattabi Juliet Kigongo	Lecturer
170.	Dr. Herbert Kasozi	Lecturer
171.	Matovu Bernard	Assistant Lecturer
172.	Ndagire Noeline	Chief Technician
173.	Niyonzima Eustace	Principal Technician
174.	Namagala Virginia	Senior Technician
175.	Sseddyabane Nsubuga David	Lab. Assistant
176.	Walyelo Alex	Technician
177.	Muchunguzi Joshua	Lab. Assistant
178.	Odur Luka	Technical Assistant
<b>SUPPORT STAFF</b>		
179.	Bwete Geraldine	Sec./Steno
180.	Katusime Asumpta	Messenger/Cleaner
181.	Nakayiza Mary	S/Cleaner
182.	Atwijukire Mercy	Messenger
<b>Plant Sciences, Microbiology and Biotechnology Department</b> <b>School of Biosciences</b> <b>Acting Head of Department: Dr. Jamilu Edirisa Senku</b>		
183.	Esezah Kyomugisha Kakudidi	Professor
184.	Arthur Kajungu Tugume	Assoc. Professor (Dean, SBS)
185.	James Kalema	Associate Professor
186.	Esther Katuura Mwebesa	Senior Lecturer
187.	Shahasi Yusuf Athman	Lecturer
188.	Jamilu Edirisa Ssenku	Senior Lecturer (HoD)
189.	Esther Nakamatte	Lecturer

190.	Patience Tugume	Lecturer
191.	Collins Edward Bulafu	Lecturer
192.	Anthony Mutebi Nsubuga	Lecturer
193.	Dorothy Ndagire	Lecturer
194.	Alice Nabatanzi	Lecturer
195.	Byarugaba Savina Asiimwe	Lecturer
196.	Alfred Ozimati	Lecturer
197.	Paul Ssegawa	Herbarium Curator
198.	Mary Namaganda	PA Herbarium Curator
199.	Godwin Anywar	Lecturer
200.	Abubaker Sadik Mustafa	Assistant Lecturer
201.	Teddy Mary Asiimwe Tindyebwa	Assistant Lecturer
202.	Lydia Nabyonga	Assistant Lecturer
203.	Margaret Atim	Assistant Lecturer
204.	Cyprian Osinde	Assistant Lecturer
205.	Samule Ojelel	Assistant Lecturer
206.	Moses Zziwa	Principal Technician
207.	David Muhereza Begumya	Senior Technician
208.	Christian Abba	Technical Assistant I
209.	Stanley Ofwono	Laboratory Assistant
210.	Geoffrey Ssegendo	Technician
<b>Support Staff</b>		
211.	Grace Wandera	Copy Typist
212.	Robert Kiruge	Grounds man
213.	Fred Ssekandi	Grounds man
214.	Richard Mfitumukiza	Cleaner
<b>Principal's Office</b>		
215.	Mr. Tingo Alfred	College Registrar
216.	Ms. Hasifa Mukyala	Administrative Assistant
217.	Ms. Eleanor Nandutu	Administrative Assistant
218.	Ms. Shivon Atwine	College Procurement Officer
219.	Ms. Sarah Nakayima	College Librarian
220.	Ms. Hasifa Kabejja	College Communication Officer
221.	Mr. Alex Isemaghendera	College Web Administrator
222.	Ms. Claire Birungi	College Bursar
223.	Ms. Harriet Hawa	College Human Resource Officer
224.	Ms. Loyce Amoding	Administrative Secretary I
225.	Mr. Moses Kasagga	Computer Technician
226.	Ms. Samalie Nampewo Sekitte	Administrative Assistant/Sec. Dean SBS
<b>SUPPORT STAFF</b>		
227.	Ms. Emily Namatovu	Secretary/ Dep. Principal
228.	Ms. Juliet Zake	Secretary/Dean SPS
229.	Mr. Epaphra Barenga	Accounts Clerk
230.	Ms. Brenda Akwel	Library Assistant
231.	Ms. Suubi Gertrude	Library Assistant
232.	Ms. Tukundane Emily	Library Assistant
233.	Mr. James Sserwada	Technician II
234.	Mr. Phillip Kagoro Mujwisa	Driver
235.	Mr. Joseph Sennyonga	Messenger
236.	Mr. Timothy Katuramu	Clerical Officer
237.	Mr. Charles Kiyingi	Machine Operator

238.	Mr. Charles Munyamasoko	Cleaner
239.	Ms. Allen Ssanyu Nalyazi	Cleaner
240.	Ms. Margaret Namwase	Cleaner
241.	Ms. Anne Nakintu	Sanitary Cleaner
242.	Mr. Stephen Mugisa	Cleaner
243.	Ms. Regina Nakabuye	Cleaner
244.	Mr. Nathan Rukundo	Cleaner/Messenger
245.	Mr. Yazid Lubanga	Cleaner/Messenger
246.	Ms. Asina Tibesigwa	Cleaner/Messenger
247.	Mr. Owen Nassasira	Cleaner/Messenger
248.	Mr. Anthony Kawongolo	Cleaner/Messenger
249.	Mr. Siraki Igulu	Cleaner/Messenger
250.	Mr. Davis Amanyana	Cleaner/Messenger
251.	Ms. Joyce Nakafeero Nakato	Cleaner/Messenger
252.	Mr. Nibert Bagaba	Cleaner/Messenger
253.	Ms. Aminah Namuli	Cleaner/Messenger
254.	Ms. Janet Mary Katusabe	Cleaner/Messenger
255.	Ms. Mary Nakato	Cleaner/Messenger
256.	Ms. Nawiba Nakasolo	Cleaner/Messenger
257.	Mr. Isma Kalinaki	Cleaner/Messenger
258.	Ms. Alice Nakabembe	Cleaner/Messenger





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