



# MTAWA PANEL DISCUSSION AND GRADUATE CAREER WORKSHOP

*For Women in Academia*

*HELD ON*

**July 24&25, 2018**

Jomo Kenyatta University of Agriculture and Technology  
Juja, Kenya

## HIGHLIGHTS

- Choosing your career path
- Is graduate school right for you
- Identifying a graduate program
- Applying to graduate programs
- Presenting yourself
- Individual consultations

---

## *Workshop Report*

---

### CONTACT US

Email: [mtawainc@gmail.com](mailto:mtawainc@gmail.com)

Visit us online: <https://mtawainc.org>



Mentoring Network for African Women in Academia



**REPORT OF MTAWA PANEL DISCUSSION AND GRADUATE CAREER WORKSHOP**  
**Held 24 & 25 July 2018**  
**Sino-Africa Joint Research Centre, JKUAT**  
**Juja, Kenya**

Participants from eight public and private universities attended the event namely: Aga Khan University, Dedan Kimathi University, Egerton University, Kenyatta University, Maseno University, Strathmore University, University of Nairobi, and Jomo Kenyatta University of Agriculture and Technology (JKUAT). Six nationalities were also represented, namely Kenya, Uganda, South Sudan, Tanzania, Cameroon and USA.

**Workshop Goals:**

- Provision of information and tools to participants interested in post-graduate careers for application and success in post-graduate programs;
- Equipping of participants with skills for enhancement of professional development;
- Provision of opportunities for networking of participants with scholars, professionals, and peers.

-----

**DAY 1: Tuesday 24 July 2018**

**Introduction: Prof. Helen Kutima, Director, Gender & Mentoring Center, JKUAT**

Prof. Kutima rationalized the Centre's activities, highlighting the underrepresentation of women in science and technology at secondary and tertiary education levels. Prof Kutima indicated that at secondary school level girls tended to perform poorly in STEM subjects, thus not achieving the minimum university entry requirements to get into these fields. It was noted that at graduate level, many female students decide to pursue humanities subjects, which can stifle career growth due to lack of specialization.

**Opening Remarks: Prof. Stephen Diang'a, Dean, Architecture and Building Sciences, JKUAT**

JKUAT's mission was articulated as centering on provision of quality training, research, and innovation that develops leaders in the fields of Agriculture, Engineering, Technology, Enterprise Development, Built Environment, and Applied Sciences to suit the needs of a dynamic world. Prof Diang'a raised the importance of mentoring women in science to increase their participation in the growing science and technology job markets. It was recognized that JKUAT has seen increased enrollment of women in programmes in which women are traditionally underrepresented at undergraduate and graduate levels, and in positions of leadership within the institution. Importance of alignment of JKUAT and SABS work with the Government of Kenya's Big-Four development focal areas of Manufacturing, Affordable Housing, Food Security, and Universal Healthcare was also acknowledged.

## **Welcome, MTAWA Overview and Acknowledgments: Prof. Margaret Gitau, Purdue University & Mentoring Network of African Women in Academia (MTAWA)**

Prof Margaret Gitau provided a background of MTAWA, and articulated the organizations' vision, mission, and activities. Participants were encouraged to join MTAWA in order to benefit from mentoring relationships that have been identified as essential to career growth, especially for women in science and technology fields. Prof. Gitau also acknowledged the workshop speakers, panelists, the workshop organizing team and key partners that had contributed financial and technical support.

## **Session I (Part A): Launching Your Graduate and Professional Career: Tips and Tactics for Success**

Facilitated by Prof Clare Muhoro, this session focused on Participant Self-Assessment & Group Discussion.

The session enabled participants to identify their interests and strengths and to definitively state their career goals. Participants examined the relationship between identified individual traits, personal circumstances, and personal vision for the future. The intersection of these three components would inform their ideal course of action/way forward. Participants reflected on their satisfying accomplishments and what these revealed about themselves. In addition, they were guided on condensation of their vision and goals into a one-minute 'elevator pitch'.

Practical pointers for developing good communication skills, especially for scientists, were presented. Steps for application for postgraduate or professional career positions were discussed; the importance of being 'findable' on the internet, and having a strategic social media presence was highlighted. Interview types, preparation, and dynamics were presented and discussed. The importance of concise answers to FAQs, research on potential employer/academic position, clear speech in delivery of ideas/responses was emphasized. The key elements of CVs and the different types and formats thereof were articulated and discussed.

## **Session I (Part B): Which career and graduate program do I want?**

Facilitated by Prof Clare Muhoro, this session comprised description of diverse professional journeys by panelists and provision of insights regarding choice and pursuit of career paths.

Dr. Christine Adhiambo, University of Nairobi identified drivers that contribute to selection and continued pursuit of specific areas of study and research.

Dr. Teckla Muhoro, JKUAT articulated on the work-studies balance and the influence of work/industry experience on selection of academic pursuits.

Dr. Rose Mutiso, Mawazo Institute articulated the role of funding in pursuing academic and career goals, and on access to funding opportunities.

Ms. Agnes Limo, Safaricom emphasized the role of technology in current and future generations, and the importance of determination, drive, and decision making in pursuit of identified goals.

Ms. Michelle Boit, Tullow Oil noted the importance of personal identity in career development and the opportunities in the oil and petroleum industry in Kenya.

Prof. Margaret Gitau, Purdue University/MTAWA recognized the gains made in representation of women in the sciences at university level and the role of personal conviction, mentorship, and socialization in influencing academic and career pursuits.

**Keynote Address: Prof. Caroline Thoruwa, Professor of Chemistry and Director, Kenyatta University, Nairobi Campus.**

Through numerous personal experiences, Prof Thoruwa captured the challenges that have hindered women's career progression in STEM. The keynote address noted that multiple factors have worked against the advancement of women. These include concentration of women at the lower ranks in professions, lack of role models and mentors, male dominated environments, hostile working environment, lack of access to information and research funds, work-life balance challenges, lack of scientific and technological skills on grant writing and publications, limited funds for scholarships and research, and low age limit for international scholarships and research grants. It was acknowledged that the low representation of women in science, technology, and engineering is a global problem. Prof Thoruwa noted this trend to be reversible through targeted initiatives and interventions focused on existing inequalities and challenges, and identification of what needs to be done to create the critical mass of women that can champion STEM.

Also articulated was the 'leaking pipeline' concept that showed points of attrition of women in academic/career pursuits and where opportunities for advancement tended to be lost. The importance of academic excellence was emphasized as it positioned women to be selected and to take up opportunities when these arose. In addition, the benefits of good role models, mentors, and associations of women in sciences and other such organizations were underscored.

**Session 2: How do I go about applying to graduate programs?**

Facilitated by Prof Clare Muhoro, this session comprised exposure to practical and administrative aspects to assist decision-making on the type of programme and institution to which to apply and guidance to be given for universities in Kenyan and abroad.

Ms. Phyllis Kalele, Academy of Science of South Africa emphasized the role of Pan-African academic networks and provided information to associations and professional bodies of women in science.

Ms. Rosetta Ngugi, Towson University highlighted that career and academic paths can be varied, and on methods of identification of/application to appropriate universities in line with academic pursuits.

Dr. Emmah Omulokoli, JKUAT emphasized on the importance of mentorship in non-academic sphere and on the role of peer educators and clubs in universities.

Prof. Margaret Gitau, Purdue University/MTAWA highlighted the role of networks and appropriate engagement with university faculty and with referees during the graduate application processes.

**DAY 2: Wednesday 25 July 2018**

**Session I: Open Consultations**

Facilitated by consultants (faculty from JKUAT and MTAWA) this interactive session comprised individual one-one consultations with participants. Based on Day 1 activities, students presented CVs and personal statements for review, discussion, and feedback.

## **Session 2: Mentoring in Academia and Profession**

Facilitated by Prof Clare Muhoro, this session comprised presentation and discussion on the roles, influence, and dynamics of mentorships from academic, industrial, and non-profit sector perspectives.

Dr. Jacqueline Kariithi, Princeton University recognized the role of formal mentorship programmes and the benefits of self-investment in academic and career pursuits.

Ms. Immaculate Makoko, International Potato Research Center highlighted on cultivation of good relationships with mentors, knowledge of their own academic/non-academic journeys, and on matching mentors-mentee expectations.

Dr. Susan Kibue, JKUAT outlined challenges and opportunities of being in a STEM-related field, on mentorship across departments and disciplines, and on contribution of attitude and environment to workplace performance.

Prof. Caroline Thoruwa, Kenyatta University informed on the PEER Women in Science Mentorship Programme, presented the benefits of mentoring for mentor and mentee, and shared case studies of students that have excelled because of good mentorship.

## **Workshop Recap and Closing Remarks**

Dr. Teckla Muhoro recapped the activities and content of the two days.

Prof. Mary Abukutsa, JKUAT Deputy Vice Chancellor (Research, Production and Extension) lauded the MTAWA programme and challenged women to remain focused. Emphasis on importance of developing social soft skills was made, and identified as critical in enhancing women scholars' capacity to strike a balance in the navigation of career, professional, and work-life terrains.

Prof. Margaret Gitau, Purdue University/MTAWA recognized the wealth of ideas and information shared and exchanged during the workshop.

-----*End of Report*-----

---

*We are thankful to our Keynote Speaker and all our panelists, speakers, and consultants for taking time out of their schedules to attend the workshop and to share their experiences and insights.*

## DAY 1 PANELISTS

---

### **Prof. Clare Muhoro: Towson University, MTAWA, COACH and USAID (MODERATOR)**

*Prof. Muhoro is Associate Professor of Chemistry at Towson University. She is an expert in organometallic chemistry and studies metal-based catalysts for synthesis of important organic molecules with applications in pharmaceuticals and nanomaterials. Her research also focuses on aquatic chemistry of organic pesticides in tropical environments. Prof. Muhoro is a founding board member and Secretary of MTAWA, and serves as science partnerships advisor in the US Global Development Lab at USAID, Washington where she develops and manages USAID programs in science. She also serves as a board member for the Committee for the Advancement of Women in Science (COACH). Prof. Muhoro received her B.Sc. in Chemistry from St. Lawrence University, NY, and her M.Sc. and Ph.D. in Organometallic Chemistry from Yale University.*



### **Dr. Christine Adhiambo: University of Nairobi**

*Dr. Adhiambo is a Lecturer in the Department of Biochemistry at the University of Nairobi. Her research focuses on the protozoan parasites Leishmania and Trypanosoma. Leishmaniasis and trypanosomiasis are characterized by WHO/TDR as neglected tropical diseases. She is a Board Member of and Africa contact person for MTAWA. Dr. Adhiambo received both her B.Sc. in Biochemistry/Zoology and her M.Sc. in Biochemistry from the University of Nairobi and Ph.D. in Biochemistry from Purdue University, IN.*



### **Prof. Margaret Gitau: Purdue University and MTAWA**

*Prof. Gitau is Associate Professor of Agricultural and Biological Engineering at Purdue University. Her research focuses on water quality with emphasis on: integrated (hydrologic, water quality, statistical) computer modeling; land use, land management, and climate impacts; and, the development of computer applications for water quality decision making and management. She also serves as Associate Editor for the Transactions of the American Society of Agricultural and Biological Engineers (ASABE), Applied Engineering in Agriculture, and the Journal of Soil and Water Conservation, and as Vice Chair of ASABE's Global Partnerships Committee. Prof. Gitau is the Founding President and Chair of the Board of MTAWA. She holds a Ph.D. in Agricultural and Biological Engineering from the Pennsylvania State University.*





**Ms. Michelle Boit: Tullow Oil**

*Michelle Boit is a Senior Production Engineer working at Tullow Oil based in Nairobi, Kenya. She leads the construction of surface facilities and the production of crude oil for the EOPS (Early Oil Pilot Scheme) project. Michelle graduated from Texas Tech University with a bachelor of science in Chemical Engineering (Honors). She also graduated with her master's degree from University of Texas at Dallas in Global Leadership Executive MBA. Michelle has worked in the oil and gas industry for more than 10 years in different locations including USA, Kenya and Uganda. She has diverse work experience in the oil and gas industry.*

**Ms. Agnes Limo: Safaricom Women in Technology**

*Ms. Limo is the Senior Manager-Home Solutions at Safaricom PLC. She is a seasoned Telecoms expert in GSM and Fiber Optics spanning over 12 years. She is responsible for connecting Homes with broadband internet, preparing the platforms for Triple Play, Home Automation and ensuring Superior Customer Experience. She leads a team of talented tech savvy colleagues, and works with partners that include manufacturers, service providers, public and regulatory authorities. She pursues other initiatives to empower women like Women in Technology, Women in Business, and Child Online Safety, and has participated in Transformative Research towards early detection of Flash Floods and Droughts as a Microwave expert. She has a BSC-Electrical and Electronics Engineering from University of Nairobi. Agnes is married with three children*



**Dr. Teckla Muhoro: JKUAT**

*Dr. Muhoro is Lecturer in the Department of Construction Management and in the Centre for Urban Studies in the School of Architecture and Building Sciences. Her academic areas of interest and research are sustainability of cities, urban theory, urban design, and architectural heritage. She serves as a board member of the Kenya Green Building Society and as a member of the Education Committee of the Global Outreach Programme. She is also a member of Women in Academia (Kenya), a mentor in the Kupaa Mentorship Programme, and an affiliate of the Purpose and Leadership Forum. Dr. Muhoro holds a B.Arch. from Savannah College of Art and Design (USA), a M.Arch. from Katholieke Universiteit Leuven (Belgium), and PhD from JKUAT.*

**Dr. Rose Mutiso: Mawazo Institute**

*Dr. Rose M. Mutiso is co-founder and CEO of the Mawazo Institute, which supports the next generation of female scholars and thought leaders in East Africa. She is also a Senior Fellow of the Center for Global Development's Energy for Growth Hub and the current Next Einstein Forum Ambassador representing Kenya. She earned her BA and BE in Engineering Sciences with a concentration in Materials Science from Dartmouth College, and her PhD in Materials Science and Engineering from the University of Pennsylvania.*



## DAY 1 SPEAKERS

---

### **Prof. Caroline Langat Thoruwa: Director, Kenyatta University, Nairobi City Campus (LUNCH TIME KEYNOTE SPEAKER)**

*Prof. Thoruwa is the current Director of Kenyatta University, Nairobi City Campus, Kenya. She has served in various capacities at the university including Chair of the Department of Chemistry, the Director of Undergraduate Studies, and Director of the Center for Linkages and International Programs. Her research work and interest is in the area of organic & natural products chemistry, medicinal chemistry, post-harvest products, and biofuels. She has a passion for projects that serve to improve the educational and social status of girls and women. She has been involved in projects for attracting, recruiting and retaining girls and women in STEM. She is involved in mentoring young scientists. A Founder member of African Women in Science and Engineering (AWSE) since its inception in 1999, she was previously the Secretary of AWSE before being elected as chairperson in 2010. She is a Board member of International Network for Women Engineers & Scientists (INWES).*



### **Prof. Helen Lydia Kutima: JKUAT (INTRODUCTIONS)**



*Prof. Kutima is a Senior Lecturer, Head of the Department of Zoology, and Director of the Gender and Mentoring Centre at JKUAT. Her research and academic interest is in molecular Parasitology and Entomology, vector biology, and infectious diseases of humans and animals. She is a member of the Entomological Society of Kenya, the African Academy of Sciences, African Women in Science and Engineering, the World Association of Advancement in Veterinary Parasitology, and the International Network of Women in Science and Engineering. Prof. Kutima earned her B.Ed in Zoology/Botany and MSc in Immuno-Parasitology from Kenyatta University. She holds a PhD in Parasitology and Entomology from JKUAT and the International Centre for*

*Insect Physiology and Ecology (ICIPE).*

### **Prof. Stephen Diang'a: Dean, School of Architecture & Building Sciences, JKUAT (OPENING REMARKS)**

*Prof. Diang'a is Dean of the School of Architecture and Building Sciences at JKUAT. He oversees the administration of the Departments of Architecture, Landscape Architecture, Construction Management, and the Centre for Urban Studies. His academic areas of interest and research are sustainable housing, urban planning, construction management, and architecture. He is a practicing architect, registered with the Architectural Association of Kenya (AAK). Prof Diang'a earned his B.Arch from the University of Nairobi, M.Arch Eng. from Katholieke Universiteit Leuven, Belgium, and PhD from the University of Kwa Zulu Natal, South Africa.*





**Ms. Phyllis Kalele: Academy of Science of South Africa**

*Phyllis Kalele is the Senior Liaison Officer-African Collaboration, at the Academy of Science of South Africa (ASSAf) and the head of The World Academy of Sciences sub-Saharan Africa Regional Partner (TWAS-SAREP) secretariat. She is responsible for: building and strengthening existing academy partnerships in and for Africa; leading academy activities in the continent with the aim of advocating for the use of evidence-based science in policy making and increasing the visibility of African scientists; directing support for the establishment of new national senior and young academies of science; overseeing the implementation of TWAS programmes in sub-Saharan Africa; and is the principal contact person at ASSAf for Africa.*

**Dr. Emmah Omulokoli: Dean of Student Affairs, JKUAT**

*Dr Omulokoli is Dean of Students at JKUAT. As head of the welfare of student affairs, her work focuses on social and personal development of students at all academic levels, and facilitation of students to secure financial assistance for academic programmes.*



**Ms. Rosetta Ngugi: Towson University**

*Rosetta is a chemical engineering graduate from the University of Leeds. After a brief internship at HACO Industries, she discovered her desire to have a career that would enable her to impact young people's lives. She became a teaching fellow at the Aga Khan Academy in Mombasa, teaching Mathematics and Physics in the International Baccalaureate curriculum. She also earned a Postgraduate Diploma in Education from Daystar University. At the Academy she coached the Open girls' basketball team leading them to win the Mombasa District Championship in 2011. Rosetta, then worked at Braeburn Garden Estate School as a Physics teacher for 2 years. She is currently pursuing an MSc in Applied Physics, and is a teaching and research assistant in the Department of Physics, Astronomy, and Geosciences at Towson University, Maryland.*

**Prof. Margaret Gitau: Purdue University and MTAWA**

*Prof. Gitau is Associate Professor of Agricultural and Biological Engineering at Purdue University. Her research focuses on water quality with emphasis on: integrated (hydrologic, water quality, statistical) modeling; land use, land management, and climate impacts; and, the development of computer applications for water quality decision making and management. She also serves as Associate Editor for the Transactions of the American Society of Agricultural and Biological Engineers (ASABE), Applied Engineering in Agriculture, and the Journal of Soil and Water Conservation, and as Vice Chair of ASABE's Global Partnerships Committee. She is the Founding President and Chair of the Board of MTAWA. Prof. Gitau earned her BS and MS in Agricultural Engineering from the University of Nairobi. She holds a Ph.D. in Agricultural and Biological Engineering from the Pennsylvania State University.*



## DAY 2 PANELISTS

---

### **Prof. Clare Muhoro: Towson University and MTAWA (MODERATOR)**

*Prof. Muhoro is Associate Professor of Chemistry at Towson University. She is an expert in organometallic chemistry and studies metal-based catalysts for synthesis of important organic molecules with applications in pharmaceuticals and nanomaterials. Her research also focuses on aquatic chemistry of organic pesticides in tropical environments. Prof. Muhoro is a founding board member and Secretary of MTAWA, and serves as science partnerships advisor in the US Global Development Lab at USAID, Washington where she develops and manages USAID programs in science. She also serves as a board member for the Committee for the Advancement of Women in Science (COACH). Prof. Muhoro received her B.Sc. in Chemistry from St. Lawrence University, NY, and her M.Sc. and Ph.D. in Organometallic Chemistry from Yale University.*



### **Dr. Jacqueline Kariithi: Princeton University**

*Dr. Kariithi is an environmental scientist passionate about conservation, tourism and development issues. She has received leadership and mentorship training through the African Women in Agricultural Research and Development (AWARD) fellowship programme that cultivates holistic leadership whilst, motivating and guiding others to achieve their goals. She has therefore mentored several students pursuing degrees in Environmental, Coastal and Marine conservation fields over the past four years. Jacqueline is currently a Postdoctoral Research Associate in the department of Ecology and Evolutionary Biology at Princeton University. Her current postdoctoral research explores the linkages between cultural heritage, biodiversity conservation and their impact on livelihoods such as agriculture, tourism and forestry.*

### **Ms. Immaculate Makoko: International Potato Research Center**

*Ms. Makoko was born in Western Kenya and is currently pursuing a Bachelor's degree in Biotechnology at The Technical University of Kenya, with a Diploma in Industrial microbiology and Biotechnology from the Technical University of Mombasa. Her research at International Potato Center (CIP) is focused on developing Late blight resistant farmer-preferred varieties of Potato. Prior, Makoko has contributed to the development and maintenance of Tissue culture plant materials at KALRO-Biotechnology Center. Makoko is interested in research and partnerships involving crop development technologies to improve livelihoods of farmers.*





**Dr. Caroline Thoruwa: Kenyatta University**

*Prof. Thoruwa is the current Director of Kenyatta University, Nairobi City Campus, Kenya. She has served in various capacities at the university including Chair of the Department of Chemistry, the Director of Undergraduate Studies, and Director of the Center for Linkages and International Programs. Her research work and interest is in the area of organic & natural products chemistry, medicinal chemistry, post-harvest products, and biofuels. She has a passion for projects that serve to improve the educational and social status of girls and women. She has been involved in projects for attracting, recruiting and retaining girls and women in STEM. She is involved in mentoring young scientists. A Founder member of African Women in Science and Engineering (AWSE) since its inception in 1999, she was previously the Secretary of*

*AWSE before being elected as chairperson in 2010. She is a Board member of International Network for Women Engineers & Scientists (INWES).*

## DAY 2 CONSULTANTS AND ACKNOWLEDGEMENTS

---

### DAY 2 CONSULTANTS

Dr. Christine Adhiambo (University of Nairobi)  
Dr. Mugwima Bernard Njuguna (JKUAT)  
Dr. Margaret Gitau (Purdue University and MTAWA)  
Dr. Jacqueline Kariithi (Princeton University)  
Dr. Helen Kutima (JKUAT)  
Dr. Clare Muhoro (Towson University, MTAWA, COACH and USAID)  
Dr. Teckla Muhoro (JKUAT)  
Dr. Grace Mwaura (African Academy of Sciences)  
Dr. Judy Omumbo (African Academy of Sciences)

### ACKNOWLEDGEMENTS

#### **Hosts**

Prof. Mabel Imbuga (VC, JKUAT)  
Gender and Mentoring Center (JKUAT)  
Dean Stephen Diang'a, School of Architecture and Building Sciences (JKUAT)  
Center for Urban Studies (JKUAT)  
Sino-Africa Joint Research Center (JKUAT)

#### **Partners**

Coach (Eugene, Oregon)  
Lillian Nyawira and Barbara Osiro and Safaricom Women in Technology (Nairobi, Kenya)  
Purdue University (West Lafayette, Indiana)  
Rose Mutiso and Mawazo Institute (Nairobi, Kenya)  
Towson University (Towson, Maryland)

#### **Volunteers**

Dr. Anastasia Njoroge (Purdue University)  
Ms. Elizabeth Kabeu (Safaricom Limited)  
Dr. Margaret Okomo-Adhiambo (CDC)  
Ms. Pauline Welikhe (Purdue University)

#### **Workshop Personnel**

Prof. Clare Muhoro (Towson University, MTAWA, COACH and USAID, Lead)  
Dr. Teckla Muhoro (JKUAT Lead)  
Dr. Helen Kutima (JKUAT)  
Prof. Margaret Gitau (Purdue University and MTAWA)  
Ms. Rosetta Ngugi (Towson University and MTAWA)  
Ms. Brenda Bhoyyo (JKUAT)  
Ms. Maremiya Hussein (JKUAT)  
Ms. Wairimu Wambua (University of Nairobi graduate 2017)