

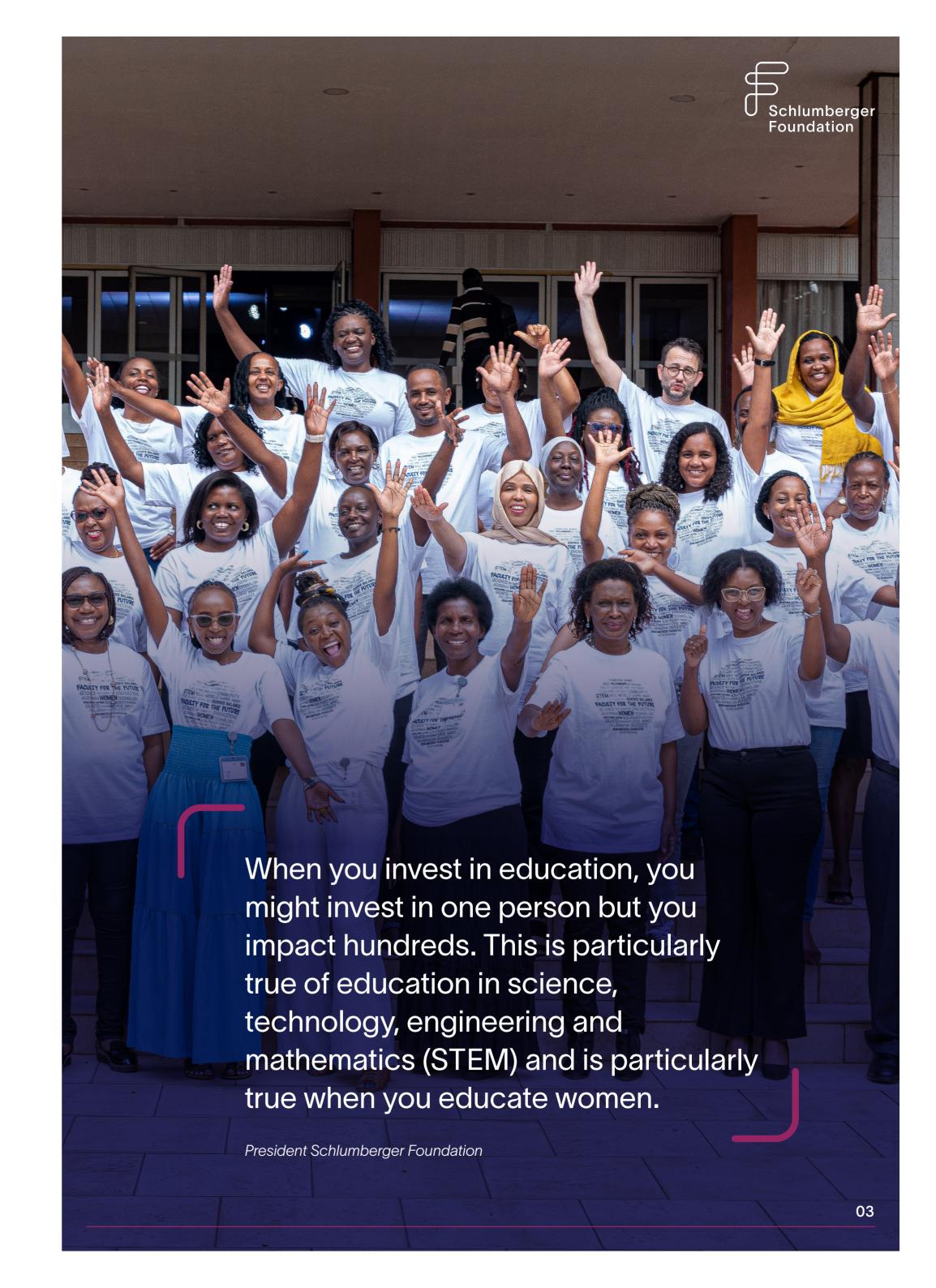
Schlumberger Foundation

2024 annual report

In 2024, the Schlumberger Foundation marked 20 years of impact and advanced its mission to close the gender gap in STEM through its Faculty for the Future program. By supporting women scientists from developing countries, we invest in innovation that transforms communities.

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Word from the President

It is a privilege to have been elected in October 2024 to serve as President of the Schlumberger Foundation. I would like to express my deep appreciation for the dedicated and inspirational leadership of Roseline Chapel, who nurtured and guided the Faculty for the Future program throughout her tenure as President. Thank you, Roseline.



The creation of the Faculty for the Future (FftF) program twenty years ago was a visionary step by the Schlumberger Foundation. Our predecessors imagined a program that would increase the number of academic researchers and educators in countries where they were most needed, bringing engineering and scientific expertise to address research questions critical to those communities. Importantly, they envisioned a program for women—recognizing that the gender gap represented a missed opportunity for both women and innovation. This vision has made FftF unique: a program focused on excellence in science, technology, engineering, and mathematics, with global reach and research diversity, and one that brings a female perspective to the major technical challenges of our time.

Over the past ten years as a Director, I have relished opportunities to meet FftF Fellows and witness firsthand the transformative impact of a female lens on education,

innovation, and leadership. I had such an opportunity in Kampala in April 2024, when we gathered alumnae from East Africa to celebrate 20 years of FftF. The work of Fellows such as Aline, Vassilca, and Deise showed particularly how the female lens shapes outcomes.

- Aline In many communities, women are primary water collectors and household managers. Aline's research on water access is impactful because she engages these women as decision-makers, ensuring systems meet daily needs.
- Vassilca Designing renewable energy solutions for rural communities requires an understanding of household energy demands. Vassilca's work involves the women responsible for households to ensure electricity access meets productive needs.
- Deise The first minutes and hours after a stroke determine patient outcomes. Decisions about care, timing, and seeking medical help—whether the patient is male or female—are often made by women. Deise's work in building stroke protocols is already saving lives.

This female lens means FftF Fellows often choose different research topics to men, frame questions from unique perspectives, and approach solutions differently. This diversity enriches research and drives purposeful innovation—leading to better outcomes, higher adoption, and meaningful change.

Capella Festa, President Schlumberger Foundation

Financial Overview

In 2024, the Schlumberger Foundation continued to invest in its flagship Faculty for the Future program focused on advanced academic research in STEM disciplines for women scientists from the developing world. The program focuses on reducing the gender gap in STEM education and leadership by breaking down the economic barrier that prevents women from achieving their educational aspirations.



A total of 53 new fellows were admitted in 2024 bringing the total population which has received financial support from this program to 915 engineers and scientists from 93 developing countries, studying in 35 host countries around the world. A total of 53 new fellows were admitted in 2024 bringing the total population which has received financial support from this program to 915 engineers and scientists from 93 developing countries, studying in 35 host countries around the world.

The total of 53 new grants awarded in March 2024 represents a decrease of 5% YoY. The 86 renewed grants awarded with the numbers increase of 43% YoY compared to the previous year of 60. Grant spend increased by 9% compared with the previous year. 56% of the total grant spend in 2024 was disbursed to grantees studying in the United Kingdom and the United States: \$1.43M and \$1.32M respectively (vs \$1.32M and \$1.12M last year). The remainder was disbursed to grantees enrolled at universities in Australia, Canada, Europe, and South Africa.

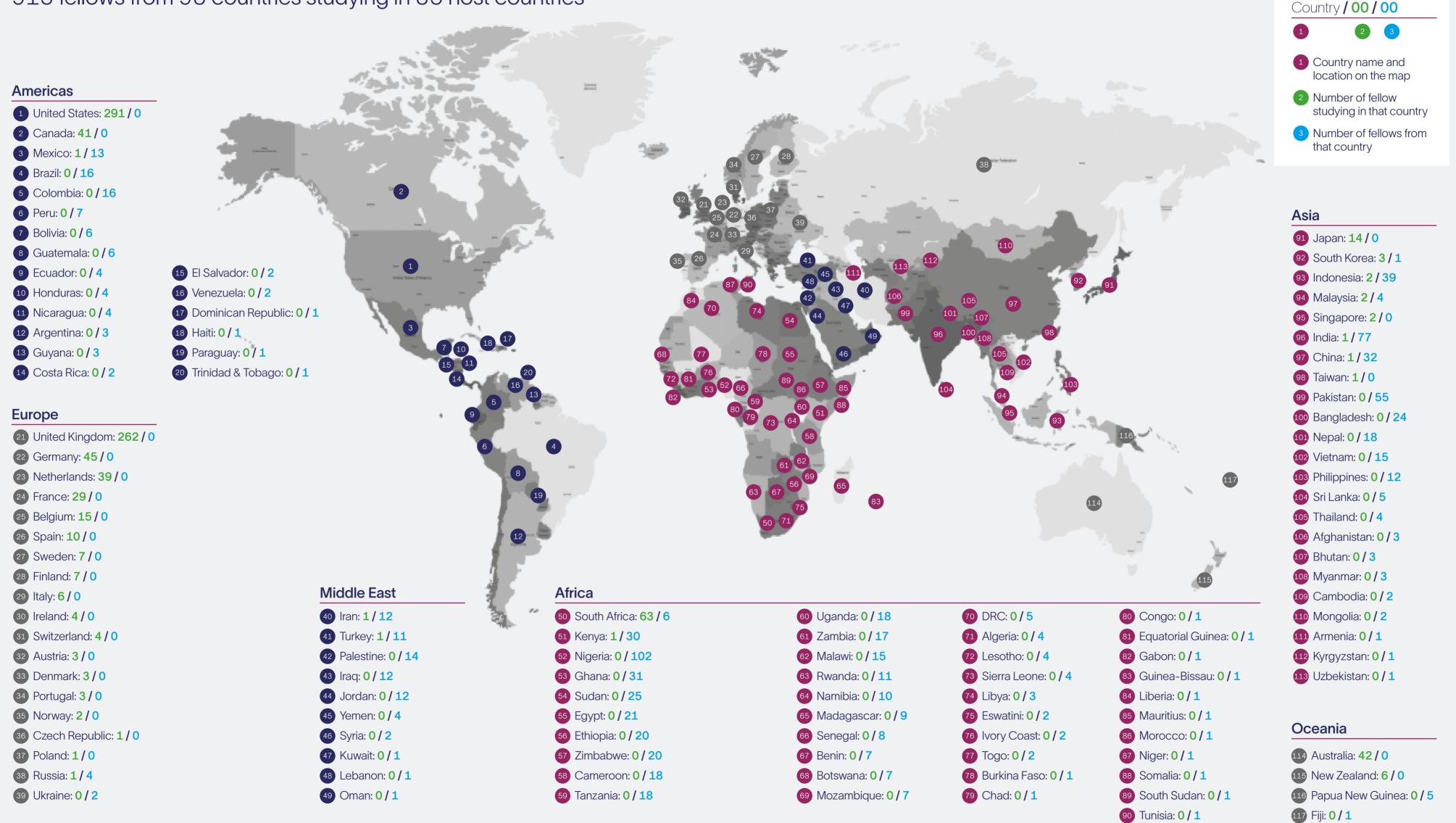


Citizenship and country of study

Recipients of the 915 Faculty for the Future Fellowships awarded to date come from across the globe. They have benefited from attending leading research universities and institutes in 35 different host countries.

Faculty for the Future Program

915 fellows from 93 countries studying in 35 host countries



East Africa Event, Kampala April 2024

Uganda proudly hosted the first FftF East Africa-focused event in April 2024, a three-day gathering that brought together 28 distinguished alumnae from seven East African countries to spotlight the transformative power of STEM research.

Since its inception in 2004, the FftF program has awarded PhD and Post-Doctorate scholarships to over 915 women scientists from 93 countries, including 46 trailblazers from East Africa.

Attended by senior representatives from the Ministry of Science, Technology and Innovation, the Petroleum Authority of Uganda and the Ministry of Energy and Mineral Development, the event's objective was to provide

a platform for Faculty for the Future Fellows to showcase projects that are changing lives — from developing biofuels to delivering safe, clean water to communities, and driving innovations that ripple far beyond borders.

This event was not only a celebration of achievements but also a call to action designed to raise awareness, foster collaboration, and champion initiatives that close the gender gap in science and technology in Africa.











Schlumberger Foundation

From Research to Impact

Schlumberger Foundation is proud of the outstanding 23 Fellows that successfully graduated with their PhD in 2024.

For every single Fellow that made the list achieving gender parity is a doctorate represents a true milestone. It's well-solutions to the deserved recognition for years of research and study into their chosen field, and testament to their dedication in advancing STEM knowledge.

As a connected network of talented women scientists from the world's developing and emerging economies, the FftT Fellowship today is a vital balancing force in achieving gender parity in science. And by developing practical solutions to the most pressing sustainable development problems of our age, our Fellows are agents of change in their countries.

As they continue their scientific endeavours we look forward to hearing great things in the future about their impact on their region and the world.



2024 PhD Graduates

Dr. Jessie Khaki

Malawi, PhD in Statistics and Epidemiology, Lancaster University, United Kingdom

Dr. Goabaone Ramatlapeng

Botswana, PhD in Geology (Hydrochemistry), University of California, Davis, United States

Dr. Tina Phiri

Zambia, **PhD in Metallurgical Engineering**, Murdoch University, Perth, Australia

Dr. Mai Thi Phuong Vu

Vietnam, **PhD in Drug research**, University of Eastern Finland, Finland

Dr. Marlene Joannie Bewa

Benin, **PhD in Public Health**, University of South Florida, United States

Dr. Mennat Allah Labib

Egypt, **PhD in Engineering**, University of Edinburgh, United Kingdom

Dr. Stella Gachoki

Kenya, **PhD in Natural Resources**, University of Twente, The Netherlands

Dr. Bidhya Sharma

Nepal, **PhD in Geography**, McGill University, Montreal, Canada

Dr. Ruth Maganga

Tanzania, **PhD in Microbiology and Infection**, University of Birmingham, United Kingdom

Dr. Nini Sane

Senegal, **PhD in Science and Technology**, University of Bordeaux, France

Dr. Mercy Sosanya

Nigeria, **PhD in Nutritional Sciences**, University of Texas at Austin, United States

Dr. Ibtihal Abdelsalam Mahdi Mohamed Ahmed

Sudan, **PhD in Civil Engineering**, Imperial College, London, United Kingdom

Dr. Isabel Potani

Malawi, **PhD in Nutritional Sciences**, University of Toronto, Canada

Dr. Abeer Alnasrawi

Iraq, PhD in Cell and Molecular Biology, University of Arkansas, United States

Dr. Juliana Edor

Ghana, **PhD in Chemistry**, North West University, South Africa

Dr. Teopolina Nghinaunye

Namibia, **PhD in Biotechnology**, Brandenburg University of Technology, Germany

Dr. Emmanuela Adjei-Sowah

Ghana, **PhD in Biomedical Engineering**, University of Rochester, United States

Dr. Zhoor Hamid

Sudan, PhD in Drug Design,

Helmholtz Institute of Pharmaceutical Research, Saarland University, Germany

Dr. Aya Ahmed

Sudan, **PhD in Civil Engineering**, Imperial College, London, United Kingdom

Dr. Khatun E Zannat

Bangladesh, **PhD in Public Transport Planning & Design**, University of Leeds, United Kingdom

Dr. Suyen Espinoza Miranda

Nicaragua, **PhD in Biology, Boston College**, United States

Dr. Maryam Saeed

Pakistan, PhD in Electrical and Electronic Engineering, University College Dublin, Ireland

Dr. Sally Musungu

Kenya, **PhD in Environmental Research**, Imperial College, London, United Kingdom



Powering Balance

A Closer Look at some 2024 Fellows

What unites their diverse research journeys is more than just academic ambition. Each story begins with a deeply personal spark – often based on an early experience or childhood dream – that shaped their choice of study. These projects all address urgent challenges in their home countries ranging from combatting breast cancer and infectious diseases to advancing renewable energy and sustainable construction.

Beyond this research, these remarkable women also share a commitment to return home to teach and mentor the next

generation; challenging gender stereotypes and opening doors for girls in STEM. They are leveraging their time at world-class institutions abroad not for themselves, but to bring knowledge and innovation back to communities that need it most.

Through its Faculty for the Future program, the Schlumberger Foundation helps transform these aspirations into practical progress – supporting research that combines global significance with local impact, while narrowing the gender gap in STEM in science, technology and engineering.

Beyond this research, these remarkable women also share a commitment to return home to teach and mentor the next generation; challenging gender stereotypes and opening doors for girls in STEM.

The role of cohesin and chromosome architecture in promoting breast cancer progression

Betty Edem NUGBA



Home Country	Ghana
Degree	PhD student in Biochemistry and Molecular Biology
Expertise	Breast Cancer
Research Focus	The role of cohesin and chromosome architecture in promoting breast cancer progression
Host University	University of Miami, USA
Fellowship Awarded	2024

While growing up in eastern Ghana, Betty Nugba witnessed her mother's contraction of and successful recovery from breast cancer. Around the same time, Betty's mother's best friend succumbed to the same disease. So it's hard to imagine that these two events had no impact on the fact that Betty is now an accomplished biochemist and researcher specialised in innovative treatment for...breast cancer.

Academic excellence distinguished Betty Nugba early, earning her, at age 15, entry to the University of Ghana, where she attained a BSc in Medical Laboratory Sciences. The first and only Ghanaian women to be awarded the prestigious TICAD7 scholarship, Betty went on to acquire a Master's degree in Biotechnology from the Egypt-Japan University of Science and Technology in Alexandria, Egypt. Today with help from Faculty for the Future Betty is pursuing a PhD in Biochemistry and Molecular Biology at the University of Miami Miller School of Medicine.

Betty Nugba's research in Miami will use state-of-the-art technologies to explore new means of inhibiting metastatic breast cancer. "This is a fantastic opportunity to train at a highly esteemed institution," says Betty, referring to the UofM's Sylvester Comprehensive Cancer Institute. "It will help me develop my expertise and present me with future funding opportunities and collaborations."

Upon completion of her PhD in 2028, Dr. Nugba will be returning to the University of Ghana as an assistant lecturer in the Biochemistry and Medical Laboratory Sciences departments, where she will be ideally positioned to mentor young Ghanaian women in their pursuit of STEM education and careers. "I will be visiting schools in villages and underprivileged communities like those I grew up in," says Betty. "I'll be challenging gender stereotypes and hopefully helping young women understand their power to overcome such stereotypes."



Developing a simulation-based model system for infectious disease outbreak.

Winnie Wezzie MKANDAWIRE



Home Country	Malawi
Degree	PhD student in Bioinformatics and Computational Biology
Expertise	Infectious disease modelling
Research Focus	Developing a simulation-based model system for infectious disease outbreak.
Host University	University of Massachusetts, USA
Fellowship Awarded	2024

It's not easy to turn the tables on fate. Just ask Winnie Mkandawire, who was born in a slum in Malawi, whose parents died when she was young, who was abandoned by relatives, and who endured physical, sexual and emotional abuse to a degree that would destroy the will of most people.

In spite of these and other hardships, Winnie excelled academically, and with support from teachers and charities she demonstrated intelligence and talent that no catastrophe could overturn. Driven by the preventable deaths of her parents—her father from pneumonia, her mother from malaria—and the deaths of her two best friends—one from both typhoid and tuberculosis, the other from pneumonia—Winnie developed a keen interest in biomedical biology and began aspiring to help vulnerable populations through scientific discovery, and to enhance the world's understanding of infectious diseases.

Winnie Mkandawire began higher education with a BSc in Biomedical Science from Malawi's Mzuzu University in 2014—a degree punctuated by honors including the Best Overall Academic Student in Basic Sciences and the National Mathematics Highest Score awards. While working as a guest lecturer at Mzuzu University starting

in 2015, Winnie next attained a Master's in Bioinformatics from the same institution in 2019.

Research has been a prime motivator for Winnie, who in 2021 earned a Master's in Bioinformatics and Computational Biology at Worcester Polytechnic Institute in the USA. Her research there was acknowledged by a Fulbright Foreign Student Scholarship Award, among others. Now, with help from Faculty for the Future, Winnie is pursuing a PhD in Bioinformatics and Computational Biology at the University of Massachusetts Medical School in the United States.

"This doctoral journey represents the culmination of my academic pursuits, allowing me to synthesize knowledge from various disciplines including data science, bioinformatics, epidemiology and human behavior to address complex scientific challenges," says Winnie.

Winnie Mkandawire plans to return to Malawi in 2026, whereupon she'll continue teaching and researching at Mzuzu University while single-handedly raising her young son. She recognises the importance of being a visible role model to inspire and encourage girls and women to follow the STEM path. "I hope to become a beacon of inspiration and advocacy for young women interested in the sciences."

Lignocellulosic biomass valorization (NB only Dr Kane's previous PhD, completed in 2022, is listed on web)

Dr. Aissata Ousmane KANE

Home Country



rionio Godina y	Corregar
Degree	Degree post-doctoral research in materials science.
Expertise	Sustainable energy materials
Research Focus	Lignocellulosic biomass valorizationn
Host University	University of Grenoble, France
Fellowship Awarded	2024

Senegal

Growing up in a small village in northern Senegal with a natural aptitude for STEM subjects might lead to any number of career options. In the case of Aissata Kane it has lead to a deep interest in the recycling of plant waste and the production of renewable energy with which to fill Senegal's gap in electricity production—not to mention a probable teaching position at her country's best-known university.

Aissata's trip down the STEM path began in 2011 with a BSc in Physics and Chemistry at Senegal's University Cheikh Anta Diop (UCAD), where she also later locked down both Master's and PhD degrees in Materials Science and Engineering. Not content with a single doctorate, in 2022 she obtained a second PhD, in Biomolecular Physics from the University of Sao Paolo in San Carlos, Brazil. With Faculty for the Future's help Aissata will now pursue further post-doc research at the University of Grenoble in France.

Dr. Kane's research in France will focus on the valorization of lignocellulosic biomass. She explains that biomass typically has two components—carbohydrates (cellulose and hemicellulose) with which bioethanol can be produced, and lignin, which has not been valorized up to now but which holds potential as a source of sustainable energy materials.

From her position as a researcher and assistant lecturer in Physics at UCAD, to which she will return from Grenoble in 2025, Aissata will continue her longtime effort to boost the number of girls and young women interested in STEM studies and careers. "I am a good example," says Aissata. "Girls need to know that they too can reach the top."



Use of supplementary cementitious materials (SCMs) as a partial replacement for cement in the design of resource-efficient Ultra-High-Performance Concrete (UHPC)

Aagya DAHAL



Home Country	Nepal
Degree	PhD student in Civil Engineering
Expertise	Engineering building materials
Research Focus	Use of supplementary cementitious materials (SCMs) as a partial replacement for cement in the design of resource-efficient Ultra-High-Performance Concrete (UHPC
Host University	University of Connecticut, USA
Fellowship Awarded	2024

How to react when you're the fourth in a family of four girls in a society like that of Nepal, where girls are valued less than boys? Aagya Dahal's answer was to make her parents proud by consistently finishing at or near the top of her class, determining for herself a career path that runs counter to society's expectations, and succeeding to a degree that has enabled her to pursue a PhD at an esteemed university in one of the world's most developed countries.

Following in the footsteps of her father, a civil engineer,
Aagya Dahal began her academic adventure by securing
a BSc in Civil Engineering at MS Ramaiah Institute of
Technology in Bangalore, India. She next earned a Master
of Technology of Civil Engineering (Engineering Structures)
at the National Institute of Technology in Warangal, India.
Now she will be pursuing a PhD in Civil Engineering at the
University of Connecticut (UConn) in the United States.

Aagya Dahal's research at UConn will focus on the use of supplementary cementitious materials (SCMs) as a partial

replacement for cement in the design of resource-efficient Ultra-High-Performance Concrete (UHPC). "The primary objective of this research is to understand the dispersion mechanism of micro-sized particles used in concrete mix design, and the second is to produce concrete with a lower carbon footprint and a lower detrimental impact on our environment," Aagya says.

The results of Aagya Dahal's study should have practical application in Nepal, which has roughly 70 cement production plants which, taken together, produce some 0.06% of global carbon dioxide emissions. "These emissions are huge for a country as small as Nepal," says Aagya. "Immediate action is critical."

Upon finishing her PhD in 2028, Aagya Dahal plans to become a professor in her chosen field at one of Nepal's best universities, where she is determined to serve as a role model for young women and do her share to fill the gender gap.

Clinical Research and Translational Medicine

Dr. Helena Agostinho BUQUE



Home Country	Mozambique
Degree	PhD student in Neurology
Expertise	Neurology
Research Focus	Clinical Research and Translational Medicine
Host University	University of Algarve, Portugal
Fellowship Awarded	2024

"I am a dreamer," says Helena Buque, a 36-year-old physician from Mozambique who attributes her success in life to hard work, perseverance, positive thinking and yes, to the fact that she actually had a dream and kept it close. "I believe in the power of dreams to motivate a person. If I hadn't dreamt of becoming a doctor, I wouldn't have become a doctor, but I am a doctor!" Can't argue with that!

Dr. Buque earned her degree in General Medicine over six years at the Catholic University of Mozambique, but then it was on to the next dream, which saw Helena undertake a specialty in Neurology at the same institution. She achieved that goal in 2023, while simultaneously earning a Master's degree in Public Health at Eduardo Mondlane University (EMU) in her country's capital. Helena is now pursuing a PhD in Neurology at the University of Algarve in southern Portugal.

Dr. Buque's research at EMU focuses on the clinical, demographic and prognostic factors of chronic central nervous system infections such as tuberculosis, neurocysticercosis and cryptococcal meningitis. She explains that in Mozambique, as in much of sub-Saharan Africa, infectious diseases of these types continue to be the leading cause of premature death, and that HIV-related immunosuppressants favour the emergence of such infections of the central nervous system.

"The results of my research should benefit patients by improving long-term clinical and functional outcomes, and should benefit the national healthcare system by improving clinical management protocols and reducing prolonged hospital stays."

Dr. Buque plans to return to her position in the Neurology department at the Central Hospital of Maputo where, as an educator of medical students, she expects to serve as a model of gender diversity and emphasize the crucial role that women plan in science and medicine.

Regenerative Endodontics

Dr. Arwa Al-Maswary



Home Country	Yemen
Degree	Post-doctoral research in regenerative endodontics
Expertise	Endontics
Research Focus	Regenerative Endodontics
Host University	University of Otago, New Zealand
Fellowship Awarded	2024

Civil war has been raging in Yemen for a decade now. Thousands have died, chaos has reigned. But none of this has stopped Arwa Al-Maswary, who was born and raised in Yemen's capital of Sanaa, from dedicating herself to the narrow field of study known as regenerative endodontics, wherein scientific research seeks new answers to the old problems of tooth pain, infection and decay. All of which may seem somehow incongruous, but think about it: Someday the civil war is going to end, but people will always have dental problems that need fixing. Arwa Al-Maswary would be the first to agree.

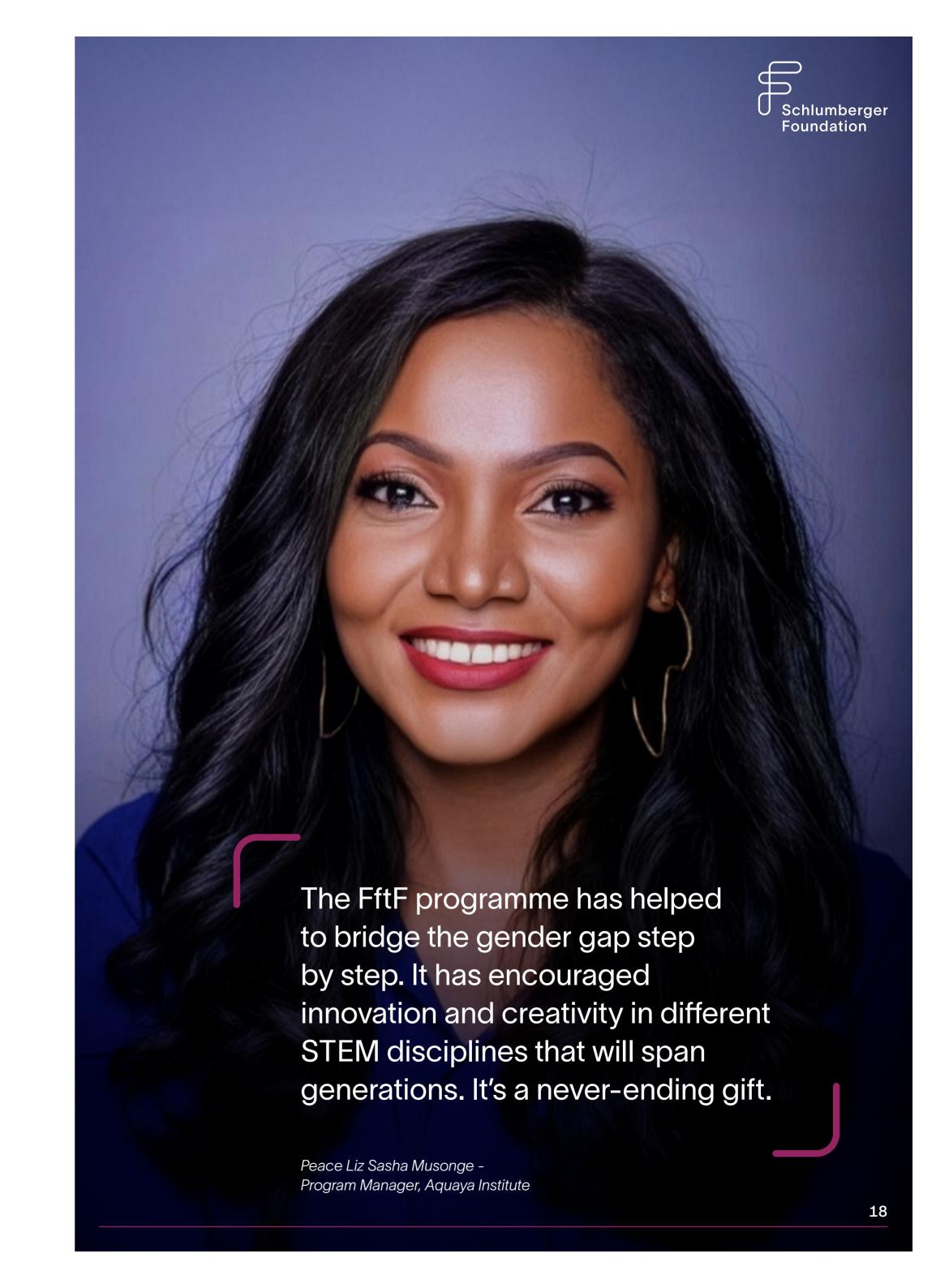
Arwa actually achieved her first degree in Dental Surgery, a BSc from Yemen's University of Science and Technology, in 2006, four years before the war started. She moved quickly thereafter, earning a Master's in Conservative Dentistry at Egypt's Tanta University, then a PhD in Dentistry from the University of Birmingham in England. Now with help from Faculty for the Future Arwa will conduct post-

doctoral research in regenerative endodontics at the University of Otago in New Zealand.

Root canals have been the traditional method for treatment of tooth pain and infection, but Arwa Al-Maswary explains that this method can result in multiple side effects, including permanent loss of vitality and/or permanent loss of the tooth itself.

"These problems are significantly addressed by modern regenerative approaches to revitalize the tooth and regain tooth strength," says Arwa. "But these new approaches still need refining. My research aims to enhance regenerative events and ultimately establish a revitalised tooth."

Currently assistant professor and lecturer in Endodontics at four major universities in Yemen, Arwa Al-Maswary will return to her home country in 2027, resuming her teaching and research positions, in which she is ideally situated to inspire young Yemeni women to follow in her STEM footsteps.



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