SCHLUMBERGER FOUNDATION
FACULTY FOR THE FUTURE
CAPE TOWN (SOUTH AFRICA) REGIONAL
FELLOWS & ALUMNAE FORUM 2016
“Through the Faculty for the Future scholarships, we aim at bringing down the economic barrier that would otherwise prevent outstanding women scientists from pursuing their education and life dream. Through this Faculty for the Future Forum, our ambition is to learn from the experience of the Alumnae back home in Africa, and ignite the power of each fellow within a network of likeminded women who have the potential to change the world through and beyond their own actions. Not only do Fellows and Alumnae bring innovation and knowledge to resolve world challenges in their countries of origin, they also offer an extremely powerful and inspiring guidance to generations to come through the role model that they are becoming or have become.”

Ms. Roseline Chapel

President,
Schlumberger Foundation
Contents

Cape Town (South Africa) 06–07
Regional Fellows & Alumnae Forum 2016

Agenda 08–15
Number of Faculty for the Future Fellows & Alumnae Attendees 16
Home Countries of Faculty for the Future Fellows & Alumnae Attendees 17
Speakers 18–51
Alumnae 52–75
Fellows 76–99
Cape Town (South Africa) Regional Fellows & Alumnae Forum 2016

The Schlumberger Foundation Faculty for the Future program was launched in 2004. Since the program was implemented, the Schlumberger Foundation hosted 13 meetings (Forums) for its Faculty for the Future community of Fellows and Alumnae in the United Kingdom (London and Cambridge), in France (Paris and Clamart), in the United States (New York, Cambridge and Houston) and in the United Arab Emirates (Abu Dhabi).

These in-person meetings are hosted once or twice a year in close proximity to and in association with the universities where the grantees are pursuing their studies. With approximately 30 to 70 grantees in attendance, a regional Forum provides an opportunity for participants to meet and share research and life experiences, to initiate international collaborations, to learn techniques to spread and communicate their research, to meet and network with well-known scientists and other accomplished leaders who might act as career mentors, and to discuss such things as work / life balance and other gender specific issues.

The ultimate goal is to create a community of women leaders in science, technology, engineering and mathematics (STEM) who will support the socio-economic development of their native regions by strengthening the faculties in their home universities through teaching and conducting research into relevant local challenges, inspiring other young women to pursue STEM careers, and use their scientific expertise to influence policy making and catalyze socio-economic development locally and internationally.
The Schlumberger Foundation is hosting its 14th Faculty for the Future Forum for the community in Cape Town, South Africa, from August 28th to 31st, 2016.

43 Fellows & Alumnae have been invited to attend the Forum.

During the Forum, attendees will have the opportunity to share their research, establish collaborations, discuss relevant topics and meet the Faculty for the Future community, Schlumberger Foundation Board members and staff, Schlumberger executives as well as high quality speakers.
Sunday August 28th, 2016: **Arrival & Ice Breaker**

**Venue:** Protea Hotel Victoria Junction  
Corner of Somerset and Ebenezer Road, Green Point, Cape Town 8002, South Africa  
Phone: +27-21-418-1234

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<tr>
<td>From 12:00</td>
<td>Hotel Lobby</td>
<td>Arrival of Participants &amp; Hotel Check-In</td>
<td>Faculty for the Future Fellows &amp; Alumnae &amp; Other Guests Staying at the Hotel</td>
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<td>(and from August 27th for some guests)</td>
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<td>14:30</td>
<td>Hotel Lobby</td>
<td>Departure for Team Building Activity (Walk to Green Point Park)</td>
<td>Faculty for the Future Fellows &amp; Alumnae</td>
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<td>15:00 - 17:00</td>
<td>Green Point Park</td>
<td>Team Building Activity</td>
<td>Faculty for the Future Fellows &amp; Alumnae</td>
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<td>18:15</td>
<td>Hotel Lobby</td>
<td>Departure for Ice-Breaker Dinner</td>
<td>Faculty for the Future Fellows &amp; Alumnae</td>
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<td>18:30 - 22:00</td>
<td>Gold Restaurant</td>
<td>Ice-Breaker Dinner</td>
<td>Faculty for the Future Fellows &amp; Alumnae</td>
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Please note the Team Building Activity & the Ice-Breaker Dinner are reserved for the Faculty for the Future Fellows & Alumnae.
**Monday August 29th, 2016: Forum DAY 1**

**Venue:** Graduate School of Business (GSB), University of Cape Town  
8 Portswod Road, V&A Waterfront, Cape Town, South Africa  
Phone: +27 21-406-1911

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| 09:00  | GSB: Board Room 2 | Welcoming Remarks                         | **Speaker:**  
| 09:30  |                   | **Ms. Roseline Chapel,** President, Schlumberger Foundation; Manager, Mergers & Acquisitions, Schlumberger North America  
|        |                   | **Moderator:**  
| 09:30  |                   | **Ms. Leah Hoosain,** Geoscientist, Schlumberger  
| 09:30  |                   | Learning Session: Mentoring & Networking  | **Speaker:**  
| 10:15  |                   | **Ms. Sarah-Anne Arnold,** MTN Solution Space Manager, UCT Graduate School of Business  
| 10:15  |                   | Coffee Break                              | **Speaker:**  
| 10:45  |                   | Keynote Talk: The Schlumberger Engagement in Science and Innovation  | **Speaker:**  
| 10:45  |                   | **Mr. Saheed Kenku,** Business Development Manager, Southern & Eastern Africa, Schlumberger; UCT Ambassador for Schlumberger  
| 11:30  |                   | Keynote Talk                              | **Speaker:**  
| 11:30  |                   | **Dr. Max Price,** Vice-Chancellor, UCT  
| 12:00  |                   | Acknowledgement of UCT as a Schlumberger Ambassador University  | **Participants:**  
| 12:00  |                   | **Ms. Roseline Chapel,** President, Schlumberger Foundation; Manager, Mergers & Acquisitions, Schlumberger North America  
| 12:15  |                   | **Mr. Saheed Kenku,** Business Development Manager, Southern & Eastern Africa, Schlumberger; UCT Ambassador for Schlumberger  
|        |                   | **Mr. Gerard Martellozo,** Chairman, Schlumberger Foundation; VP Human Resources, Schlumberger  
|        |                   | **Mr. Robert Onyejeckwe,** Sub-Sahara Africa GeoMarketManager, Schlumberger  
|        |                   | **Dr. Max Price,** Vice-Chancellor, UCT  

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<tr>
<td>12:30</td>
<td>Stonebreakers Restaurant</td>
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<tr>
<td>13:45</td>
<td>GSB: Board Room 1</td>
<td>Poster Session:</td>
<td>Research presentation by Faculty for the Future Fellows &amp; Alumnae</td>
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<td>15:00</td>
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<td>Fellows &amp; Alumnae (Group 1)</td>
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<td>15:00</td>
<td>GSB: Board Room 2</td>
<td>Coffee Break</td>
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<td>15:15</td>
<td>GSB: Board Room 2</td>
<td>Learning Session:</td>
<td>Speaker: Dr. Nico Jooste, Senior Director: International Education, Nelson Mandela Metropolitan University &amp; International Education Association of South Africa (IEASA)</td>
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<td>16:00</td>
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<td>Establishing International Collaborations in Higher Education. And Q&amp;A</td>
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<td>16:00</td>
<td>GSB: Board Room 2</td>
<td>Keynote Talk:</td>
<td>Speaker: Ms. Rachel Adams, Chief Research Specialist, Research Use and Impact Assessment (RIA) Unit, Human Sciences Research Council (HSRC), South Africa</td>
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<td>16:00</td>
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<td>Investing in Women Education as a Development Factor: Gender Equality &amp; Human Rights. And Q&amp;A</td>
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<td>Shuttle Departure to Hotel</td>
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<td>Shuttle Departure to Gala Dinner</td>
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<td>19:00</td>
<td>Belmont Mount Nelson Hotel:</td>
<td>Gala Dinner</td>
<td>Remarks: Ms. Lindiwe Mekwe, Acting CEO, Petroleum Agency South Africa</td>
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<td>76 Orange Street, Cape Town,</td>
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<td>Host: Mr. Gerard Martellozo, Chairman, Schlumberger Foundation; VP Human Resources, Schlumberger</td>
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**Tuesday August 30th, 2016: Forum DAY 2**

**Venue:** Graduate School of Business (GSB), University of Cape Town  
8 Portswood Road, V&A Waterfront, Cape Town, South Africa  
Phone: +27 21-406-1911

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| 8:30   | GSB: Board    | **Learning Session:**  
          | Room 2                                   | What are my Tools & Levers as a Scientist to Raise Visibility Back Home Based on my Recently Acquired Credibility?  
          | 09:15         | **Speaker:** Prof. Charlene Africa, Faculty of Natural Sciences, University of the Western Cape (and OWSD member)  
| 09:15  | GSB: Board    | **Learning Session:**  
          | Room 2                                   | Science for the People: Creating Content and Promoting Public Engagement in Africa  
          | 10:00         | **Speaker:** Ms. Michelle Roseborough, Visceral Podcast  
| 10:15  | GSB: Board    | Coffee Break                              |                                                                      |
| 10:15  | Room 2        | **Learning Session:**  
| 11:00  | Room 2        | **Post Session:** Fellows & Alumnae (Group 2) | Research presentation by Faculty for the Future Fellows & Alumnae  
<p>| 11:00  | GSB: Board    |                                            |                                                                      |
| 12:30  | Stonebreakers | Buffet Lunch                              |                                                                      |
| 13:30  | Restaurant    |                                            |                                                                      |</p>
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| 13:30 | GSB: Board Room 2 | **Panel Session:** How to Make an Impact on Women in Science | **Panel Leader:**
**Emeritus Professor Jennifer Ann Thomson,**
UCT (and OWSD Chair)
**Speakers:**
**Prof. Charlene Africa,** Faculty of Natural Sciences, University of the Western Cape (and OWSD member)
**Dr. Elizabeth Van Der Merwe,** Cape Chair, South African Women in Science & Engineering (SAWISE)
**Ms. Anne Githuku-Shongwe,** Representative, UN Women South Africa Multi-Country Office
**Prof. Anusuya Chinsamy-Turan,** Palaeobiologist, Department of Biological Sciences, UCT |
| 14:45 | GSB: Board Room 2 | **Workshop:** How to Make an Impact on Women in Science | **3 Groups:**
**Through Academia:** Leader: Dr. Elizabeth Van Der Merwe, Cape Chair, South African Women in Science & Engineering (SAWISE) / Rapporteur: Dr. Cecilia Akintayo, Associate Professor, Industrial Chemistry Department, Federal University Oye, Oye Ekiti, Nigeria
**Through Policy Making:** Leader: Emeritus Professor Jennifer Ann Thomson, UCT / Rapporteur: Dr. Rebecca Nakatudde, Assistant lecturer, Department of Radiology, Makerere University, Uganda
**Through Entrepreneurship:** Leader: Ms. Monkgogi Othogile, Researcher, D-Lab / Rapporteur: Dr. Aemere Ogunlaja, Lecturer, Redeemer’s University, Ede, Osun State, Nigeria |
| 16:15 | GSB: Board Room 2 | Coffee Break | |
| 16:30 | GSB: Board Room 2 | **Groups Presentations and Wrap-Up by Moderator** | **Moderator:**
**Engineering Chinyama Annatoria,**
Lecturer, Department of Civil & Water Engineering, National University of Science & Technology, Bulawayo, Zimbabwe |
| 17:30 | GSB: Lobby | Shuttle Departure to Hotel | Free Night |
Wednesday August 31th, 2016: **Forum DAY 3**

**Venue:** Workshop 17  
17 Dock Rd, V & A Waterfront, Cape Town, 8002 South Africa  
Phone: +27-010-900-2000

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| 8:30 | Workshop 17 | **Learning session:** How to Raise Funds & Write Grants And Q&A | **Speaker:**  
  *Ms. Tamsin Jones,* Founding Member, Workshop 17 |
| 09:15 | Workshop 17 | **Keynote Talk:** the Role of the Media in Relation to Science, Technology and Development | **Speaker:**  
  *Dr. Iqbal Surve,* Executive Chairman, The Independent |
| 10:00 | Workshop 17 | Coffee Break | |
| 10:15 | Workshop 17 | **Panel Session:** STEM Entrepreneurship (& Intellectual Property & Protection of Ideas) | **Panel Leader & Moderator:**  
  *Mr. Julius Akinyemi,* Entrepreneur in Residence, MIT Media Lab  
**Speakers:**  
  *Dr. Francois Bonnici,* Director, Bertha Centre for Social Innovation & Entrepreneurship  
  *Dr Mary-Jane Bopape,* Researcher, Council for Scientific and Industrial Research, South Africa  
  *Ms. Jenny Cargill,* Special Advisor to the Premier, Western Cape Government, South Africa  
  *Dr. Iqbal Surve,* Executive Chairman, The Independent |
| 11:30 | Workshop 17 | **Learning Session:** Equipping & supporting next generation of STEM Leaders | **Speaker:**  
  *Dr. Nina Dudnik,* Founder and CEO, Seeding Labs |
<p>| 12:45 | Workshop 17 | Buffet Lunch | |</p>
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| 13:30 | Workshop 17 | **Keynote Talk:** Being a Role Model in Science: My journey towards the design and production of extremely drought tolerant crops **And Q&A** | **Speaker:**  
*Prof. Jill Farrant*, Professor of Molecular and Cell Biology, UCT, SARChI in “Systems biology studies on plant desiccation tolerance for food security” |
| 14:15 | Workshop 17 | **Panel Session:** How to Overcome the Barriers upon Home Return and Adapt to my New Environment | **Speakers:**  
*Dr. Nana Ama Browne Klutse*, Research Scientist, Ghana Atomic Energy Commission & Manager, Remote Sensing and Climate Center, Ghana Atomic Energy Commission  
*Dr. Chao Mbogo*, Researcher, Mentor, Lecturer of Computer Science at Kenya Methodist University  
*Dr. Judith Odhiambo*, Lecturer, Kisii University, Kenya  
*Dr. Sithabile Tirivarombo*, Lecturer, Botswana International University of Science & Technology, Botswana  
**Moderator:**  
*Dr. Tahiana Ramananantoandro*, Associate Professor, School of Agronomy, University of Antananarivo, Madagascar |
| 15:30 | Workshop 17 | **Round Table Discussion:** Reducing the Gender Gap in Science | **Moderators:**  
*Dr. Nina Dudnik*, Founder and CEO, Seeding Labs  
*Dr. Elizabeth Van Der Merwe*, Cape Chair, South African Women in Science & Engineering (SAWISE) |
| 16:30 | Workshop 17 | **Wrap up and feedback** |  |
| 17:00 | Workshop 17 |  | Closing Drinks at Workshop 17 |
Number of Faculty for the Future Fellows & Alumnae Attendees

- Nigeria: 07 Alumnae, 03 Fellows
- Kenya: 03 Alumnae, 05 Fellows
- Zimbabwe: 02 Alumnae, 04 Fellows
- Ghana: 04 Alumnae, 01 Fellows
- Uganda: 01 Alumnae, 03 Fellows
- Tanzania: 02 Alumnae, 01 Fellows
- Cameroon: 01 Alumnae
- Lesotho: 01 Alumnae
- Madagascar: 01 Alumnae
- Malawi: 01 Alumnae
- Rwanda: 01 Alumnae
- South Africa: 01 Alumnae
- Zambia: 01 Alumnae
Home Countries of Faculty for the Future Fellows & Alumnae Attendees

Nigeria 10
Cameroon 01
Uganda 04
Kenya 08
Tanzania 03
Zambia 01
Rwanda 01
Malawi 01
Madagascar 01
Zimbabwe 06
Ghana 05
South Africa 01
Lesotho 01
Malawi 01
Madagascar 01
Guest Speakers
Mrs. RacheL ADAMS

Mrs. Rachel Adams is a Chief Researcher in the Research Use & Impact Assessment (RIA) Unit at the Human Sciences Research Council (HSRC).

Her current research interests include transparency and accountability; the discourse of human rights; women’s rights and feminism; and the effects of privatisation and neo-liberalism. Adams previously held the position of senior researcher for Civil and Political Rights at the South African Human Rights Commission, where her work included drafting submissions on proposed legislation to Parliament, and writing reports on the state of implementation of human rights to the United Nations.

Adams completed a Masters of Philosophy in International Human Rights Law, with distinction, and is currently finalising her PhD at the University of Cape Town under a merit-based scholarship. Her thesis is a critical appraisal of the modern notion of transparency. Some of Adams other achievements includes being an executive member of the Access to Information Working Group of the African Network of Constitutional Lawyers; and playing a key role to the establishment of a newspaper in Ghana and Liberia, entitled The Vision, which focused on human rights and AIDS awareness for Liberian refugees.
Prof. Charlene W.J. AFRICA

Charlene W.J. Africa is a Professor in the Department of Medical Biosciences at the University of the Western Cape (UWC), South Africa (SA). She obtained a diploma in Clinical Pathology and a specialist diploma in Medical Microbiology from the University of Cape Town Medical School, in conjunction with the Groote Schuur and Somerset Hospitals, in 1975. Charlene was subsequently awarded an honorary BSc (Hons) in Oral Biology by the University of Witwatersrand, where in 1987 she gained an MSc in Dentistry. In 1992 she completed a PhD in Medicine at the University of London, United Kingdom.

Charlene has worked in industry and private pathology as well as academic research institutes in Cape Town, Durban, London and Kansas City, United States. At UWC she has served three terms in the position of Deputy Dean (Gender and Equity) in its Faculty of Science and is Cluster Head for Medical Microbiology in its Department of Medical Biosciences. Her lecturing experience includes 3rd, 4th and 5th year dental students, 1st and 2nd year oral hygienists, 3rd year and Honors Medical Biosciences students, and the Masters program of Women and Gender studies in the University’s Arts Faculty.

Awards include research scholarships from the British Council, Medical Research Council, National Research Foundation, Africa Educational Trust, Sugar Association of SA, Dental Association of SA and United Nations. Charlene is author/co-author of 66 peer-reviewed publications and conference proceedings and has given 41 national and 38 international conference presentations. She is a leader in multidisciplinary research covering female morbidity due to opportunistic endogenous infections and their impact on pregnancy outcomes and subsequent neonatal morbidity and mortality. Charlene has participated in many workshops and conferences on gender and equality. She is currently an executive member of the Academy of Science of South Africa (ASSAF)-hosted Organization for Women in Science for the Developing World (OWSD) and receives frequent invitations to speak at scientific and women’s conferences.
Mr. Julius O. AKINYEMI

Julius is the Founder and CEO of UWINCorp Inc. (The Mobile Commodity Exchange)—an initiative of Unleashing the Wealth of Nations he started at Massachusetts Institute of Technology’s Media Lab.

Julius is also the Entrepreneur-In-Residence at MIT’s Media Lab in Cambridge, Massachusetts. Prior to his residency at MIT he was Global Director of Emerging Technologies for PepsiCo Inc. Prior to joining PepsiCo, he was the Senior Vice President of Wells Fargo Bank in San Francisco for Emerging Technologies and the Wireless Business Technologies for Mobile Banking. At Wells Fargo, he served in various areas of the bank including finance, systems, retail and commercial banking. Julius has been involved in various industry groups including the US Mobile Finance Steering Committee of the Financial Services Technology Consortium and Bank Information Services (BITS) Financial Services Round-table. He was also involved in the Consumer product Group’s RFID technology item tags project.

Julius was an Executive Advisory Board member of Cingular/AT&T Wireless as well as Verizon Wireless companies. Previously he was Director of Finance and MIS for Pan American World Airways (Western Europe Region) based in Paris, France. Julius obtained his MBA from Ohio University; he holds a couple of intellectual property patents.

Julius is also the founder of Applied Technology Solutions, which provides low-cost Internet access in developing countries, and co-founder of Sweden-based ICT4Africa. He was a member of the working team for ICT to eliminate poverty at the UN. He has an MBA from Ohio University. Julius hold a couple of Patents.
Ms. Sarah-Anne ARNOLD

Sarah-Anne is the Manager of the MTN Solution Space at the University of Cape Town Graduate School of Business.

She developed and established the Solution Space in 2014, who’s mandate is to create a platform for students, entrepreneurs, researchers, faculty and innovative partners to envision, build and scale new solutions. It’s strategic programmes include a Master of Philosophy specialising in Inclusive Innovation—an interdisciplinary research-based degree that leads to the practical prototyping of new business models aligned to African markets. Sarah-Anne is responsible for the Solution Space overall strategy, management, external relations and business development.

Sarah-Anne also consults and provides strategic advice to a variety of clients, from private investors with feasibility studies, to corporates on social innovation and entrepreneurship. Originally trained as a designer, Sarah-Anne’s previous experience was in the Media and Publishing industry within research and development, new product planning and project management for the Penguin Group London.

Sarah-Anne holds an MBA from University of Cape Town Graduate School of Business, a BA (Hons) from Central Saint Martins, University of London.
Dr. François BONNICI

François is the founding Director of the Bertha Centre for Social Innovation and Entrepreneurship at the University of Cape Town Graduate School of Business.

The Bertha Centre has rapidly become the leading academic centre in Africa dedicated to advancing social innovation in Africa. The core approach of the Bertha Centre has been to uncover, pioneer, connect, social innovations and social entrepreneurs that work to generate inclusive opportunities and advance social justice in our country and continent.

In the four years since its inception, the Bertha Centre has profiled over 300 innovative models, programmes and solutions; convened over 6,000 citizens and practitioners across sectors; has tested the feasibility of innovative social solutions ranging from social impact bonds, social franchising, and social innovation hubs; and produced numerous knowledge outputs & publications and awarded over R4m in scholarships to African students. The Centre has played a leading role in curriculum transformation, making it the first business school in the world to put social impact and innovation at the heart of its work, with production of many African case studies. Social Innovation & Entrepreneurship is now one of the business school’s three strategic themes and in 2016 the business school has opened a satellite campus in Philippi Village.
Since leaving medical school at UCT as the Gold Medal graduate, he completed his Masters in Public Health at the London School of Hygiene and read for a MBA at the University of Oxford, again graduating top of his class, followed by a Masters in Leadership through Columbia, Wharton & INSEAD, convened by the World Economic Forum.

He has had a career spanning 18 years working in clinical medicine, humanitarian & development programmes, public private partnerships and innovative social change projects with civil society, foundations, governments, multilaterals, business and social investors. He has been recognised as a Archbishop Tutu African Leadership Fellow, Rhodes Scholar; Global Leadership Fellow of the World Economic Forum; and was awarded the inaugural Social Innovation Leadership Award at the African Leadership Awards in 2015, and the UCT Social Responsiveness Award in 2015.
Dr. Mary-Jane BOPAPE

Mary-Jane Bopape is a senior researcher at the Centre for High Performance Computing (CHPC) which is managed by the Meraka Institute of the Council for Scientific and Industrial Research (CSIR).

Her work is on the numerical modelling of the atmosphere at different spatial and time scales including climate change, as well as the improvement of parameterisation schemes that represent subgrid processes in atmospheric models. She is also responsible for supporting some of the earth system scientists who use the CHPC cluster, and running training workshops to teach softwares used in atmospheric science. She lectures a BSc Hons (Meteorology) cloud dynamics module at the University of Pretoria on a part time basis.

She holds a PhD (Meteorology) degree from the University of Pretoria which she obtained in 2013. She worked as a Postdoctoral Research Fellow at the University of Reading in the UK for a two year period which ended in January 2016. She is a co-recipient of the 2008 World Meteorological Organization research award for young scientists.

She served on the Executive Council of the South African Society for Atmospheric Sciences for two terms.
Ms. Jenny CARGILL

Jenny Cargill is the Head of the Premier’s Delivery Support Unit, in the Western Cape Government, with responsibility for six key strategic priorities (referred to as game changers). These have a strong focus on the economy and the youth, for example, energy security and eLearning.

Prior to this, she was the Premier’s advisor on the Green Economy. Before joining the Western Cape Government in 2011, she published a book entitled *Trick or Treat: Rethinking black economic empowerment*.

She is also a protagonist in the award winning film on the struggle against apartheid, *Memories of Rain*. After the first democratic elections in 1994, she founded a think tank, BusinessMap SA, which monitored the economic transition as South Africa sought to integrate into the global economy; and specialized in black economic empowerment investments.

Ms. Jenny Cargill
Special Advisor to the Premier
Western Cape Government
Cape Town, South Africa
Ms. Roseline CHAPEL

Roseline is Manager Schlumberger Mergers & Acquisition—North America, based in Houston, Texas, USA. Prior to her current assignment, she was VP Finance at M-I SWACO in Houston, and deeply involved in its integration into Schlumberger following the acquisition of the Smith International group in 2010.

Roseline joined Schlumberger in 1988 in the Internal Audit team in Paris, France. She has since held a variety of leadership positions in Tax, Finance and Management. She was based in Paris, France, for the first half of her career, with responsibilities as Tax Manager Schlumberger Technologies Europe, VP Finance Well Services Europe and Africa, VP Finance Wireline & Testing, and General Manager CGST-SAVE. In 2001 she moved to Houston as VP Finance for Oilfield Services North and South America, a position she held until 2004. From 2004 to 2006, she was VP Finance Oilfield Services based in Paris, France. From 2006 to 2010, she was Schlumberger Limited Director of Internal Audit in Houston; in this position, she was also in charge of career development of the Schlumberger Finance personnel. She was also a member of the Schlumberger Gender Balance Steering Committee, a group formed to identify and understand the specific issues affecting career development of women in Schlumberger, and to advise management in designing and implementing policies and practices to overcome the obstacles faced by women in Schlumberger in their pursuit of long and challenging careers.
Roseline holds a Master in Management from Ecole Superieure de Commerce et d’Administration des Entreprises in Marseilles, France, of which she is a mentor helping young graduates make career and life decisions. She is on the board of the French-American Chamber of Commerce which supports French entrepreneurs and businesses develop their economic activity in the Houston area, where she also heads its membership committee. She joined the board of the Schlumberger Foundation in 2015 to continue its development as a unique vehicle deeply anchored in Schlumberger values of Science, Innovation and People, and ensure it continues to change the world through its original positioning that women and science constitute an invincible combination able to tackle development in economically and socially challenged regions.
Professor Anusuya Chinsamy-Turan is a palaeobiologist based in the Department of Biological Sciences the University of Cape Town.

She is a global expert on the microscopic structure of the bones of extinct and extant vertebrates. Her work has been recognized by several highly acclaimed awards: For example, she was recently awarded an NRF A-rating (which recognizes her as a world leader in her field), and the world Academy of Science’s 2013 Popularization of Science and Public Understanding Award for Sub Saharan Africa.

In 2005 she won the South African Woman of the Year Award, which acknowledges her contribution to science both in terms of research and science communication to the wider public. In 2005 she also won the “Distinguished Women Scientist Award” from the South African Department of Science and Technology. Professor Chinsamy-Turan has published extensively—both in international scientific journals (including 4 publications in Nature, 2 in Nature Communications, and recently one in Nature’s Scientific Reports), as well as in the popular press. She is former President of the Association of South African Women in Science and Engineering (SAWISE), former Deputy President of the Academy of Science of South Africa, and she has also served as Director of Iziko Museums Natural History Collections, and as Chair of the Advisory Board of Scifest Africa (the biggest science festival in Africa), and as Chair of the Department of Biological Sciences at UCT.
She is currently a board member for the US-based Jurassic Foundation, and Chair of the Society of Vertebrate Paleontology’s Romer-Simpson Prize Committee. She is a Fellow of the Royal Society of South African, the University of Cape Town, and the World Academy of Science.

Dr. Nina DUDNIK

Nina Dudnik is the founder and CEO of Seeding Labs, a nonprofit organization and USAID partner that ensures scientists in the developing world have the tools, training and network to pursue life-changing research.

Nina earned a Bachelor’s degree in biochemistry from Brown University and a PhD in molecular biology from Harvard University, and worked in agricultural development with the Consultative Group for International Agricultural Research in Italy, Syria, Kenya and Cote d’Ivoire.

Nina has been a Fulbright scholar, an Echoing Green fellow, a TED Fellow and a Boston Business Journal 40 Under 40 awardee, and has been featured on National Public Radio’s All Things Considered, the Boston Globe, WIRED, The Kenyan Standard and Elle Magazine.
Prof. Jill FARRANT

Jill Farrant is a Professor and holds a DST-NRF South African research chair in Systems Biology Studies on Plant Desiccation Tolerance for Food Security within the Department of Molecular and Cell Biology, University of Cape Town.

She is an acknowledged world leader in the field of plant desiccation tolerance, working on both seeds and resurrection plants. Her fundamental research involves use of a systems biology approach (using techniques in molecular biology, biochemistry, cell biology and physiology) to understand the protection mechanisms laid down in orthodox seeds and vegetative tissue of resurrection plants, with the ultimate aim of using key protectants identified to make drought tolerant crops.

She has received considerable recognition for her research, obtaining the President’s award in 1993 and NRF A rating in 2009 which she still holds. Some of her awards include the SA Biological Society medal for the best MSc in the country (1986); the South African Association’s bronze (1993) and Silver (2007) medals for excellence in Botany; the Oppenheimer Memorial Trust Fellowship (2009); the Department of Science and Technology Distinguished Women in Science award (2010), the L’Oreal-UNESCO award in life sciences (2012) that recognizes women whose exceptional careers in science have “opened up new and sometimes revolutionary ways of improving human well-being” and recently the EPFL WISH Foundation Erma Hamburger award (2015) for outstanding research and for being a role model to botanists world wide.

She is a member of the Academy of Sciences of South Africa (MASSAf) Fellow of the Royal Society of South Africa (RSSAf), University of Cape Town, the British Royal Society of Biology and the Third World Academy of Sciences (TWAS).
Jill Farrant is an associate editor for Plant Growth Regulation and review editor for Functional Plant Biology. She collaborates widely with researchers locally and internationally. Fiercely passionate about academia, she has graduated 20 PhD and 32 MSc students and currently is supervisor of 16 PhD and 4 MSc students. She has been highly active in the mentoring of students and facilitating funding for them via the Equity Development Programme in the Department of Molecular and Cell Biology at UCT, and recently by acting as Jury president for L’Oreal- UNESCO Sub-Saharan Africa Fellowships.

Nationally, Jill Farrant has been named in a City Press compilation of 100 World Class South Africans, and among the 50 Incredible Woman shaping the African continent. She has been featured in the SABC3 TV programs “I am Woman, Leap of Faith”, “21 ICONS”, a showcase for the South African spirit in which tribute is paid to “the men and women who have helped to shape our country and, indeed, our world” and the BBC series “the genius behind” in which “the most amazing and sometimes little known technological and scientific breakthroughs of modern times, and the innovative minds behind them” are portrayed.
Ms. Anne GITHUKU-SHONGWE

Anne Githuku-Shongwe is the newly-appointed Representative for UN Women’s South Africa Multi-Country Office (SAMCO), which is responsible for women’s empowerment and gender equality in Botswana, Lesotho, Swaziland and Namibia as well as South Africa, where the office is based.

Anne is an award-winning social entrepreneur and founder of youth-development digital innovation organization Afroes. She has a Masters’ degree in International Development from The American University; a postgraduate certificate in Social Innovation from the University of Cape Town, Graduate School of Business and a certificate in The Art of Large Scale Systems Change for Social Entrepreneurship from Harvard University.

Anne also brings to her role 20 years of experience as a senior international development professional with the United Nations Development Programme, during which she pioneered innovative and successful approaches to combating HIV and AIDS as well as Public Sector Capacity Development.
Elizabeth is the Co-Founder & CEO of codeX, which is growing the next generation of African coders. Software developers with strong product focus and problem solving skills are what Africa needs as its billion people go online, yet they are in desperately short supply. codeX finds the best raw talent and trains them by doing real projects in a work-like environment, building personal and professional development into the curriculum. codeX then works with employers to place coders in jobs and also hires them to do paid development work and mentor the next generation.

Elizabeth has been lucky enough to be obsessed with her twin passions, technology and Africa, on TV. A veteran journalist and executive producer, she has made hundreds of stories, shows, and series on technology and innovation for Bloomberg Television in New York. She has also traveled around the continent telling stories of the entrepreneurs, investors, and companies building Africa’s digital future for Bloomberg TV Africa.

Elizabeth is intimately involved in the African tech ecosystem, writing on tech in Africa for Quartz, teaching a course for the University of Southern California on South Africa’s transition to digital media, and serving on the Executive Committee of Silicon Cape.

Elizabeth has a deep and longstanding passion for economic development in Africa, and believes arming people with the skills and tools to build creative products and companies is the key to the continent’s future.
Ms. Leah HOOSAIN

Geophysicist at Schlumberger Software Integrated Solutions, Cape Town, South Africa.

Leah has worked in the industry for 5 and half years over Sub-Saharan Africa. In addition to her technical role at Schlumberger, Leah is also the University Initiatives coordinator for Schlumberger donations made to universities over the east and southern Africa region.

Ms. Leah Hoosain

Geophysicist

Schlumberger Software Integrated Solutions

Cape Town, South Africa
Ms. Tamsin Jones

Co-founder

Workshop 17

Cape Town, South Africa

Tamsin is the co-founder of Workshop 17, a tech innovation and entrepreneurship hub in Cape Town, and a senior strategy director.

She is known for originating, designing and developing projects and relationships that have resulted in successful high-impact initiatives or investments, and believes best way to predict the future is to create it. With clients across the globe that span corporates, peak bodies, impact and private equity funds, governments, new ventures and non-profits, Tamsin’s work focuses on southern and East Africa on big ideas that can make a difference. By combining commercial and operational expertise with social and corporate innovation skills, she helps create new ventures that sustain growth and generate long term shareholder value.

Tamsin holds an MBA from the University of Oxford with a merit scholarship awarded by the Skoll Centre for Social Entrepreneurship and is a senior advisor to The Africa List, a select private sector CEO network in East and Southern Africa, powered by the UK’s development finance institution, CDC Group.
Dr. Nico JOOSTE

Dr. Nico Jooste is the Senior Director: International Education at the, Nelson Mandela Metropolitan University. He acted in this position since July 2000. He was responsible for the development of the Office for International Education at the University with the philosophy of Comprehensive Internationalisation as the guide.

He is involved in the re-thinking of Internationalisation Globally and arranged the Global Dialogue on the future of Higher Education Internationalisation in January 2014 in Port Elizabeth, South Africa. This event brought together all the major role players in Higher Education Internationalisation. He is currently also the Deputy President of the International Education Association of South Africa.

Prior to his appointment at the NMMU (initially UPE before the merger) he was the Executive Director of Eastern Cape Higher Education Association from June 1998 to June 2000. He was also the Acting University Registrar of the University of Fort Hare from Jan 1995–December 1996 and Deputy Registrar Academic from Jan 1993.

He was Lecturer and Senior Lecturer in the Department of History and Economic History, University of Fort Hare from. February 1982–February 1992. Areas of specialization: Eastern Cape History and International relations of South Africa during the period of the Cold War.

Published widely on South African History as well as on Higher Education Management and presented numerous papers at local and International Conferences on both topics. He holds a PhD in History.
Saheed Kenku is the Business Development Manager for Southern & Eastern Africa, a position he assumed in April 2015. In this role Saheed is responsible for the overall management of Schlumberger in the region. He has over 19 years experience in the international oil & gas industry, all within the Schlumberger group.


Saheed holds a Bachelors degree in Chemical Engineering degree from the University of Birmingham and a Masters degree in Petroleum Engineering from the Imperial College of Science, Technology and Medicine, University of London, UK.
Mr. Gérard MARTELLOZO

Gérard Martellozo is vice president, human resources (HR) for Schlumberger Limited, located in London, United Kingdom. Prior to this appointment he was senior advisor to the chief executive officer of Schlumberger, based in Houston, Texas, United States.

Gérard joined Schlumberger in 1979 after completing a Masters of Engineering at the Ecole Nationale Superieure de l’Aeronautique et de l’Espace (Sup’Aero), France. He began his oilfield career as a wireline field engineer, quickly progressing into operations management with assignments in Spain, Italy, France, Nigeria, Algeria and Venezuela. He then transitioned into personnel, and during the next twenty years worked with most of the company’s oilfield services business sectors. From 2010 to 2012 he was personnel manager of the company’s drilling group, and during this time was responsible for integrating the organizations of several major oilfield services companies purchased by Schlumberger including Smith, M-I and Geoservices.

He is one of the founders of Partnerjob.com, for which he has served as treasurer since 2003. This is a non-profit association that includes several major corporations and organizations that value global mobility and spouse support as members. It aims to facilitate the geographical mobility of dual-career partners by offering a worldwide database where employers can connect with international candidates and where talented candidates can find global job opportunities. Gérard joined the board of the Foundation in March 2014 to continue to lend his support to the Schlumberger long-term commitment to promoting women in technology in the world at large.
Ms. Lindiwe Portia MEKWE

Mrs Lindiwe Portia Mekwe is married to Sydney Mekwe and is blessed with two sons and a lovely daughter.

Her educational qualifications post matric is a B Proc degree which she attained from the University of the North in 1994, In 2004 she attained an LLB degree with the University of Pretoria and her LLM in 2016 from the University of the Western Cape.

1. Career Progression
   - 2013 to date—Acting CEO of the Petroleum Agency SA
   - 2009–to 2013, General Manager: Regulation Division at the Petroleum Agency SA, responsible for the regulation of the exploration and production of the oil and gas.
   - 2008–2008, Chief Director: Mineral and Mining Policy, managing the Mineral and Mining legislative process within Department of Minerals and Energy.
   - 2003–2006, Deputy Director: Mineral Recording, responsible for recording, updating and maintenance of all applications pertaining to prospecting and mining of minerals and petroleum resources in the National Mining Promotion Systems.
2. Actively contributed to the drafting of the following Documents

- Diamonds Amendment Act, 2005 (Act no. 29 of 2005),
- Diamonds Second Amendment Act, 2005 (Act No. 30 of 2005)
- Precious Metals Act, 2005 (Act No. 37 of 2005),
- Diamonds Export Levy Bill,
Ms. Monkgogi OTLHOGILE

Monkgogi Othhogile (who goes by MK) was born and raised in Botswana, where her work is based.

Her research is based on impact evaluations for rural electrification and she has worked with the Botswana Rural Electrification Programme for the past year on an evaluation of their grid-based program. However, she has a passion for renewable energy and has worked with several California-based solar companies as well as Power4All; a campaign targeted at bringing awareness to the needs of the two billion energy poor people around the world and the need for sustainable, efficient and affordable renewable energy in the face of the climate’s and our own health.

She has also worked with International Development Innovation Network (IDIN), a program led by MIT’s D-Lab, as an organizer for a development summit and innovation center that aims to improve the livelihoods of the desert dwellers in Botswana.

Since graduating with her Masters in May, MK is continuing with her research as well as spearheading on the ground operations of Enaccess, a solar-water irrigation company (water-energy nexus) started by her and fellow Berkeley students.
Dr. Max Price took up the post of Vice-Chancellor of the University of Cape Town in July 2008. From 1996 to 2006, he was dean of the Faculty of Health Sciences at the University of the Witwatersrand. As dean, he spearheaded the introduction of a new medical curriculum, led the transformation of the faculty, initiated a variety of courses and programmes and established the first University-owned private teaching hospital and also a major clinical research company.

After obtaining his medical degree from University of the Witwatersrand, Dr Price was awarded a Rhodes Scholarship. He studied philosophy, politics and economics at Oxford. Following clinical work in academic and rural hospitals in SA, he took a Masters degree at the London School of Hygiene and Tropical Medicine continuing there as a Research Fellow in Health Economics. He joined the Centre for Health Policy at Wits University in 1988 as a senior researcher, and become its director in 1992.

Dr Price’s research has covered the political economy of health in SA, health economics, rural health services, health systems research and health science education. He is an Honorary Fellow of the Colleges of Medicine of South Africa in recognition of his leadership role in public health medicine and medical education.
Ms. Michelle ROSEBOROUGH

Michelle Roseborough is the founder and host of Visceral Podcast.

Visceral Podcast is a media platform that promotes women’s achievements in science, technology and innovation, in Africa. Visceral Podcast produces engaging, empowering stories about women in the sciences and their contributions to the STEM fields.

Michelle has a strong track record as a development consultant and researcher. She has a Masters in Public and Development Management from the University of the Witwatersrand and has recently completed her Masters in Development Economics from the University of Cape Town.

When she’s not consuming endless amount of social media content, she’s busy conducting quirky interviews with Africa’s most intelligent women in STEM.
Dr. Iqbal Survé is a medical doctor, social entrepreneur and philanthropist born and educated in South Africa. He is also an alumni of the American College of Sports Medicine as well as Harvard Business School. Dr Survé, was affectionately known as the “Struggle Doctor” during the liberation struggle by black South Africans, because of his provision of medical care to victims of apartheid brutality, including those imprisoned on the infamous Robben Island such as Nelson Mandela.

Dr Survé’s involvement in the liberation movement and his pursuit of social justice has shaped the values of the Sekunjalo Group, which he founded in 1997. Today, Sekunjalo remains one of the top ranked companies in terms of empowering its people and creating wealth for emerging entrepreneurs and individuals.

An optimist, Dr Survé firmly believes in the progress of the continent. He has invested on the African continent in many diverse sectors. Today, the Sekunjalo Group has 189 investments in its stable, ranging from; biotechnology, asset management and financial services, food and beverages, fishing and aquaculture, power and energy, healthcare and pharmaceuticals, to telecommunication, including its latest media investment, Independent Media South Africa.

Keeping to the narrative of Africa’s rising, the Survé family and Sekunjalo have funded and committed themselves to, two very important initiatives; the launch of African Independent, the first continent wide print newspaper (distributed to 40 countries in Africa) which is also accompanied by an online platform, www.africanindy.com, as well as the launch of Africa’s first content syndication service, by Africans for Africans, and global audience, called the African News Agency (ANA).
Dr Survé has directed his wealth towards fostering a society for the greater good. He is recognised for his philanthropic activities from countries as diverse as Finland, where he is appointed Honorary Consul in recognition of the impact of his global philanthropic initiatives on children and human rights through his philanthropic trust, Survé Philanthropies.

Mayor Higgins of the city of New Orleans, USA described the Sekunjalo Group as, one of the leading examples of a “business with a social impact,” and acknowledged Dr Survé’s philanthropic initiatives as being important for Africa’s economic and social development.

Sekunjalo is a founding member of the prestigious World Economic Forum (WEF) Global Growth Companies (GGC). The companies have been identified by WEF, as the world’s fastest and most innovative growth companies. Dr Iqbal Survé is regular contributor and participant in the WEF Davos and Summer Davos meetings, and remains a director of the WEF GGC Advisory Board.
Emeritus Prof. Jennifer A. THOMSON

Jennifer Thomson (PhD Rhodes) is Emeritus Professor in the Department of Molecular and Cell Biology at the University of Cape Town. She held a post-doctoral fellowship at Harvard, was Associate Professor in Genetics at the University of the Witwatersrand, visiting scientist at MIT, and Director of the Laboratory for Molecular and Cell Biology for the CSIR, before becoming Head of the Department of Microbiology at UCT in 1988.

She won the L’Oreal/UNESCO prize for Women in Science for Africa in 2004 and has an Honorary Doctorate from the Sorbonne University. Her research field is the development of genetically modified maize resistant to the African endemic maize streak virus and tolerant to drought. She has published three books on Genetically Modified Organisms: Genes for Africa, Seeds for the Future, and Food for Africa, and is a frequent speaker at international meetings, including the World Economic Forum and the United Nations. She is a member of the board (previously Chair) of the African Agricultural Technology Foundation (AATF), based in Nairobi and Vice-Chair of ISAAA (International Service for the Acquisition of AgriBiotech Applications).

She serves on the National Advisory Council on Innovation of the South African Minister of Science and Technology. She is the President of the Organisation for Women in Science for the Developing World (OWSD) and chairs the South African chapter.
Dr. Elizabeth van der Merwe is the Chair (Western Cape and National) of the Association of South African Women in Science and Engineering (SAWISE http://www.sawise.org.za/) since 2012. Over the years, this Association has played a role in raising the profile of women in STEM, highlighted and addressed problems facing women in STEM, provided leadership and role models for young people intending to enter into study and career paths in STEM. We achieve this by hosting workshops which empower our members, profiling young and established women in STEM on our webpage and laud achievements of women in STEM, and engage with young school girl learners close to their home towns some distance from the main city (Cape Town) during National Science Week.

On the academic front Elizabeth is a Senior Lecturer in the Department of Human Biology, Faculty of Health Sciences, University of Cape Town (UCT). Her progress to the academic arena has been an interesting journey over many years starting with her studies and career in Medical Technology (working in diagnostic pathology) 40 years ago. There she developed a keen interest in medical research, and moved into a pure research environment as a supporting member of the research team. With an eye on becoming an independent researcher one day, she continued with postgraduate studies (BSc Med Hons and MSc Med) at UCT on a part time basis while raising a young child. After many years in medical research, she joined UCT as a lecturer and continued with her PhD studies (UCT) to reach her goal as independent researcher with interest in regenerative medicine.
Her academic duties involve teaching, assessment and curriculum design in the MBChB, BSc and in postgraduate programmes with main interest in Histology, Physiology and Cell Biology and Regenerative Medicine. Her experience gained throughout her journey has been invaluable to her applications in many research fields as collaborator and principal investigator. Her passion is investigating the three-dimensional structural and functional relationships at the microanatomical and cellular levels particularly relating to understanding mechanisms underlying the vascular organisation and innervation during organ regeneration.

Her other roles and passion in the academic arena is to address issues of inequality particularly for women and she serves as Employment Equity representative on University’s staff selection committees. She one of the founder members of the University of Cape Town’s arm of the International Women’s Network in Higher Education (launched in Sheffield in 2015) which aims to look at means of accelerating women’s careers in academia and addressing the gender gap.
Faculty for the Future Alumnae Attendees
Victoria ADETUNJI

Victoria Adetunji was born in Osun State, south-western Nigeria, and is the eldest in her family with three sisters and two brothers.

Victoria studied at the University of Ibadan, Nigeria, where she gained qualifications as a Doctor of Veterinary Medicine, a Masters in Preventive Veterinary Medicine, and in 2007 a PhD, where her studies focused on food safety with an emphasis on the public health aspects of a locally produced soft cheese. She is currently an Associate professor and consultant at the Department of Veterinary Public Health and Preventive Medicine, University of Ibadan.

Victoria notes there is currently little information on the status of food products of animal origin in Nigeria, and in developing countries at large. The level of hygiene in the processing and packaging of these products means their microbial load often does not meet international standards recommended by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO). Her research focuses on risk assessment to establish the status and safety of milk and meat products. Food-borne pathogens of interest include E. coli O157:H7, Listeria monocytogenes, and several species of Salmonella, with her research investigating the persistence of related pathogens in food processing environments. Also included is the control of food-borne zoonosis: infectious disease that can be transmitted between animals and humans. The results of her research are expected to support the development of policies, guidelines, standards and regulations related to food processing and storage in countries such as Nigeria.

After completing her post-doctoral studies, Victoria returned to teaching at the University of Ibadan, and the knowledge gained has contributed to her efforts in solving food safety problems, particularly in developing countries.
Deborah AJAYI

Deborah Ajayi was born in Leeds, England but at a young age she moved to Ibadan, Nigeria where she lived with her grandmother. She is the fourth born in a family of 3 girls and 3 boys. She is married to a lecturer and professor in Nigeria, and they have three boys.

While attending the University of Ibadan, Deborah received her undergraduate degree in 1986 in education, specializing in pure and applied mathematics. In 1990 she obtained her Master of Science degree in mathematics specializing in functional analysis, and then went on to earn her PhD in mathematics in 1996, making her the first female to earn a Ph.D. in Mathematics from the University of Ibadan in Nigeria. She specialized in the field of algebraic topology, later she became interested in combinatorics because it has widespread applications for real world problems in such fields as computer science, chemistry, molecular biology and engineering.

She was enrolled in post-doctoral studies at Pennsylvania State University, where she focused on the interactions of combinatorics, geometry and algebraic topology and the use of combinatorial methods in contact and symplectic geometry. Her research in algebraic topology has applications in differential geometry, especially the characteristic classes and the span of certain manifolds. She intends to focus on aspects of combinatorics such as graph theory and Tverberg theorems using her knowledge of characteristic classes and combinatorial methods to solve problems in contact and symplectic geometry.

The results of her research should benefit computer scientists and enhance multidisciplinary research in such fields as mathematics, computer science, medicine and engineering. When she completed her post-doctoral studies, she returned to the University of Ibadan and continued her teaching, research and mentoring activities. She was able to produce the second female Ph.D. in Mathematics from University of Ibadan in 2014. She says that despite the importance of her field, there is no known expert on this research area in Nigeria.
Olufunmilayo Ajayi was born in Ekiti State in southwest Nigeria. Her parents were peasant farmers with four children. Until completing her second degree she helped support herself financially with jobs such as a house maid, selling plantains, hair dressing, and farming.

Olufunmilayo attended the Federal University of Technology, Akure, Ondo State, southwest Nigeria, where she gained a B. Tech. and M. Tech. in Food Storage Technology, followed in 2010 by a PhD in Stored Products Entomology and Control. She then became a faculty member lecturing in the University’s Department of Biology. She has been prima facie qualified for the position of Associate Professor.

The research focus is on the use of biorationals in Integrated Pest Management strategies against insect pests. Plants and animals produce biochemical compounds that are key agents in biocontrol of pests. Semiochemicals are active biochemical compounds produced by organisms—especially insects—that act as messengers within or between species. They include pheromones, which trigger a social response in members of the same species such as feeding, mating, egg-laying, aggregation or dispersal. Semiochemicals can be used for selective control of insect pests. Her postdoctoral research was on identifying kairomones involved in Cowpea-Callosobruchus maculatus interaction. Olufunmilayo identified the major kairomones produced in cowpeas that guide C. maculatus to infest cowpea. The research is the first-mention in cowpea-kairomone-Callosobruchus research and a major discovery in developing semiochemical-based pest management agent against C. maculatus, a notorious pest of cowpea.

On completion of her post-doctoral studies in October, 2014, Olufunmilayo has since returned to her teaching job in the Federal University of Technology Akure, Nigeria. She has been applying the knowledge gained to solving problems related to agricultural pests in Nigerian fields and food stores through direct teaching of students, research project supervision, seminar presentations, and workshops.
Cecilia Olufunke AKINTAYO

Cecilia Olufunke Akintayo was born in Omu-Ekiti, Nigeria, the second child in a family of five boys and two girls. Both her parents were teachers and encouraged her to keep an open mind when choosing a career.

After receiving her Bachelor’s degree in Chemistry in 1995 from the Federal University of Technology, Akure, Cecilia went on to the University of Ibadan, where she took Master’s and Ph.D degree in Industrial Chemistry in 2001 and 2005 respectively. She is currently an Associate Professor of Industrial Chemistry, in the Department of Chemistry, Federal University Oye, Oye-Ekiti.

She is a two time recipient of Sweden’s International Foundation for Science Research Grant in 2008 and 2011. She has been awarded the Faculty for the Future grant in 2011 for a Postdoctoral research at Syracuse University in the United States. In 2009, she was awarded the prestigious Alexander von Humboldt Fellowship of the Federal Republic of Germany. She also has to her credit a TWAS Research Grant in 2014 and a two time recipient of the TETFUND Research Grant of Nigeria.

Cecilia is currently researching into synthesis and characterization of biobased dendrimers and hyperbranched polymers using a Nigerian plant oil, Plukenetia conophora oil.

Cecilia home based research group comprises of five students of which four are females. One of them, Babalola Morayo is a two time recipient of the Faculty for the Future Award and currently undertaking her PhD at Lancaster University UK.

She is happily married to Prof Akintayo Emmanuel T. and the marriage is blessed with three daughters of which the first recently bagged her Bachelor’s degree in Chemistry from TU Clausthal, Germany.
Annatoria Chinyama was born in Chiredzi, a small town in the south east of Zimbabwe, and is part of a family of four girls and eight boys. She is a mother of two girls and one boy. She performed well in a wide variety of subjects at high school so found it difficult to choose her career. She initially wanted to become an accountant, but then turned her focus towards science and engineering.

Annatoria attended the University of Zimbabwe, Harare, where in 2000 she obtained a BSc in Civil Engineering. She then worked as a research assistant at the University and then later on in 2002 joined Bulawayo Polytechnic as a lecturer. In 2007, she gained an MSc in Integrated Water Resources Management, supported by a Scholarship from WaterNet, a network of university departments and research and training institutes based in Southern and East Africa. After two years working with a company supplying water pipe systems, Annatoria became a lecturer in the Department of Civil and Water Engineering, National University of Science and Technology, Bulawayo, Zimbabwe.

Annatoria’s doctoral research in South Africa focuses on the efficiency of treatment processes required to produce safe drinking water. Many African cities have problems related to pollution of their water supplies. One of these problems is eutrophication, a process where nutrients from substances including detergents, fertilizers, and sewage lead to responses in the ecosystem such as increased levels of blue-green algae. These algae increase the cost of treatment processes required to produce water that is safe to drink. Annatoria plans to develop a decision support tool to assist continual improvement in managing the impact of blue-green algae in water treatment.

After completion of her studies in South Africa, Annatoria intends to continue lecturing and research at the National University of Science and Technology in Bulawayo. She also hopes to establish an institute in Zimbabwe to spearhead water research in the country.
Mopelola IDOWU

Mopelola Idowu was born in Ibadan, Nigeria, into a family of eight children. She spent most of her childhood in Ibadan except while at a boarding school at high school level in Akure, Nigeria, where she received a Federal Government Scholarship as one of the top students in her year.

Mopelola studied Chemistry at the University of Ibadan, and in 1994 she obtained a BSc followed in 1997 by an MSc. She then taught chemistry at a high school in Ibadan before moving to Rhodes University, South Africa, in 2006 where she was supported by scholarships from the Andrew Mellon Foundation and the Research Foundation of South Africa. During her studies at Rhodes she worked as a tutor and demonstrator until obtaining her PhD in Chemistry in 2009. Since then she has been a lecturer in Physical -inorganic Chemistry at the Federal University of Agriculture, Abeokuta, Nigeria, where she has also served at various positions.

The goal of Mopelola’s research at the University of Michigan is to develop safe multi-chromophore systems (combinations of light-absorbing molecules) as materials for harvesting solar energy. She was spurred by the fact that demand for electricity in Nigeria far outstrips the current supply, yet the country’s geographical location provides an abundance of sunlight throughout the year, which with appropriate energy collection systems could be converted into electricity. Mopelola’s ambition is to contribute towards averting an energy crisis by helping to develop a cheap alternative source of energy that can be accessed in Nigeria and other parts of the world.

After her research stay in the United States, Mopelola is back to teaching and research at the Federal University of Agriculture, building a robust research group. She has successfully guided some female colleagues and students in winning scholarships for better research experience abroad within her short return back home. She is also in the process of establishing collaborations with individuals abroad which will help towards development of her students and research.
Oluwafikemi Iji was born in Lagos, Nigeria and was the first in her family to pursue a PhD degree. Her father first stimulated her curiosity and desire to pursue a career in science. She also grew up with a love and admiration for nature.

Oluwafikemi attended the University of Ibadan, located in southwestern Nigeria and the third largest metropolitan area in the country. Here she gained the degree of Doctor of Veterinary Medicine followed by a Master’s in Veterinary Pharmacology. Her passion lies in ecosystem health research, which is the use of scientific tools to understand the complex interactions between humans, animals and their natural environments as well as promoting the health, integrity and sustainability of the shared ecosystem.

The current PhD research relates to acid mine drainage (AMD), which is the outflow of acidic water from metal mines, coal mines, and some other areas where the earth has been disturbed. In particular, Oluwafikemi is focusing on efforts to develop cultured cell models for AMD toxicity screening and environmental bio-monitoring, investigating the use of fish gill cell cultures in sensitive in-vitro models that link the bioavailability of pollutants and intrinsic toxicity in target organs. This method aims to provide a new approach to risk assessment for regulatory tests, and an easy and inexpensive approach to allow more environmentally realistic site-specific assessments of water quality. This would be an important component in the management and remediation of AMD-impacted watersheds.

Oluwafikemi hopes to become an international expert in environmental toxicology, environmental cleanup, chemical regulation, and product stewardship. She expects her work to promote the “one health” concept, which encompasses the health and wellbeing of people, animals and the environment.
Elizabeth Victoria Mumbi KIGONDU

Dr. Elizabeth Kigondu was born and raised in Nairobi, Kenya. She was inspired by successful Kenyan women such as the environmental and political activist the late Prof. Wangari Maathai, who in 2004 became the first African woman to receive the Nobel Peace Prize.

Elizabeth attended the Jomo Kenyatta University of Agriculture and Technology (JKUAT), near Nairobi, where she obtained a BSc in Chemistry followed by an MSc in Medicinal Chemistry from the Institute of Tropical Medicine and Infectious Diseases (ITROMID), housed at the Kenya Medical Research Institute (KEMRI) and the course offered in collaboration with JKUAT. Her MSc research inspired her interest in phytochemistry—the study of chemicals derived from plants—and especially the capability of phytochemicals for anti-parasitic and other medicinal uses. The World Health Organization (WHO) reports that 80% of the populations in developing countries use medicinal plants for the treatment of various ailments. This practice is associated with poor access and affordability to conventional drugs among rural communities.

The PhD research was undertaken at the Department of Chemistry and the Institute of Infectious Diseases and Molecular Medicine at the University of Cape Town. Elizabeth’s project aimed to identify new tuberculosis (TB) therapies, which is particularly important as the level of drug resistance to current anti-TB treatments is increasing. Combination therapy is the current WHO recommendation for treatment of TB, as well as other diseases such as HIV/AIDS, malaria and cancer. The testing of drugs in combination is normally carried out late in the drug discovery process. By contrast, Elizabeth’s project aimed to incorporate it at an early stage of development and identify optimum combinations to treat TB in the future.

After her PhD studies, Elizabeth returned to her home country where she has been carrying out her work as a research scientist and a supervisor at KEMRI’s, Centre for Traditional Medicine and Drug Research.
Nana Browne Klutse was born in Saltpond, Ghana but hails from Nyanfeku Ekroful. She is married with a son and a daughter. While attending Anomabu Methodist Primary and Junior Secondary School in Saltpond, Nana’s father and teachers encouraged her to pursue an academic career in physics.

She is a Senior Research Scientist at the Ghana Space Science and Technology Institute of the Ghana Atomic Energy Commission. She is the Manager of the Remote Sensing and Climate Center at the Institute. She is a Physicist and holds a Doctor of Philosophy Degree from the University of Cape Town, South Africa. Her area of specialization is climatology and does research in climate modelling, climate impact assessments on society (health, energy, and gender).

She has worked on both national and international projects and consultancies including the climate and health project in Ghana and the ongoing global CORDEX experiment. She has co-authored a good number of journal article publications and academic books to her credit.

She teaches physics, climate science and related subjects, supervises students’ research in Ghana and abroad, and serves as an external examiner for universities in Ghana. She dedicates her life for community services, mentors young men and women for education pursuits, self-confidence and self-motivation.

She serves on national and international committees including the African Union Space Policy and Strategy.

At the leisure time, she spends time with children with learning disabilities and that led to her co-founding an NGO called the campaign for children with learning disabilities.

She is of the opinion that girls should be encouraged at the basic level to build their interest in science.
Happy MAGOHA

Happy Magoha was born and raised in Dar es Salaam, Tanzania, and is the youngest in a family of two children.

Happy graduated with a Bachelor of Science degree in Food Science and Technology from Sokoine University of Agriculture in Morogoro in 2000. In 2002, she won a Commonwealth scholarship to study at the Auckland University of Technology in New Zealand, where she completed her Masters of Applied Science degree in Food Science in 2004. Since 2005, she has been working as a lecturer in Home Economics and Human Nutrition at the Open University of Tanzania. She is currently on study leave at Ghent University in Belgium.

Happy’s doctoral research focused on mycotoxin exposure in children. Mycotoxin is a common toxin in maize, which is the main ingredient of complementary foods in Tanzania and the main staple food in most parts of the country. Several health risks are associated with mycotoxin exposure, especially in children. Breast milk can be contaminated by consuming mycotoxin-contaminated maize, with a high likelihood that the toxin will then be passed on to the infant through breastfeeding. Happy also examined the effectiveness of post-harvest processing, used either alone or in combination with other methods, in reducing fumonisin contamination in home-grown maize in Tanzania.

Happy’s ambition in life is to use her skills as a lecturer in human nutrition and her knowledge of contaminants to help improve food safety in her country.

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<td>Lecturer, Food and Nutrition, Coordinator of the International Students Office &amp; Coordinator of the Gender Unit, Open University of Tanzania (OUT), Tanzania</td>
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Silvia Materu has PhD degree in eco-toxicology and environmental risk assessment, obtained in 2015, from Leuphana University of Lüneburg in Germany. Her research was funded by DAAD and Schlumberger Foundation under the-Faculty for the Future program. She has a Master degree in Integrated Environmental Management from University of Dar es salaam, obtained in 2007, under the DAAD-in Country scholarship.

She is a professional member of African Women in Science and Engineering (AWSE) and African Society of Environmental Toxicology and Chemistry (SETAC-Africa). She has attended and facilitated various training and consultancies on occupational health and risk exposure, ecotoxicology, environmental management, climate change, disaster assessment and disaster management. She has also a good number of publications from national and international conference proceedings and peer review journals in the areas of wetland management, sediment/water quality and ecotoxocology/risk assessment.

Dr. Materu works with Sokoine University of Agriculture, Tanzania. Her current research focuses on issues of water security, integrated water resource management and conservation of wetlands in Tanzania.

Silvia Materu was born in Materuni, a small village in a remote area of northern Tanzania. The fifth-born in a family of six children, her early education owed much to the efforts of her mother, a small farmholder who invested in her children’s education whatever she could spare from her meagre agricultural earnings. Silvia is married to Reguli and they have two lovely sons.
Charity Chao MBOGO

Charity Chao Mbogo was born in Mombasa, Kenya. She began her higher education at Kenya Methodist University (KeMU), where in 2003 she received a First Class Honours BSc in Mathematics and Computer Science.

After graduation, Chao worked for two years as a Teaching Assistant at KeMU, supporting courses in computing and mathematics. A Shell Centenary Scholarship enabled her to study towards an MSc in Computer Science at the University of Oxford, United Kingdom, which she completed in 2007. She then returned to KeMU as a Lecturer in its Department of Computer Science. In 2012 Chao received a bursary from the University of Cape Town (UCT) that enabled her to begin her PhD studies in South Africa.

While teaching computer programming at KeMu, Chao found that her students often had difficulties in the subject, mostly because they had no prior experience in programming languages and needed to learn new syntax and semantics. In addition, like many students in developing countries, most did not have regular access to computers they could use outside the classroom to practice and develop their programming skills. However in contrast, many of the students owned mobile phones. Chao’s PhD research investigates the use of a supporting technique called scaffolding, which is specifically designed for mobile phones to provide programming environments based on the needs of learners. The technique should help to overcome the limitations of mobile phones as a learning tool, such as their small screens and small keypads. Chao hopes the proposed solution will be particularly useful to novice learners in resource-constrained environments such as in developing countries.

Chao graduated from her PhD program in December 2015 and has returned to lecturing at KeMU. The examiners at UCT rated her research as one that makes a significant contribution and that it needed no corrections. She is currently continuing with her research in order to contribute towards educational technology in countries such as Kenya.

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Taryn MORRIS

Taryn Morris was born in Johannesburg, South Africa as. She birder and photographer. Her main hobby is ultimate frisbee and she recently represented the first ever South African women’s team at the World Ultimate Championships in London.

In 2004 Taryn graduated cum laude with a BSc (Hons) in zoology from the University of the Witwatersrand in Johannesburg and in 2008 graduated cum laude with her MSc degree. After earning a professional certificate in Environmental Policy and Economics at the Centre for Environmental Policy at Bard College in New York, United States, in 2010 she enrolled in doctoral studies in ecology at the University of Colorado at Boulder. Taryn’s PhD research focused on ecosystem resistance of native habitats to alien plant invasion in her home country of South Africa. After graduating in 2014, Taryn conducted research in the Kruger National Park assessing the dynamics of savanna trees in response to changing climate and megaherbivore disturbance through a post-doctoral fellowship with the Center for Ecosystem Science and Society at the University of Florida.

Taryn recently shifted from the academic realm into the conservation and policy arena after taking up a position at the prestigious NGO, BirdLife South Africa, as the Coastal Seabird Conservation manager.

The main objective of her work, funded by the Charl van der Merwe Trust, is to ensure that an Ecosystem Approach to Fisheries management is implemented in the South African small pelagic fisheries. This approach ensures that the needs of top predators, such as penguins and other seabirds, as well as the ecosystem health as a whole are integrated into fisheries management. Taryn enjoys the challenge of finding solutions that strike a balance between responsible resource use and biodiversity preservation. She continues to grow her academic and professional career through this new and exciting opportunity to translate science and research into on the ground conservation and policy.
Rebecca Nakatudde is Ugandan by birth and the third of seven children. During the 1979–1985 wars in Uganda her family fled the Luwero district where she was born and moved to the Mukono district, where she grew up. She is married with one girl and two boys.

Rebecca obtained her Bachelor of Science honors degree (second upper division) in 2000 in physics, mathematics and education at Makerere University in Kampala, Uganda, and She competed her Master of Science degree in medical physics at the University of the Witwatersrand in Johannesburg, South Africa in 2009. At completion, she went back to Uganda as the first female medical physicist in Uganda and East Africa as a Region. She is currently working at Makerere University as an Assistant Lecturer in the Department of Radiology. Rebecca as supervised five (05) masters in Radiation physics and Radiology to completion.

In addition to her work in the University she serves as; Visiting Lecturer Mbarara University of Science and Technology Visiting Lecturer ECUREI Mengo Hospital Current Director of REDO Radiation Protection and Dosimetry Consultancy Services Vice President of the Federation of African Medical Physics Organization (FAMPO) Representative of Public Universities to the Allied Health Examination Board (UAHEB)

Rebecca is currently one of the key people in steer heading the biomedical engineering, Radiation Oncology and Medical Physics training in Uganda.

She is also working on her PhD studies where want to analyze the frequency levels of the telephone mast installations on top of the buildings in Urban settings in East Africa and the impact of the radiation levels to the public.

Her effort and dream is to become a professor of Radiation science in Uganda before the age of 46 years.
Caroline Neh Ngwa was born and grew up in Bafut, in the northwest region of Cameroon. Her family encouraged her to go into science, despite her growing up in an environment where child higher education was not common—especially for girls. She has chosen a career in teaching and research and is particularly interested in magma chamber processes and the physical volcanology of pyroclastic deposits.

Caroline has an MSc and a PhD from the University of Buea, which is located in southwest Cameroon on the flank of Mount Cameroon (or Fako), an active volcano. Her MSc thesis was entitled “An evaluation of risk zones around Mount Cameroon based on studies of macroseismicity and volcanic products”. The PhD in Applied Geology, completed in 2010, was entitled “Phreatomagmatic activity at Debunscha Maar: Tephra sequences melt inclusions and bulk rock petrochemistry.” The Debunscha Maar is located on the southwest flank of the volcano.

The post-doctoral research relates to understanding the dynamics of volcanic eruptions through physical volcanology and the petrochemistry of melt inclusions in erupted material. About 10% of the world’s population lives around areas of active volcanoes, and effective surveillance is vital for hazard mitigation and management. Caroline is investigating erupted materials at Mount Cameroon with the aim of understanding magma chamber processes, magma evolution and generating data for pre-eruptive magma volatile contents. The results will have direct implications for natural hazard management and civil protection in Cameroon while also contributing to global volcanism studies.

After her studies in Germany, Caroline returned to research and teaching in Cameroon where she is contributing to the promotion of girl’s education through mentoring and research activities.
Judith Odhiambo grew up and attended elementary school in Kagilo, a village near the equator in the west of Kenya. During her childhood she saw first-hand the effects of immense poverty coupled with cyclic food insecurity, which motivated her interest in working to raise the living standards of communities where most people are subsistence farmers.

At the age of 15, Judith moved to Menengai high school in kuru County for her secondary education. She attended Egerton University, Kenya for a diploma course in Agricultural Education and Extension. She then taught Agriculture and Biology at a girls’ secondary school where she was also head of the science department and patron of its young farmers club. After 8 years, she returned to Egerton University for a BSc in Agricultural Education and Extension and then gained an MSc in Agronomy at the same university.

In 2011, Judith got a scholarship from United States International Development (USAID) to do her PhD at the University of Wyoming, USA which she successfully completed in Fall 2014. Her PhD studies focused on Conservation Agriculture in Africa towards sustainable food production and environmental sustainability in Africa. With the help of Schlumberger Foundation, she did a parallel study in the northern High Plains of Nebraska, USA, in fields where long-term application of sustainable conservation agricultural practices under dry-land farming was employed. Her aim was to understand the long term impacts of Conservation Agriculture.

After completing her PhD studies, Judith returned to Kenya where she got a Faculty Position of Lecturer at Kisii University. She is currently the Acting Chairperson (COD) of the Department of Agricultural Sciences. She is also a member of Board of Management of Kwa Mixed Secondary School and has been an invited Guest speaker at several Education days. She uses these opportunities to share with girls and their parents the essentials of education and to venture in STEM careers and to promote practices towards food stability and living standards.
Dr Grace Ofori-Sarpong is an Associate Professor of Minerals Engineering and an employee of the University of Mines and Technology (UMaT), Tarkwa, Ghana. She is the Head of Petroleum Engineering and the Vice Dean of Planning and Quality Assurance Unit, UMaT. She holds a Bachelor of Science Degree in Metallurgical Engineering (Mineral Processing and Extractive Metallurgy) and a Master of Science Degree in Environmental Resources Management, both from the Kwame Nkrumah University of Science and Technology, KNUST, Kumasi, Ghana. She also has a PhD in Energy and Mineral Engineering from the Pennsylvania State University, USA.

Her areas of research interests include microbial-mineral interaction, recovery of precious metals, microwave processing, water quality monitoring and mine waste management. She has supervised about 50 undergraduate and postgraduate project work/theses and has taught about 20 different courses in universities in Ghana and abroad. Grace has been involved in several research work including training/consultancies in several gold mining companies in Ghana and abroad. As evidence of research, she has about 42 technical papers to her credit, and several unpublished reports.

Assoc Prof Grace Ofori-Sarpong is a member of the Society for Mining, Metallurgical and Exploration (SME), USA, Society of Petroleum Engineers (SPE), USA, Ghana Institution of Engineers (GhIE), Women in Science and Engineering (WISE), USA, and International Women in Mining Community (WIM), UK. She is also a Fellow of the Schlumberger Faculty for the Future (FFTF), Netherlands, Australian-African Partnership Facility (AAPF), South Africa, and a Scholar of the PEO International Peace Scholarship, USA, and DIES Training on Internal Quality Assurance, Germany.
Aemere Ogunlaja was born and was educated until high school in Warri, a city in Delta State located in an oil producing area. She has direct experience of the impacts of oil spills and related social unrest, and this has influenced her area of research.

Aemere studied towards a BSc in Microbiology at Edo State University, Ekpoma, Nigeria. She later attended the University of Ibadan, Nigeria, where she gained an MSc, followed in 2014 by a PhD, both in Zoology, specializing in ecology and environmental biology.

Measures used by companies and government authorities to clean-up after oil spills can be expensive and technically challenging. Aemere feels that indigenous people often suffer from inadequate clean-up operations, and is investigating cheaper and more accessible methods to improve the management of oil spills. During her BSc and MSc studies she researched the quality of water in water wells and rivers around the oil refinery in Warri, as well as the effects of this water on microbial load and on the organs of mice. Oil pollution has become a problem in other areas, often due to deliberate damage to pipelines and Aemere’s PhD research focuses on assessment of the levels of heavy metal and polyaromatic hydrocarbon contaminants in soils and water resulting from damaged pipelines in Lagos state, Nigeria, as well as its effect on earthworm diversity and abundance. Her findings highlighted the potential of the earthworm species Libyodrillus violaceous to counteract some heavy metals. The postdoctoral research is using molecular techniques to ascertain the value of breeding these earthworms to help in clean-up operations.

After her studies in South Africa, Aemere plans to return to Redeemer’s University, Nigeria, where she has been a Lecturer since 2006. An Environmental Sciences college is planned to be established there in the near future, which will benefit her further research.
Thelma OHENE-AGYEI

Thelma Ohene-Agyei was born and raised in Obuasi, Ghana.

Thelma attended primary school in Obuasi and Wesley Girls High School in Cape Coast, before enrolling at the Kwame Nkrumah University of Science and Technology, where she graduated with a bachelor’s degree in Pharmacy in 2007. While training to become a registered pharmacist, she spent a year working at the university as a teaching assistant, completing her MPhil there in 2010. She moved to the UK in 2010 and received her PhD from Sidney Sussex College, University of Cambridge in July 2015.

Thelma’s research seeks to enhance our knowledge of drug transport mechanisms in pathogenic micro-organisms, which would enable new antibiotics to be developed and help combat pseudomonads and pathogenic bacteria in general. Bacteria cause a significant proportion of infections and its resistance to antibiotics is the major challenge confronting the control of this prevalent cause of disease and mortality. The devastating consequences of resistance are increasingly seen during outbreaks of life-threatening diseases such as cholera and dysentery and in the increased mortality to diseases such as tuberculosis, malaria and AIDS. Pseudomonas aeruginosa is a human pathogen that is resistant to a wide range of antimicrobial drugs. Multidrug-resistant strains of Gram-negative bacteria of this type rely on tripartite protein assemblies that span both the inner and outer membranes to pump cytotoxic compounds from the cell. Pseudomonas aeruginosa expresses several multidrug-transporter complexes of this kind, including the MexAB–OprM system that plays a dominant role in intrinsic drug resistance. The goal of Thelma’s research is to throw light on the molecular mechanism of this important drug efflux pump, which is still poorly understood.

Thelma would like her career to encompass research that will contribute to the discovery of new drugs and better disease therapies, and to use her findings to develop partnerships of knowledge transfer between industry and academia.
Tahiana Ramananantoandro was born and raised in Antananarivo, the capital city of Madagascar. She received an Engineering Diploma in Forestry Science from the Ecole Supérieure des Sciences Agronomiques (ESSA), University of Antananarivo, in 2000. During an exchange program with the Institut National Agronomique de Paris Grignon and UNESCO Man and Biosphere program, France, she earned a postgraduate diploma in Territory Management. In 2001, she completed an MSc in Wood Science at the University of Bordeaux 1, France.

Tahiana completed her PhD in Process Engineering at the Ecole des Mines de Saint Etienne, France in 2005 with a thesis related to the sensory perception of wood roughness. Before returning to Madagascar, she was a researcher and teacher at IUT de Tarbes, and Ecole Nantaise Supérieure d’Enseignement Commercial, France. Since 2008, she has been an Assistant Professor at ESSA in Madagascar. Since 2016, she has been Assessor in charge of the research at ESSA. She is a member of various professional organizations, has contributed to thirty international conferences, and has written eighteen publications in international journals. She has been awarded a Faculty for the Future scholarship in 2013 to study grain-raising occurrence after finishing on wood surfaces.

The forest is the main source of material and energy for the Malagasy population, and wood is a raw material available to people with limited incomes. Tahiana’s research aims to study the diversity of wood in terms of its anatomical, mechanical, physical, calorific and machining properties. She is particularly interested in studying the wood of Madagascar because of its high level of endemism and diversity, and there has been surprisingly little previous research into this topic. Her ultimate aim is to make a significant contribution to the efficient and sustainable use of these resources.
Naa Dedei was born and raised in Accra, the second of two children. Her mother, a teacher, taught her mathematics and science at school and encouraged her academic pursuits. Her father, a quantity surveyor, inspired her to pursue a career in science. She is married and has two daughters.

Naa Dedei enrolled at the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, and graduated in 2006 with a BSc degree in Geodetic Engineering. She then spent one academic year working at the University as a teaching assistant. In 2007, she received a scholarship from the German Catholic Academic Exchange Service (KAAD) to study for an MSc degree in Germany. Naa Dedei graduated from Stuttgart University of Applied Sciences in 2009 with an MSc degree in Photogrammetry and Geoinformatics.

The PhD studies reflect Naa Dedei’s belief that Africa needs to increase awareness of its traditions and cultural heritage, and preserve them for posterity. Her research focused on the development of a reliable technique for extracting accurate spatial information of heritage sites—i.e. 3D models of buildings and other structures—from spherical panoramic images. The technique is suitable in situations with limited access to funds or as a quick field method to document many features in a short time.

Naa Dedei has resumed teaching and research as a Lecturer at the University of Mines and Technology in Ghana. She is also an active member of the Graduate Women International, an organization that advocates for women’s rights, equality and empowerment through access to quality education.
Sithabile Tirivarombo was born and raised in Gweru, Zimbabwe, where she attended secondary school. She did her Advanced level education in the City of Bulawayo after which she enrolled at the University of Zimbabwe where she obtained a Bachelor of Science honors degree in Chemistry at the University of Zimbabwe in 1994. Sithabile became a teaching assistant in the University’s chemistry department. She attained a Master of Science degree in Water Resources Engineering and Management in 2000 and in 2003 she joined Chinhoyi University of Technology in Zimbabwe where she founded the Department of Environmental Sciences and Technology.

She then developed a Bachelor of Technology honors degree in Environmental Health in 2006. During her stay at Chinhoyi University Sithabile was instrumental in the formulation of most of the policies for the young and upcoming university. This was done through the effective role she played at the University’s Senate Executive meetings and other various university committees. In 2008 she joined Ethiopian Civil Service University where she lectured in the Urban Management and Planning master’s degree program.

In 2009 she began full-time doctoral studies at the Institute for Water Research at Rhodes University in South Africa. Her PhD thesis was on the hydrological impacts of climate change and water resources management in the Zambezi River basin. This study helped her gain insight of the interactions between climate (variability and change) and hydrological systems, which in turn aided in determining the effects of climate change on freshwater resources and food security particularly in the already vulnerable African region.

After her PhD she joined Botswana International University of Science and Technology as a faculty member of the department of Earth and Environmental Sciences. In addition to university teaching, Sithabile devotes her time to research and community service in the context of sustainability and water resources management.
Faculty for the Future Fellows Attendees
Olubukola ADENUBI

Olubukola Adenubi was born and grew up in Lagos, Nigeria, and is the mother of three children. As a child, after school each day, she would call her aunts and tell them what she had learned in school, earning her the nickname “little teacher”. It was therefore no surprise to her friends and family that she subsequently became a lecturer.

Olubukola attended Ahmadu Bello University, Zaria, Kaduna State, the largest university in Nigeria, where in 2000 she obtained a degree as a Doctor of Veterinary Medicine. After a year in compulsory national service, she worked in the private veterinary sector for four years until 2005 when she became a lecturer and researcher at the College of Veterinary Medicine, Federal University of Agriculture, Abeokuta, Ogun State, Nigeria. In 2009, Olubukola obtained an MSc in Pharmacology from the University of Ibadan, Nigeria, where she evaluated the effect of plant extracts on the testicular and semen morphology of male rats.

The PhD research in South Africa focuses on investigating the anti-parasitic effects of traditional medicinal plants. Ticks are a common source of disease in African livestock, and heavy infestations also cause weight loss and anemia, while tick bites affect the quality of hides. Control of infestations is currently based primarily on the use of pesticide chemicals, leading to problems such as tick resistance and contamination of meat and milk products. South Africa and Nigeria are blessed with rich flora and only a fraction of their medicinal plants have been rigorously studied and analyzed for their biological activity against ticks. Natural plant-based solutions for controlling ticks would support organic livestock farming and help avoid resistant strains.

On her return to Nigeria, Olubukola plans to resume back to work as a lecturer in the Department of Veterinary Physiology and Pharmacology, Faculty of Veterinary Medicine, Federal University of Agriculture, Abeokuta.

Home Country
Nigeria

Degree
PhD in Paraclinical Sciences

Expertise
Phytomedicine

Research Focus
Anti-Parasitic Plants

Host University
University of Pretoria, South Africa

Fellowship Awarded
2014
Millicent Akotam AGANGIBA

Millicent Agangiba was born in Nkawkaw and raised in Accra, Ghana, along with her four siblings. Her mother and father, who were both small traders, always encouraged their children to aim for the best in life. Millicent’s father took pride in her academic achievement, and hired a private tutor in mathematics to support her ambition to become an engineer.

After graduating from senior high school, Millicent was awarded a scholarship by the Russian Government through the Government of Ghana to study in the Russian Federation. After eight months learning the Russian language she joined the Computer Science department of Tver State Technical University, where in 2007 she obtained an MSc in Computers, Complexes, Systems and Networks.

A 2014 United Nations report indicated that more than one billion of the world’s population lives with disabilities; 80% of whom live in developing countries. Information and communications technology (ICT) continues to expand in government activities; however little attention has been given to the accessibility of E-government by the large number of people in developing countries with special needs. Millicent’s research uses empirical studies from Ghana to evaluate accessibility for this group of people to E-government services. It also investigates the barriers and restrictions faced by disabled people in the accessibility of E-government services. She expects her work to provide a framework for the design of more citizen-centric web applications for people with special needs and disabilities, and help guide governments in formulating web policies.

After completion of her PhD studies in South Africa, Millicent intends to return to the Computer Science and Engineering Department of the University of Mines and Technology, Tarkwa, Ghana, where she has been a lecturer since 2011.
Lilian AMUHAYA

Lilian Amuhaya was born in Nakuru, Kenya, and is the third child in a family of seven. She works at Egerton University, Njoro, Kenya, together with her husband, who is a specialist in electronics and computing, and is also currently pursuing a PhD.

After graduating from high school in Kenya, Lillian studied at the Moscow Power Engineering Institute, Technical University, Moscow, Russia, where in 2004 she obtained a BSc in Electrical Engineering, Electro-Mechanics and Electro-Technology. She remained in Moscow to continue her studies, and in 2006 gained an MSc specializing in the automation of electric drives. After graduating, she returned to Kenya and began lecturing in Egerton University.

Lillian’s PhD work is based in the Electrical Machines Laboratory at Stellenbosch University. Her research project involves the development of novel electrical machines, experimental testing, and numerical simulation, of electromechanical drive systems that have applications for improving wind energy. She is focusing on the technical challenges of increasing the performance of these systems to maintain their reliability; increase their efficiency and power density; and reduce their cost. The PhD research also addresses managing the integration of electrical machines into complex electromechanical drive systems.

After her PhD studies, Lillian plans to return to Kenya to teach and guide students through their research at Egerton University. She also intends to practice as a consultant and hopes to contribute towards the development of new techniques and novel designs to ensure more efficient machines and drives for applications including renewable energy sources and electric vehicles. She hopes to be a role model to young girls and encourage more women into engineering and science careers.
Catherine CHAVULA

Catherine Chavula was born in Lilongwe, Malawi, and is the eldest in a family of six children. She spent her early childhood in different parts of Malawi travelling with her family and attended several different public schools. During her primary school days, although never having seen a computer, she developed an interest in their potential through reading stories and articles in magazines.

Catherine studied at the University of Malawi, where she obtained a BSc in Computer Science and Statistics. Since 2006 she has taught in the Information and Communication Technology (ICT) department of Mzuzu University, a public university in Malawi, and as the only female member of the department she has a special place in mentoring its students. In 2011 Catherine gained an MSc in Computer Science from Essex University, United Kingdom, receiving a prize for outstanding performance in her work.

The PhD research focuses on technologies that can allow people to access online information in their local language even when the information is only available in other languages. Catherine is designing a semantic model for representing language data on the web, and investigating how these data can be used to access information using the Bantu languages used by many people in Africa. Her primary goal is to allow users with low levels of literacy to effectively search through data in their own language. She believes that human language technologies (HLTs) are critical for building ICT solutions that are relevant and suitable for local communities.

After completing her doctoral studies, Catherine plans to return to Malawi and continue teaching at Mzuzu University. She hopes to conduct more research in the area of ICT for development (ICT4D) with a focus on how HLTs can contribute to the socio-economic development of countries such as Malawi.
Adijat Omowumi Inyang was born and raised in Nigeria. As a child she grew up in a culture that believed science, engineering, and technology are unsuitable for women. However, she remained determined to build a career in biomedical engineering.

In 1997, Adijat came top in her class when obtaining a National Diploma in Science Laboratory Technology from the Polytechnic Ibadan, Nigeria. She then joined the Obafemi Awolowo University (OAU), Ile-Ife, Nigeria, where in 2004 she gained a BSc in Metallurgical and Materials Engineering. She remained at OAU to study towards an MSc in Materials Engineering, during which time she developed a new material for biomedical applications. Adijat became a teaching assistant at OAU in 2006 and since 2013 has been a lecturer in its Department of Materials Science and Engineering. She was awarded several scholarships by the University of Cape Town, where in 2013 she completed a PhD in Biomedical Engineering with research on the design of a novel meniscal implant. She was granted a patent titled “Knee Meniscus Prosthesis” in South Africa as a result of the novelty of the developed material and design.

Adijat’s postdoctoral studies are applying engineering to understand the functions of bones, joints and cartilages in healthy and diseased states. This understanding aids the design of implant materials with appropriate biological and mechanical properties to act as effective replacements for living tissue. She has a focus on designing a novel affordable shoulder implant with dual radii to more closely replicate the natural shoulder joint, which will be the first of its kind in Africa. She hopes that her project will contribute to the expansion of implant research in Africa and promote the use of indigenous implants.

After her studies, Adijat plans to teach at OAU and play a leadership role in coordinating ongoing research projects that are biomedical in nature, involving multiple university departments such as material science, electronic engineering, computer science and mathematics.
Busisiwe Ncube Kanyika was born in Kitwe and spent her teenage years in Ndola, two of the three largest cities in Zambia. Her mother had financial problems during Busisiwe’s childhood and had trouble paying for education as well as being evicted when she could not afford the rent. Despite these difficulties, Busisiwe excelled at school and went on to win awards as an outstanding student in Grade 9 and the best senior secondary science student. She developed a strong interest in the education of young people and is currently involved with projects that teach mathematics to children in South African townships.

Busisiwe was inspired to pursue a career in academia by her mother, who developed a sustainable business in horticulture. Busisiwe attended the University of Zambia, Lusaka, where she obtained a BSc in Cell Molecular Biology and Genetics followed in 2014 by an Msc in Plant Breeding and Seed Systems. Her masters’ dissertation looked to identify genetic markers that can be used in breeding studies for resistance to Early Leaf Spot, a fungal infection that damages groundnut crops.

The PhD project is focused on cassava, a staple crop that is crucial to rural farmers in the Sub-Saharan region, many of whom are women. These crops are prone to disease caused by viruses transmitted by whitefly. Busisiwe’s research hopes to better understand these viruses to identify gene mechanisms that might be utilized to counteract infection. The results of the work could be extended to other viral interactions that limit the yield of other useful crops in Sub-Saharan Africa.

After completion of her PhD, Busisiwe plans to return to the University of Zambia to perform teaching and research. Over the longer term she hopes to become a Professor in plant sciences and facilitate international research collaborations and funding for projects to improve agricultural yield.
Tendai KATIVHU

Tendai Kativhu was born, raised and attended school in Chiweshe, a rural area of Masholand Central, a province of Zimbabwe. Leadership in the country is highly male-dominated and, from a young age, Tendai was determined to help address this imbalance by becoming a female leader through education.

Tendai has a BSc in Geography and Environmental Studies from Midlands State University, Zimbabwe, and an MSc in Integrated Water Resources Management from the University of Zimbabwe. Since 2010 she has lectured at the National University of Science and Technology (NUST), Zimbabwe, where she teaches and helps students in the Environmental Science and Health and Public Health departments with their projects. Tendai also provides consultancy services to support water and sanitation projects in her country.

In common with many other developing countries, Zimbabwe faces challenges in the supply and management of water, especially in rural areas where women and girls are typically responsible for water management at household level. Several non-governmental organizations help fund the provision of water services, and one of the objectives of Tendai’s PhD study is to develop a standard sustainability conceptual framework as a decision support tool to help build more sustainable water supply services in Zimbabwe. This will be the first conceptual framework ever developed for such a vital service in a country that is also trying to address issues related to climate change, and HIV and AIDS pandemic, among other challenges.

After completing her PhD, Tendai intends to continue with postdoctoral research and publication of her work. Her long-term professional plan is to become a Professor in Water Resources Management specializing in rural water and sanitation. She also hopes to achieve higher academic postings in her home institution of NUST.

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Home Country
Zimbabwe

Degree
PhD in Environmental and Water Science

Expertise
Water Supply, Sanitation, Resources Management

Research Focus
Sustainability of Rural Water Supply Services

Host University
University of the Western Cape, South Africa

Fellowship Awarded
2015
Moleboheng Lekota was born and raised in the Quthing district of Lesotho, a landlocked country completely surrounded by South Africa. Her father worked to educate local farmers on how to apply the latest scientific research to their agricultural practices. He would tell Moleboheng about his discussions with the farmers, who would often complain about the problems that impacted their crop yields. This, combined with her family’s dependence on its own vegetable fields, inspired her to pursue a career in plant pathology and biotechnology.

Moleboheng obtained a Diploma from Lesotho Agricultural College, followed in 2003 by a BSc in General Agriculture from the National University of Lesotho where she won an award as the best student in the department. After this she spent four years as a horticultural research officer for the country’s Ministry of Agriculture. In 2008, Moleboheng received an Australia awards scholarship that enabled her to study at the University of Sydney towards an MSc in Agricultural Technologies, specializing in Plant Biotechnology. From 2010 to 2014 she worked as a Lecturer in the Department of Crop Science at the National University of Lesotho (NUL).

The PhD study focuses on understanding the molecular and biochemical mechanisms underlying resistance to powdery scab disease in potatoes. This vegetable is an important crop in many countries; however infections such as powdery scab reduce its quality and marketability. To date, no effective method for controlling the disease has been found and the pathogen that causes it is able to live in the soil for many years. Moleboheng’s study will help farmers to select types of potato that are genetically more resistant to disease and apply more effective disease control processes.

After her studies in South Africa, Moleboheng plans to return to her work as a lecturer and researcher at NUL. Her long term goal is to become a Professor in Molecular Plant Pathology.
Nusrat MUTTA BEGUM

Nusrat Mutta Begum was born in Mombasa, Kenya, and was brought up by her maternal grandparents. Chemistry, mathematics and physics were her favorite subjects at high school, and she hoped to become a doctor but due to financial hardship and other reasons was unable to do so. Nevertheless, she has pursued an academic career that has enabled her to improve peoples’ health in other ways.

Supported by sponsorship from her sister, Nusrat gained a BSc in Chemistry and Zoology from the University of Nairobi, Kenya. While an undergraduate, she was attached to the National Environment Management Authority (NEMA), which exposed her to the poor conditions of the Kibera slums in Nairobi. After graduation, she spent about two years with NEMA, which helped her to secure a position with Education for Sustainable Development in Africa, a United Nations University project. Through this appointment, she saved towards funding her masters’ course, and Nusrat was subsequently awarded an MSc in Environmental Chemistry, also from the University of Nairobi.

The MSc research related to environmental contaminants and occupational exposure to volatile organic compounds. It provided Nusrat with access to a UN accredited laboratory and training in pesticide residue analysis. From this knowledge in detecting compounds in water, she developed a PhD research project focused on eliminating pollutants in water. The research aims to reduce water contamination through a household filtration system that will cost-effectively destroy pathogenic microorganisms and reduce chemical pollutants. Due to unforeseen circumstances she started a new project towards the end of 2014. This current work entails designing polymers able to locate and release the antimalarial drug to infected red blood cells.

Upon completion of the PhD studies, Nusrat intends to return to Nairobi and join its education fraternity. She hopes to be part of a research team working with society and government policymakers towards a manageable clean environment for all.

Home Country
Kenya

Degree
PhD in Chemistry and Polymer Science

Expertise
Environmental Chemistry

Research Focus
Development of a Nanomembrane to Purify Water

Host University
University of Stellenbosch, South Africa

Fellowship Awarded
2013
Rumbidzai Muvunzi has always aimed at developing her life and has a long-held passion for engineering. She became the first person in her family to join the engineering profession, and loves knowledge and sharing it with others.

Rumbidzai obtained a BTech (Hons) degree in Production Engineering in 2009 from Chinhoyi University of Technology and received a prize for being best student in her department. In 2010, she became a Teaching Assistant at Chinhoyi University, where her areas of speciality include Manufacturing Technology and Operations Management. In 2012 she gained an MEng in Manufacturing Systems and Operations Management from the National University of Science and Technology, Zimbabwe. Her love for a career in academia compelled her to keep moving up the ladder, and to date she has six publications in journals and conference proceedings.

The PhD research focuses on the application of additive manufacturing (AM) to produce engineering tools that form shapes from sheet metal. AM is an advanced manufacturing process where physical products are created layer-by-layer through selective fusion, sintering or polymerization of a material. The technology can allow designers increased freedom of design, improve mass customization and produce longer-lasting and therefore more sustainable products. It is also expected to improve the sheet metal forming process through reducing energy consumption, improving quality, and lowering production costs. Rumbidzai hopes that the results of her research will help the development of the metal forming industry in her home country.

After obtaining her PhD Rumbidzai will be a senior academic, providing her with a higher profile platform to interact with young energetic people and share the skills she has acquired. She also plans to perform research work with outcomes focusing on development within Zimbabwe and across the world.
Esther LAMPEERA LUGWANA

Esther Nampeera Lugwana was born and grew up in Kitemu town, Nsangi Sub county, Wakiso District in central Uganda. Her father, mother and most of her relatives were farmers, which inspired Esther to pursue a career in the science of agriculture. Shortly after marrying an agricultural economist she took responsibility for the children of her four brothers after they and their wives all sadly died of complications related to AIDS. In total she looked after 12 orphans plus her own 6 children, one of whom also later died. With support from her husband she has helped most of the orphans through high school and is busy educating her own children as well as looking after her mother.

After completing high school, Esther joined Bukalasa National Agricultural College, Uganda, where she obtained a National Certificate and later a Diploma in General Agriculture. She then joined Makerere University, Uganda and gained a BSc in Agriculture followed in 2010 by an MSc in Crop Science.

Esther’s PhD research at the Jomo Kenyatta University of Agriculture and Technology focuses on green peach aphid (Myzus persicae) infestation of amaranth plants, species of which are cultivated as leaf vegetables and are important in the diet of many Africans. The aphids feed on leaves, extracting sap and transmitting plant viruses. They also secrete honeydew, which attracts fungi that infect the plant leaves. The aphids have developed resistance to chemical pesticides, which also have detrimental effects on other insect species and may also cause harm to humans. Esther is investigating alternative methods of controlling aphids using amaranth varieties that are more tolerant to aphids or chemical treatment of seeds, thereby avoiding the use of chemical sprays on growing crops.

Following completion of her studies in Kenya, Esther plans to return to Uganda to teach and conduct research. She hopes to establish collaborative projects between universities and organizations working in the field of crop protection in her home country and in other countries.
Mariam Nguvava was born and grew up in Tanzania, where she completed her school education and first university degree. Her mother did not complete secondary education but worked hard to ensure that Mariam was able to complete hers. Despite her father being unwilling to pay for secondary school education and wanting his daughter to get married at the age of 13, her mother remained adamant that Mariam should finish her studies and embark on an academic career in science.

Mariam obtained a BSc in Environmental Sciences and Management from the Sokoine University of Agriculture (SUA) in 2007. She then worked for a year as a Research Assistant on a wildlife conservation project for a non-governmental organization in Tanzania before returning to SUA as a researcher and lecturer. In 2010 Mariam received a scholarship from the German Academic Exchange Service that enabled her to study towards an MSc in Applied Marine Science and Oceanography at the University of Cape Town, after which she resumed her role at SUA.

The PhD research focuses on understanding the factors that control drought patterns in Eastern African countries including Tanzania, Kenya, Uganda, Rwanda, Burundi, Somalia, Ethiopia and South Sudan, and modeling how these patterns will change under the influence of climate change. This region has suffered extreme episodes of drought in recent decades that have had severe impacts on the population, in particular women, children and the elderly. Understanding and forecasting drought in the region will help to formulate early-warning systems and put in place plans to reduce its effects.

After completing her PhD Mariam plans to return to teaching and research at SUA, where she hopes to gain a professorship in the future. She is keen to encourage more young girls to study science and convince students they can pursue successful careers regardless of their gender.
Savannah NUWAGABA

Savannah Nuwagaba was born in Bushenyi, Uganda. Her mother is a primary school teacher and her father a farmer, and they believed in the importance of investing in education for their five children.

Savannah completed her undergraduate studies at Makerere University, Uganda, with a BSc with Education in Mathematics and Chemistry. She then received a scholarship from the African Institute for Mathematical Sciences in South Africa, where in 2011 she gained a Postgraduate Diploma in Mathematical Sciences. Following this she gained funding from Stellenbosch University to study towards an MSc in Mathematics, which she completed in 2013.

Human well-being depends on the ability of the ecosystem to provide food, fuel and fiber; however, many species are threatened by harvesting practices in fishing, farming, forestry and other industries. Savannah believes that better understanding of how communities of species interact to buffer the effects of disturbance is fundamental to continue enjoying our ecosystems. Her master’s thesis studied the architecture of antagonistic networks and examined how different ecological network architectures emerge and later influence the stability of ecological networks against perturbations. Using current evidence about the relationships between ecological and evolutionary processes, her PhD research builds on this and aims to understand eco-evolutionary dynamics of food webs. She hopes that the results of her studies will improve decision-making around practices to help maintain and enhance biodiversity.

Savannah hopes to find a position at Makerere University after her PhD studies. She is also considering transferring to Busitema University in eastern Uganda where there is a large gender gap in education due to factors including forced marriage and early pregnancy. She wants to influence changes in policy to create an environment where women can more freely develop themselves and contribute to society.
Edina Susan Farai Nyemba was born and spent much of her childhood in Nyanga, a small town in a rural area of Zimbabwe. She is the ninth child in a family of ten children, and her mother, who was deprived of education herself, worked hard as a peasant farmer to supplement the income of her husband—a temporary primary school teacher—to ensure the children could attend school. Edina attended secondary school in Harare, the capital of Zimbabwe, where she discovered computers for the first time and decided to pursue a career in a related area.

After graduating from high school, Edina joined Mutare Polytechnic College, Zimbabwe, where she obtained a Diploma in Computer Science. The course included an internship in the information and communications technology (ICT) department of Africa University, Zimbabwe, where she was subsequently employed while she completed her diploma studying part-time. Following this, Edina enrolled with the Women’s University in Africa, Zimbabwe, to study towards a BSc in Information Systems, which she gained in 2006. She subsequently completed an MSc in Information Systems at the University of Cape Town in 2012.

Edina’s PhD research focuses on finding a context-centric ICT solution to improve the delivery of water, sanitation and hygiene services to rural communities in developing nations such as Zimbabwe. She believes that by actively involving members of the local community in her research, they will learn how to find fit-for-purpose ICT solutions that can be used more efficiently and effectively.

After gaining her PhD, Edina plans to return to an academic position in her home country, where most university ICT departments are run by men. She looks forward to passing on her expertise to others, in particular women, and hopes to become a professor in ICT.
Elizabeth OKUMU

Elizabeth Okumu was born and raised in Nairobi, the capital and largest city in Kenya. She excelled at both primary and secondary school, specializing in science subjects and achieving top grades.

Elizabeth received a first class BSc in Electrical Engineering from the University of Nairobi (UON), majoring in Telecommunications. She then worked at UON as a graduate assistant until joining an MSc program in Electrical Engineering at Dar es Salaam University, Tanzania, which she completed in 2001. Her studies were sponsored by the German academic exchange service (DAAD), and included the opportunity to perform research at the University of Dortmund, Germany. Elizabeth's career began in Nairobi, however in 2009 she moved to Nakuru, Kenya, where she still works as a lecturer at Kabarak University.

Wireless communications applications are becoming more demanding and require ever greater capacity; however, the radio spectrum used for wireless communication is limited. Elizabeth’s PhD research aims to find ways to optimize the performance of wireless communications networks through the development of novel low-complexity algorithms that share the radio spectrum with other licensed radio spectrum users. Her solution should lead to more efficient use of the radio spectrum in the future and has the potential to contribute to the standardization of future wireless standards.

After finishing her PhD, Elizabeth plans to return to Kenya and resume lecturing at Kabarak University, where she also hopes to be more involved in research in her area of interest. In addition she expects to supervise the work of master’s and PhD students, as well as encouraging and influencing more girls to study science and engineering.
Irene ORINA

Irene Orina was born and raised in Kisii, Kenya, where she attended primary and secondary school. She lived in an area where many in the community considered education of girls to be unnecessary because their only roles in life should be as wives and mothers. Despite this prevailing attitude, her parents worked hard to educate their six daughters and one son, and Irene believes that this has set a good example in her home village to help change attitudes to women.

Irene joined the Jomo Kenyatta University of Agriculture and Technology (JKUAT) in 2002 to pursue a BSc in Food Science and Post-Harvest Technology, gaining a first class honors degree. She subsequently worked as a Teaching Assistant in the Department of Food science and Technology at JKUAT, then in 2012 Irene gained an MSc in Food science and Technology from the University and was promoted to a Tutorial Fellow.

The PhD research focuses on using X-ray computed tomography and associated multivariate data and texture analysis to monitor changes in the internal structure of maize kernels when infected with the fungus Fusarium verticilliodes. Maize is vulnerable to contamination by this and other fungi, which cause discoloration, biochemical changes, undesirable odors, weight loss and reduced rates of seed germination. Early detection of fungi can prevent contaminated material entering the food chain; however, to date methods used for detection have generally been expensive and time consuming. X-ray computed tomography is fast and non-invasive, enabling timely detection of contamination while maintaining the integrity of maize kernels.

After her PhD Irene plans to return to lecturing in the Department of Food Science at JKUAT, become involved in research projects in her area of interest, and supervise students in their own research projects.
Rakiya Saidu was born in the ancient city of Kano, northwest Nigeria, where she grew up along with her three sisters and five brothers in a strict Islamic household. Her father believed in giving girls the best education possible, and Rakiya completed primary school and secondary school in her home city. At school, she was especially interested in mathematics and sciences, particularly chemistry, and chose to pursue a career in medical sciences.

Rakiya began a bachelor’s course in medicine at the University of Sokoto (now Usman Dan Fodio University), Nigeria; however the University lost its accreditation to train undergraduate medical students, so she gained her qualification at the University of Maiduguri, Nigeria. During medical school, Rakiya won prizes as the best student in internal medicine, obstetrics and gynecology, pediatrics and pharmacology. Rakiya completed her professional postgraduate residency training at the University of Ilorin Teaching Hospital, Nigeria, where since 2008 she has also worked as a lecturer. In 2010 she obtained an MSc in Public Health from the University of Liverpool, United Kingdom and started her PhD work in Cape Town in 2014.

The PhD research focuses on cancer of the vulva, which can affect a woman physically, emotionally and sexually, as well as cause them to lose their self-esteem. The incidence of this cancer is increasing, especially among younger women, and evidence for the role of the immune system in vulval cancer is scarce. Better understanding of protective host immunity and predictors of worse prognosis will be critical to the design of new therapies for this cancer, particularly in populations with high concurrent HIV prevalence. The research may allow better staging of patients with vulval cancer and the design of more appropriate treatment plans.

Following her PhD studies, Rakiya plans to continue her lecturing role in Nigeria and also hopes to establish a cancer research laboratory with the support of her home university.
Jacqueline SENYAGWA

Jacqueline has a BSc in Environmental Sciences and Management from the Sokoine University of Agriculture, Dar es Salaam, Tanzania, and an MSc in Natural Resources Assessment and Management from the University of Dar es Salaam. For the last five years Jacqueline has focused on advancing knowledge in the field of environmental sciences and natural resource management for transformation of livelihoods in the developing world. She is a Research Associate with the Stockholm Environment Institute (SEI) Africa Center, which focuses on climate and energy; water, land and ecosystems services, and sustainable urbanization.

Jacqueline’s PhD research focuses on energy and development. Similar to much of the developing world, a large proportion of the population of Tanzania lack modern forms of energy. Jacqueline believes that sustainable energy solutions have the potential to not only transform the energy sector but also act as a driver for other sectors of economic importance including agriculture, which employs about 70% of the population of Tanzania.

In her early career development she was widely involved in action research in the education sector and community development projects. She is actively involved in community conservation activities through partners in the Institute of Resource Assessment at the University of Dar es Salaam. She has given talks to youth in different platforms and is involved in gender training and mentoring through the African Women in Agriculture Research and Development (AWARD) program.

After her studies, Jacqueline is looking forward to implementing her research ideas into reality by working with relevant partners such as the Tanzania Sisal Board, University of Dar es Salaam, small sisal producers and companies involved with marketing and developing sisal products. Other stakeholders include SEI and other international bilateral and multilateral development partners in energy and development.
Fiona SSOZI-MUGARURA

Fiona Ssozi-Mugarura was born and raised in Kampala, the capital city of Uganda. Her father was a medical doctor who worked in a rural hospital until he was transferred to Kampala when she was 10 years old, and her mother was a housewife who later started a tailoring business to supplement the family income. At high school, Fiona enjoyed studying chemistry and physics because they seemed to her more practical than many other subjects. When computers were introduced in the school she became fascinated by them and enrolled for a bachelor’s degree in Computer Science.

Fiona gained entry to Makerere University, Kampala. Thanks to funding towards tuition from a friend of her elder sister, she was able to graduate in 2005. The Faculty of Computing at the University retained Fiona as a junior staff member and awarded her a scholarship to pursue an MSc in Information Systems Management at London South Bank University, United Kingdom, which she completed in 2007. Following this, she returned to Makerere University where she has been teaching ever since. Fiona has also taken on some administrative roles including Quality Assurance Manager and Public Relations and Marketing Officer.

During 2011, Fiona participated in a community-based information and communications technology (ICT) initiative to help rural communities improve access to safe water. This made her aware of shortcomings in the systems used in this type of intervention, primarily due to minimal user engagement. This led her to explore a more user-centered system development methodology whereby rural community members participate in the design of the technology.

After her PhD studies in South Africa, Fiona plans to return to her job at Makerere University. She is passionate about translating research into practical solutions that can solve problems in the real world and are locally relevant. She hopes to continue working with rural communities and introduce appropriate technologies to solve some of their challenges.
Eva Liliane Ujeneza was born in Kigali, Rwanda, and spent half her childhood in Canada, where her parents were pursuing postgraduate studies. In her final high school examinations in Rwanda she was among five students to obtain the best marks in her district. She has been passionate about mathematics since she was a young girl, and still enjoys solving hard problems she has been working on. During her university studies she appreciated that although real-life problems often have no single solution, mathematical models can help to simulate a number of potential scenarios.

Eva obtained a BSc in Applied Mathematics from the National University of Rwanda, in 2009. She received a scholarship from the African institute for Mathematical Sciences (AIMS), Cape Town, South Africa to study towards an MSc in Mathematical sciences. She was then awarded another scholarship to attend the University of Cape Town (UCT), where in 2014 she gained an MSc in Environmental and Geographical Sciences.

Her PhD research is being performed at the South African Centre for Modelling and Analysis of Epidemiological Data (SACEMA), located at Stellenbosch University. Eva is modeling the reconstitution of the immune system of HIV positive patients that are on highly active antiretroviral therapy (HAART). Since their introduction in the 1990s, an increasing number of people are on HAART worldwide. This population is aging, and little is known about the long-term effects of these drugs on the immune system. Eva hopes that her studies will provide the global healthcare community with a better understanding of the potential impacts of HAART.

After her studies, Eva hopes to contribute to the tertiary education in Rwanda. Her plan is to lecture mathematics at undergraduate level using interactive learning techniques she learned while studying, and subsequently tutoring, at AIMS and UCT. She is also dreams of empowering women, especially those from resource limited settings.
Antonina Wasuna was born and grew up in Kisumu, Kenya. It was not until she grew up that she realized the sacrifices her parents had made, denying themselves luxuries so that she and her three siblings could have a good education. Chemistry and biology fascinated her in high school, and she subsequently decided to pursue a degree in Pharmacy.

Antonina excelled in her national high school examinations and gained admission into the Bachelor of Pharmacy program at the University of Nairobi – the only university in Kenya offering this degree course at the time. After graduation and completion of a mandatory one-year government internship, she registered as a pharmacist and worked in rural areas with high rates of HIV/AIDS often accompanied by tuberculosis (TB) co-infection. In 2010 she was awarded a 6-month research internship by Kenya’s Consortium for National Health Research, where she worked in a chemistry laboratory and started attending postgraduate lectures. She then decided to pursue an MSc and PhD in Medicinal Chemistry at the Drug Discovery and Development Research Unit of UCT.

The PhD focuses on discovering new chemical molecules with the potential to treat drug-resistant TB. It employs chemistry to synthesize the molecules, and then incorporates biology and pharmacology to provide a rational, prioritized approach to drug discovery. Antonina hopes this will hasten the global initiative to increase the pipeline of novel TB drugs, for which there is a critical need. In addition, in 2015, she participated in the prestigious Next Generation Scientist program at Novartis Institutes of Biomedical Research in Basel, Switzerland, a 3-month program for talented and motivated research scientists from emerging countries.

Upon the completion of her PhD, Antonina plans to return to the University of Nairobi in a teaching and research position. She wants to be part of a new generation of enthusiastic and capable mentors inspiring young people, especially women, to follow careers in science.