



# AIMS

African Institute for  
Mathematical Sciences  
NEXT EINSTEIN INITIATIVE

June 2016

# Network News

## Note from the President & CEO

## March, April and May have been landmark months for AIMS

Dear Colleagues and Friends, March, April and May have been landmark months for AIMS in many ways. I am extremely proud of what we have been able to accomplish as a network.

**T**he first Global Gathering of the Next Einstein Forum (NEF) in March stands out in my mind as a particular success. As the first global scientific gathering to take place on African soil, I think we reached our objective: to start a must-have conversation about how African scientists can contribute – and are already doing so – to solving global challenges. With our 15 NEF Fellows and NEF Ambassadors from all 54 African countries present at the NEF, we are bringing together a prolific African scientific community which, with support from public and private sector, will transform the continent for future generations. It was an honour to receive both President Kagame of Rwanda and President Macky Sall of Sénégal, both immense supporters of science for development, and patrons of the NEF. Well done to Arun Sharma, NEF Managing Director, and his team for doing a remarkable job.

AIMS is also expanding public engagement efforts, which deserve a special highlight in this newsletter edition. Recently, we were invited to speak at the World Economic Forum, on a headlining panel entitled “What Does the Fourth Industrial Revolution Mean to Africa?” I have just returned from the African Development Bank (AfDB) Annual Meetings in Lusaka, where I represented AIMS on a high level panel to discuss “Creating a Smart Africa – How the Continent Can Harness the ICT Revolution.” We also took part in the 11<sup>th</sup> Annual Conference on ICT for Development, Education and Training to discuss “Making Vision for Africa a Reality” through eLearning. It is great to see AIMS evolving to take part in conversations that make the link between development and education in mathematical sciences, showing that STEM can directly impact Africa's growth and transformation.

I would like to extend my deepest condolences to the family of Ms Pascaline Mané, Finance Officer at AIMS Sénégal, who recently



Mr Jean Lebel, President of the IDRC and Mr Thierry Zomahoun on a panel discussion at the NEF Global Gathering. She was a key member of the AIMS family and she will be missed.

I would also like to take the opportunity to welcome to the AIMS family Ms Lisa Melon, Senior Finance Consultant, Mr Adam Mukendi, Content and Community Manager and Ms Marie-Hélène Sinquin, Executive Officer, supporting and managing the affairs of the CEO's office. Ms Caroline Chiwah joined the AIMS-NEI UK office as the Finance and Treasury Manager. We also welcomed two

“ It was an honour to receive both President Kagame of Rwanda and President Macky Sall of Sénégal, both immense supporters of science for development, and patrons of the NEF.

interns, who join us through the University of Ottawa's cooperative education program in association with Queen Elizabeth Scholars: Ms Romi Archille, who will be assisting Mr Mark Heerden with the AIMS Industry Initiative and Mr Estan Beedell who will be working as part of the AIMS Communications Team.

Finally, as we work towards our 2016-2020 strategy and the relocation of our Secretariat to Kigali, Rwanda, I am thankful for the internal and external support we have received as an organisation. I anticipate a new dawn for AIMS, as we expand our efforts to meet our academic, research and public engagement objectives. I look forward to working with each of you to continue positioning Africa as the continent of the 21<sup>st</sup> century!

Sincerely,  
**Thierry Zomahoun**  
President & CEO



## Next Einstein Forum Global Gathering 2016

*The Next Einstein Forum's (NEF) Global Gathering, Africa's premier global science and technology forum, was held in Dakar from 8 to 10 March 2016. The gathering ended with a clear roadmap on how best to drive development through science, technology and innovation across the continent.*

**T**he NEF Global Gathering 2016 brought together more than 1000 global scientific and industry thought-leaders, political leaders and young scientists uniting to chart a new course for science-led development in Africa.

"This is a transformational moment for Africa and we would like to thank the President, Prime Minister and people of Sénégal for welcoming the international scientific community to Dakar," said Thierry Zomahoun, NEF Chairperson and President and CEO, AIMS. "Over the past three days, our scientists have showed us and the world that given the opportunity, they are able to do extraordinary things. Taking our African scientists out of the shadows and giving them the exposure on a global level, we're creating a youth-driven pan-African scientific community that must be sustained and expanded starting with our NEF Fellows and Ambassadors."

Moving forward, the NEF will focus on implementing the **Dakar Declaration**, a set of bold commitments to enable science-driven development by forging strategic partnerships, securing increased

*The 54 NEF Ambassadors, one from each African country, who participated in the NEF Global Gathering.*



investment, developing research capacity, encouraging education, empowering young African scientists and promoting diversity and women in STEM.

### Conference highlights and outcomes included:

- IBM Research and the NEF announced the launch of a **Visiting Scientist Program**, joining forces to promote the future of African scientific talent and advance the continent's knowledge economy. Through the collaborative agreement, five NEF Fellows will become visiting IBM scientists at IBM's global network of research labs in countries such as Kenya, US, Switzerland, China, India, Brazil, Israel, and Australia. The program is designed to give a boost to Africa's most promising young scientists and help set the pace and direction for the continent's cutting edge scientific research.
- The signing of a memorandum of understanding (MoU) between AIMS and Germany's Federal Ministry of Education and Research (BMBF), both organisations announced the establishment of five research chairs to strengthen research and support scientific exchange. The first chair has already been set up at AIMS Sénégal with NEF Fellow Moustapha Fall with others chairs in South Africa, Ghana, Cameroon and Tanzania to follow. In total, the program is valued at nine million euros.
- Alongside Neil Turok, AIMS Founder and Chairman and current Director of the Perimeter Institute for Theoretical Physics, NEF President Thierry Zomahoun, signed a letter of intent with the government of the Federal Republic of Nigeria to open an AIMS center in Nigeria.
- The AIMS Women in STEM Initiative (AIMSWIS) was also launched at the NEF Global Gathering 2016. As our flagship program focused on accelerating progress for African women in STEM, AIMSWIS has quickly earned commendations from the African Union Commission, the Government of Sénégal, Human Sciences Research Council South Africa, the Forum for African Women Educationalists, Johnson & Johnson, International Development Research Centre, among others.

The next NEF Global Gathering will be held in Kigali, Rwanda in 2018, which is now home to the AIMS headquarters, Africa's first quantum research centre, Quantum Leap Africa and the NEF secretariat.

To view videos from the event please visit

[www.youtube.com/channel/UCam1AxeVHla3F3pCPDZ3GxA/videos](https://www.youtube.com/channel/UCam1AxeVHla3F3pCPDZ3GxA/videos)

For more news stories please visit [nexteinstein.org/newsroom](http://nexteinstein.org/newsroom) ●

**AIMS-NEI VISION:** *Leading the transformation of Africa through innovative scientific training, technical advances and breakthrough discoveries that benefit the whole of society.*

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AIMS-NEI Network News is produced quarterly by AIMS Next Einstein Initiative. Contact : [info@nexteinstein.org](mailto:info@nexteinstein.org)





Above: Prof. Neil Turok. Below: Thierry Zomahoun.



# AIMS Founder Neil Turok donates Tate International Physics Leadership Prize to create Thierry Zomahoun Scholarship for Young African Mathematicians and Scientists

*The 2016 winner of the American Institute of Physics' John Torrence Tate Award for International Leadership in Physics, Prof. Neil Turok, announced that he is donating the monetary portion of the award, a US\$10,000 cash prize, to the African Institute for Mathematical Sciences (AIMS).*

**T**he donation will be used to initiate the Thierry Zomahoun Scholarship at AIMS, which will be awarded upon graduation to an African student currently taking the AIMS Master's at one of AIMS' five centres of excellence. Thierry Zomahoun has served as President and CEO of the AIMS organisation for the past five years.

"I would like this scholarship to encourage

students who come from disadvantaged backgrounds, overcome huge obstacles in their personal development, and show outstanding commitment to creating a better future for others," said Turok. "Thierry was a street kid who gained three Master's degrees and became an incredible manager and development leader. Africa needs more Thierrys!" ●

## AIMS Research News

## The BMBF and AIMS agree to create five research chairs in mathematics in Africa

**AIMS and the German Federal Ministry of Education and Research (BMBF) signed a Joint Declaration of Intent to establish five research chairs for Applied Mathematics in Africa.**



Mr Bernhard Kampmann (German Ambassador in Sénégal), Prof. Barry Green, Mr Thierry Zomahoun, Prof. Neil Turok, Dr Georg Schütte (BMBF) and Mr Frithjof A Maennel (BMBF).

**T**o be located at the AIMS centres in Sénégal, Ghana, South Africa, Cameroon and Tanzania the five professorships in applied mathematics – the so-called German Research Chairs will be coordinated by the Alexander von Humboldt Foundation.

Mr Thierry Zomahoun, President and CEO of AIMS, said, "Our long standing partnership with the German government continues to grow with this landmark commitment to propel scientific research. We believe that collaboration in science between African scientists and their global counterparts will enhance the kind of research that will lead to solutions for global challenges."



The German delegation visits AIMS Sénégal.

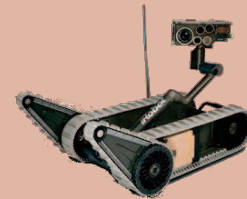
Dr Georg Schütte, State Secretary of the German BMBF, who attended the NEF Global Gathering said, "With AIMS, we are encouraging talented young Africans to study mathematics and all other disciplines which are founded on mathematics. We support them at these institutes so that they can learn to think ahead independently, solve problems and help to determine Africa's scientific and economic future."

The German Research Chairs will undertake research at the highest scientific level. In cooperation with the German Academic Exchange Service (DAAD), the German Research Chairs will be engaged in a lively exchange with German universities and other research institutions to create sustainable science structures. In addition to the international network, the research chairs are connected to at least one local university.

The BMBF is funding each German Research Chair over a period of four years with the total funding adding up to €9m. The goal, however, is to help each Centre develop their own competence and to eventually be independent of German funding in the long term.

During his time in Sénégal, Dr Schütte also took the opportunity to visit the AIMS Sénégal Centre. ●

# AIMS Alumni Small Research Grant supports an AIMS' alumnus' vision of establishing a research group in Robotics in her home country



*After graduating from AIMS in 2010, Dr Chika Yinka-Banjo completed her doctorate degree in Computer Science at the University of Cape Town in South Africa in, before eventually returning to her home country in Nigeria, where she plans on establishing a research group in the area of Robotics and Artificial Intelligence at the University of Lagos.*

**W**hile at AIMS, Dr Yinka-Banjo acquired an advanced appreciation of mathematical modelling skills and their potential applications. In her research at AIMS, Dr Yinka-Banjo developed a model that ensures that autonomous robots are able to detect and avoid obstacles as they carry out various tasks assigned to them. This informed her later desire of pursuing a PhD research project in Robotics at UCT. In her research at UCT, she developed a model that can guide multirobots to perform a pre-entry safety inspection in the underground mines/tunnels. This model which is applicable in the mining industry suggests strategies that curtail exposure of miners to underground mine accidents and disasters such as, inhalation of dangerous gases and exposure to mine roof fall. The benefits of such models are abundant and the results when implemented would catalyze the mining sector towards sustainable growth, reduce the loss of human capital which occurs from underground mine accidents, and set a foundation for building robots that can perform conventional and unconventional tasks that are too dangerous for humans..

Facilitated through the AIMS Alumni Small Research Grant (AASRG), administered by the African Institute for Mathematical Sciences (AIMS) under the "Research for Africa" project which is funded by the Canadian International Research Centre (IDRC), as an emerging female scientist, Dr Yinka-Banjo will now be able to realise

her vision of establishing a research group in Robotics and Artificial Intelligence at the University of Lagos in Nigeria. She has already resumed work as a full-time lecturer at the above mentioned university and the funds provided through AIMS will see to her rapid career growth within this environment. Dr Yinka-Banjo represents a classical example of an AIMS alumnus contributing to brain gain by returning to their home country specifically, and remaining on the African continent to contribute directly to teaching and research capacity building of young scientists in Africa, while introducing novel mathematical science research concepts and their applications. Her research which is linked to aspects related to Artificial Intelligence, Machine Learning, Swarm Intelligence, Robotics, Mathematical Modelling and their associated applications has the potential to advance knowledge and inform practices and policies in the mining sector in Nigeria specifically, and other countries in general. ●



## Co-op training class begins first work placements

**The first intake of the Co-op Training Program, done in partnership with the MasterCard Foundation, at AIMS Sénégal, completed their coursework on 1 April, and began their first work placements the following week.**

**T**he Co-op Program, the first of its kind in the AIMS network, aims to provide the same rigor as the AIMS Master's Program, with an additional seven months dedicated to obtaining hands-on experience in the workforce.

The program facilitates links with industry and business leaders to ensure relevance of the Co-op Program curriculum and promote strong experiential learning. Moreover, the program focuses on two-three key sectors of development, in collaboration with national and regional stakeholders.

AIMS Sénégal's Student Development and Co-op Manager Ms Barbara Thiane Diagne said, "This year, AIMS is partnering with several Sénégalaise organisations to provide a dozen paid internships."

Co-op student Serge Ghomsi Konga from Cameroon is interning with a local digital advertising agency, Firefly, SARL. The selection criteria were stringent and included multiple phases of interviews and tests. Ultimately, Konga chose this internship for two key reasons, "First, the organisation proposed a detailed, well-defined project that links with the training I received at AIMS and aligns well



with my professional goals. Second, this project integrates predictive real-time analysis with the methods of Machine Learning by using the Big Data components in view of the variety, volume and velocity of data to analyse."

"A Co-operative program is a proven solid method for students to acquire practical knowledge through experiential learning and for industry partners to participate in training qualified graduates, ready to enter the workforce, with the right combination of applied skills and theoretical knowledge upon graduation. We are very fortunate to have partnered with like-minded Sénégalaise organisations who share this belief with AIMS Sénégal and who are now hosting our 12 interns for this first year of our pilot program. In this era, where technology is always evolving and where new employees have to adapt regularly to changing labour market requirements, co-operative education will enable AIMS Co-op students to remain adaptable, employable and innovative. Co-op students will also bring back their experiential learning journey to AIMS as a whole, to continue empowering African youth to solve challenging issues and shape their future," said Ms Diagne. ●





Ms Poyamba (left) meets former President Bill Clinton.

## AIMS-MasterCard foundation Scholar attends Clinton Global Initiative University

**Ms Vester Poyamba  
Gunsaru, a MasterCard  
Foundation Scholar at**



**SCHOLARS  
PROGRAM**

**AIMS South Africa was one of 30 Scholars across the Program selected to attend the Clinton Global Initiative University (CGI U) 2016 at the University of California from 1 to 3 April 2016.**

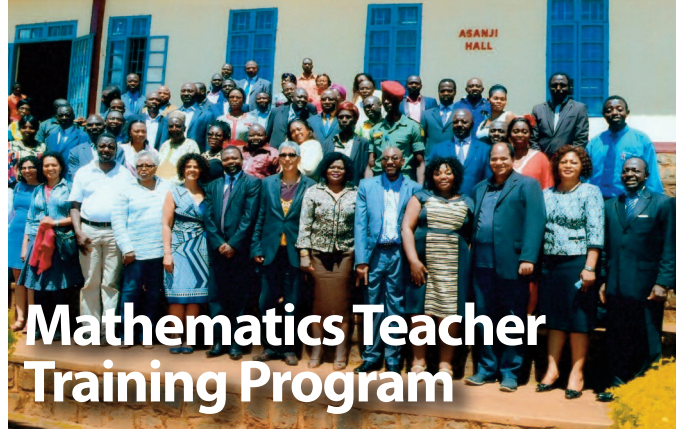
**M**s Gunsaru, originally from Malawi, applied to attend the event as she was very keen to enhance her skills, connect with mentors and network with a global community of like-minded students.

The event commenced with a MasterCard Foundation Scholars workshop which brought together the scholars from different universities around the world. "It was packed with activities from keynote speeches to CGI U success stories to skills building sessions. . . I also had the opportunity to attend a very informative skills session on funding innovations, methods and best practices where I learnt how to identify and approach possible funders," said Vester.

"But most importantly I met other young enthusiastic upcoming African leaders who had great ideas of how together we can create, change and give back to the communities that have helped shape us to what we are and what we are becoming. We were scholars from different fields, but all with the same goal in mind of taking action to make a difference, coming together and sharing ideas of how we can all take the first steps that are crucial for our change ideas."

"This was also a wonderful opportunity to network with a lot of other women in STEM who had started out with nothing but have excelled and achieved their goals with determination and ensuring they grabbed every opportunity they were presented with. Now I am not afraid to chase my dreams, because I have learnt that I can do it with the opportunity that I have been given as a MasterCard Foundation Scholar at AIMS."

"The final day of the CGI U was a day of action focused on community service. We worked on preschool, primary and high school buildings in one of the communities of Oakland, San Francisco. The activities included painting, agriculture and facility clean-up." ●



## Mathematics Teacher Training Program

*One year after the launch of the AIMS-MasterCard Foundation Mathematics Teacher Training pilot Program (TTP) activities, the constraints in achieving the planned results have been noted and an internal review meeting took place in Douala, from 31 March to 1 April 2016, and was chaired by Dr Dorothy Nyambi, Executive Vice President AIMS-NEI.*

**T**he meeting objectives were to appraise the current state of the program, explore opportunities for partnerships and establish operational guidelines. The meeting was fruitful and team members came up with very important action items which shall go a long way in improving the quality of program output and delivery in the field.

Following the internal review meeting and to assist in rapidly bringing on board the required technical resources and experienced partners to strengthen the overall design and delivery of a TTP Community of Practice (CoP) and e-learning, team members went on a visit to the African Virtual University (AVU) in Nairobi on 3 and 4 May 2016. The meetings concentrated on information sharing and presentation of both organisations with a view to giving participants insights into their activities and functioning. Key potential areas of collaboration which were identified included: the design of the CoP and e-learning platform; distance learning support; training materials support; design of the simulation Lab of 3 Higher Teacher Training College (HTTC) centres in Cameroon. A MoU is being drafted to facilitate this collaboration.



From 16 to 18 of May 2016, Dr Daniel Tieudjo, Director of the TTP also took part in the curriculum workshop of the HTTC at the University of Bamenda, a TTP partner. At this workshop he presented a joint paper with Prof. Mama Foupouagnigni on the theme: "The Role of Mathematical Sciences in STEM Education for an Emerging Cameroon".

In the presentation, he gave an overview of the TTP program, prerequisite for emergence, the role of STEM education in the emergence of Cameroon, challenges of STEM education in Cameroon and the way forward. ●

# 66<sup>th</sup> Lindau Nobel Laureate Meeting

*The Council for the Lindau Nobel Laureate has selected a number of AIMS Alumni to participate in the 66<sup>th</sup> Lindau Nobel Laureate Meeting taking place from 26 June to 1 July 2016, in Lindau Germany. Congratulations to Oladele Temitope Mary (AIMS Sénégal), Brice Dzokou Takamte (AIMS Cameroon) and Sidiki Zongo (AIMS South Africa). Only the most qualified young scientists were given the opportunity to enrich and share the unique atmosphere of the Lindau Nobel Laureate Meetings. The 66<sup>th</sup> Lindau Nobel Laureate Meeting is dedicated to the field of physics and will bring together Nobel Laureates and young scientists from all over the world*



**M**s Oladele Temitope Mary, from Nigeria, graduated from AIMS Sénégal in 2015. In 2014, she obtained a degree in Pure and Applied Physics at Ladoke Akintola University of Technology, Oyo State, Nigeria. She successfully combined her studies with work and other commitments like managing the finance of a Christian organisation, running a restaurant and acquiring entrepreneurial skills, showing herself to be self-motivated, capable of working under pressure and successfully meeting school and business deadlines. In order to satisfy

## Oladele Temitope Mary

**AIMS Sénégal 2015**

### Use of Photon Orbital Angular Momentum in Communication

her curiosity, she did an industrial engineering training workshop at a broadcasting station. There, she learned how information is carried over long distances and how they were being projected on a television.

After her undergraduate degree, a colleague told her about the AIMS program and she decided to give it a try. "Indeed, it happened, AIMS found me!"

"Every day at AIMS Sénégal held defining moments for me: The lectures and the discussions on how to apply mathematics in solving complex economic challenges; the daily five minute tests and problem solving sessions every Friday; the business and entrepreneurial talks; the "Aha" moments; the tears and big smiles on

our faces during the intensive and interesting thesis phase."

As a young researcher in the field of telecommunications with increasing interest in Photovoltaics, she did her Master's thesis on "The Use of Photon Orbital Angular Momentum in Communication", a study on how the orbital angular momentum (OAM) property of an electromagnetic (EM) field can be multiplexed with the independent spin angular momentum (SAM) property of the EM field in order to increase the channel capacity of information-carrying beams of light along a single transmission channel. She also recently completed an initiation to research phase with the Centre National de la Recherche Scientifique, France, on "The Effects of

Stiffener's nature in the Production of Ultra-thin Silicon Substrate for Advanced Photovoltaics". Her proposed PhD thesis is on "Graphene Doping and Characterization", and this research will be based on the study of the many extraordinary compositions and properties of graphene to further improve the existing technology in photovoltaics (which could be an alternative means to power and electricity generation in Africa), and for flexible telecommunication devices through ground-breaking innovations.

She is passionate about imparting significant knowledge by giving back to society through teaching. Presently, she teaches physics in a Community Secondary School in Nigeria, with the strategy of reviving the passion for studying Physical and Applied Sciences among the students. She believes the passion being created in these young minds will be a step closer to finding the next Einstein in Africa. ●



**M**r Sidiki Zongo, a national of Burkina Faso, grew up in the Ivory Coast and attended the University of Ouagadougou (UO), Burkina Faso, where he completed a BSc and an Honours degree in Pure Physics. He graduated from AIMS South Africa in 2011 and thereafter went on to complete an MSC degree in Physics with the University of the Western Cape. "When it comes to my

## Sidiki Zongo

**AIMS South Africa 2011**

### Physics, laser based research and materials science

education, I will never let myself get distracted by the lack of means."

In 2014, he attended the Open Shanghai University in China. He is currently finalising his PhD at the University of South Africa in collaboration with the iThemba Laboratory for Accelerator-Based Sciences and the University of Angers, France.

His scientific work has been published in international scientific journals such as Applied Surface Science, Applied Physics, and Optical

Materials. Sidiki has participated in the first African light source road map meeting held in France in 2015 called "The Grenoble Resolution". He is attending the Centre for Science and Technology of the Non-aligned and Other Developing Countries research and training program in India. Sidiki was also selected to attend the prestigious 66<sup>th</sup> Lindau Nobel Laureate meeting in Germany 2016.

He has a great interest in laser-based research and development activities that

include optics, nonlinear optics and photonics. He also has an interest in materials science, nanotechnology and renewable energy and is planning to initiate a program of optics, photonics and nanotechnology at his home University in Ouagadougou.

From 2006 to 2008, he led the Association of Students in physical and mathematical Sciences at the faculty of Exact and Applied Sciences (SEA-UO) where he actively supported young women in Science through non-profit activities. At iThemba LABS, where he worked as a volunteer in 2013, he greatly contributed to the Abafundi project which assists high school learners in townships to prepare for their exams. He is an active member of the NANOAFNET and the Optical Society of America. ●



# Brice Dzokou Takamte

AIMS Cameroon 2015

## Diagnostics Reference Levels in Computed Tomography (CT)

**M**r Brice Dzokou Takamte, from Cameroon, joined the University of Dschang, Cameroon, to study Physics where he completed a Bachelor's Degree in 2011, and specialised in Condensed Matter Physics during his two years Master's studies.

"My motivation to study physics has been driven by my desire to understand the mechanism behind real world phenomena as they appear fascinating and crucial for human beings. Understanding the world around me by means of simple and elegant theories has always been my major curiosity and hobby since secondary school."

To further broaden his background and to develop strong Mathematical and Computing research skills, he applied to join AIMS in Cameroon where he completed a Master's Degree in June 2015. "This intensive one-year program covering topics involving mathematics, physics, computer science, chemistry and biology taught by eminent scientists from all around the world provided great insights into my career."

Since January 2016, Brice has been pursuing his PhD at the University of Dschang.



His research focuses on the establishment of Diagnostics Reference Levels in Computed Tomography (CT) examination in Cameroon. The goal of his work is to try make radiation levels that patients are exposed to in CT as low as possible, given that higher radiation doses increase the risk of cancer and leukemia.

In November 2015 he was among 13 shortlisted candidates from Cameroon that attended the African School of Meteorology and Civil Aviation in Niger.

Passionate about his research and hoping to reduce the number of cases of cancer and Leukemia in Cameroon, Brice maintains that his work will not be limited to minimising CT patient radiation dose levels but he will also apply mathematical sciences for the safety of aircraft movements. ●

## AIMS Gender Equality and Inclusion

### Women in STEM Initiative

The AIMS Women in STEM Initiative (AIMSWIS) is an AIMS flagship program dedicated to accelerating progress for African women in STEM through evidence-based reporting and advocacy, leveraging increased investments, adoption of best practices, engaging men and collaboration across African women in the STEM pipeline.

**I**t was launched during the NEF Global Gathering during the first AIMSWIS Consultative meeting on the development of a pan-African Agenda for Women in STEM. The consultative meeting brought together key actors from across Africa who are working on promoting African Women in STEM to discuss the development of a pan-African Agenda for Women in STEM and to agree on key priorities for moving forward collectively on this important issue.

Participants included members of the African Union Commission, a



representative from the Government of Sénégal, Human Sciences Research Council (South Africa), Forum for African Women Educationalists (FAWE), Working for the Advancement of African Women (WAAW) Foundation, the African Research Academies for Women, the Visiola Foundation, Johnson & Johnson, International Development Research Centre, NEF Ambassadors, the Consortium of African Diaspora in the United States (CADUS) and many others.

"The AIMSWIS Initiative is a game changer which will enable AIMS and our partners to accelerate progress for African women in STEM while engaging men throughout the process," said Karen Craggs-Milne, Director of Gender Equality and Inclusion at AIMS.

## International Women's Day celebrated across AIMS Centres

The launch of AIMSWIS also coincided with International Women's Day which took place on 8 March 2016. In celebration of this day, AIMS coordinated network-wide outreach events across all AIMS Centres to encourage more young women to enter the exciting world of science. AIMS published a selection of female AIMS alumni to showcase the variety of skills and applications our female are involved in. This publication is available for wider circulation at

<http://nexteinstein.org/wp-content/uploads/2016/03/AIMSWIS-Alumni.pdf>

AIMS South Africa and AIMSSSEC activities which took place from 7 to 11 March included visits to local high schools by staff members and women role models in STEM fields, a public lecture and a panel discussion by women scientists.

The public lecture by Prof. Nicola Mulder, Computational Biology Group, UCT was held on 8 March and titled: "Women in Science and the science of women – studying microbiomes." (The lecture can be viewed at

<https://youtu.be/FYAZHbi3Wxk>).

The panel discussion by women scientists, held on 10 March was titled: "Courageous Women with Careers in STEM." The panellists discussed aspects of the work they are doing and gave advice to young people who are considering entering the world of science. Members of the panel were: Dr Rejoyce Gavhi-Molefe (Mathematician, AIMS South Africa), Dr Tandeka Magcwebeba (Biochemist, Stellenbosch University), Ms Amanda Namba (Engineer, City of Cape Town), Ms Celiwe Ngwenya (Educationalist, Sun International), Ms Desiree Timmet

(Statistician, STATSA) and Ms Mmabatho Mokiti (Entrepreneur, founder of Mathemaniacs). (A video of this panel discussion can be viewed at <https://youtu.be/9zraptDPHLw>)

AIMSSEC visited various schools daily on a roadshow that attracted many learners and teachers. They presented learner-centred fun activities including solving a murder mystery, investigating Euler's theorem, making three dimensional objects and a quiz in mathematics language. Most importantly, learners benefitted from motivational talks by various successful guest women speakers who are from a range of STEM careers.





At **AIMS Tanzania**, a special ceremony was organised by female students on 8 March. Two hundred girls from five schools within Bagamoyo where the AIMS centre is located attended the event. The guest of honour was Mrs Ghati Mwita who has a Master's degree in Petroleum Engineering. The eventful day was quite emotional as a few girls broke down as they narrated the challenges that they face as women in pursuit of education. In the region where the centre is based there is a strong culture of preparing girls early for marriage and it is very difficult for the girls to cope with the pressure of fulfilling their parents and would be husbands wishes and many abandon school for marriage.

The day's program was full of motivating videos, games and topical speeches from the AIMS women students and Mrs Mwita. A unique contribution came from one male AIMS student who encouraged the girls by demonstrating how the girls and women in particular should view themselves as the stronger and not the weaker sex. He emphasized that at AIMS Tanzania, the female students were equally as good in mathematical sciences as the male students, if not better.

**AIMS Ghana** also organised a forum to mark International Women's Day. The forum brought together young men and women from second cycle and tertiary institutions within the Central Region to listen to and interact with speakers including an AIMS alumnus.

Three women in STEM, Prof. Aba Andam of the Ghana Academy of Arts and Sciences, Dr Nana Ama Browne Klutse, Manager, Remote Sensing & Climate Centre of Ghana Atomic Energy Commission and Ms Ethel Coffie, CEO of Edel Technology Consulting – through video, shared their experiences in their careers highlighting their achievements and some of the barriers they had to break in order to attain their current statuses. The speakers challenged the audience to pursue and support women in STEM.



An AIMS Ghana alumnus, Mike Ignatius Nelson, highlighted the need for men to support women in STEM. He enumerated some of the ways in which boys and men can support women to attain gender parity in STEM and encouraged his colleagues to support girls and women in STEM.

**AIMS Sénégal** together with SenChix, the Association of Women Computer Scientists from Sénégal, the Sénégalaise Association of Women Mathematicians (SWMA), and women mathematicians in the diaspora organised the one-day event titled: "Girls and Science : A Bright Equation" which was held on 5 March 2016 at University Cheikh Anta Diop of Dakar. This is the second edition of this yearly meeting. This year's guest of honor was Marie-Francoise Roy from the International Mathematical Union's Committee for Women in Mathematics (CWM).

The meeting brought together about a hundred young girls from public and private schools from all around Sénégal and women scientists who use science in many different ways in their work. Young participants had the chance to meet and chat with them about their careers. During their presentations, panelists talked about gender stereotypes related to their work as well as job opportunities in the sciences. They also advocated for greater diversity and more women students in STEM courses. Participants highlighted challenges and concerns, in particular the lack of computers in many schools.

At **AIMS Cameroon**, 13 students, a tutor and 4 staff members, all women, attended the International Women's Day celebrations that are held each year in Cameroon. They joined in the march carrying AIMS and STEM banners and listened to speeches on the progress of women empowerment, the future of women in Cameroon and their contribution to socio-economic growth. Back at the centre the NGO People Empowering People Africa gave a presentation to all the students on violence against women. ●



## AIMS Centre News

### AIMS CAMEROON

# International Young Women's Conference

**O**n 27 February 2016, five female students attended the "International Young Women's Conference". They gave a presentation on AIMS and how it is working towards the development of Africa, its role in mentoring and the importance of

mathematics in development. The 315 participants at the workshop were scholars from eight different secondary schools from across the country. AIMS students also handed out flyers and interacted with the students. ●



### AIMS GHANA

## Teacher Training

*AIMS Ghana also commenced with a program to train 256 Basic School Mathematics Teachers from five districts of the Centre Regional of Ghana.*

**T**he program sponsored by the Government's Ministry of Education and AIMS Ghana has the objective of demystifying mathematics. The 5 day training program was held from 18 – 22 May 2016, and topics covered included mathematical knowledge for teaching, technology in the classroom, using Excel to teach, collection and handling of data amongst many others. ●



# Hackathon at AIMS campus



**AIMS Ghana organised its maiden hackathon, dubbed 'Empowerhack', on 1 April 2016. Participants were tasked to develop prototype software in promoting science education among girls and computational research related to health.**

**T**hree out of six groups produced a prototype on early detection of cervical cancer, epilepsy, epidemiology investigation and early menopause management through a mobile app which will be built on during the CAMS workshop in July 2016.

Participants were excited with the results of their work, developing apps that will benefit society in such a short time. ●

## Students from Mfantseman Community Basic Schools visit AIMS Ghana



**F**inal year pupils from four communities within the AIMS Ghana's catchment area, Mankessim, Saltpond, Anomabo and Biriwa, assembled at the AIMS campus to interact with students and staff. The discussion centred around the importance of mathematics and science education and the role AIMS is playing to help African economies. The visitors were excited about the visit and the diverse role mathematics and science can play in helping shape the world. ●



## AIMS SOUTH AFRICA

### 2<sup>nd</sup> Mentoring session for women students

*This mentoring session, held on 26 April 2016, was a follow up to the initial meeting held in March to celebrate International Women's Day.*



**A**n introduction to the session was given by Dr Rejoyce Gavhi-Molefe and the mentors included Dr Simukai Utete (Senior Researcher, AIMS South Africa), and AIMS alumni: Ms Ephie Geza (PhD student, AIMS South Africa), Ms Eva Liliane Ujeneza (PhD student, SACEMA), Ms Omowunmi Elizabeth Isafiade (PhD student, University of Cape Town) and Ms Savannah Nawugaba (PhD student, Stellenbosch University). ●

## Research paper wins award

**A** paper by Dr Ian Durbach, a resident researcher at AIMS South Africa, also affiliated with the University of Cape Town and Ipsos Laboratories and Gareth Lloyd (Ipsos Laboratories) which was published in 2015 in the International Journal of Market Research, has won the journal's Collaborative Research Award for 2015. The Award is given annually by the editorial board to a paper which celebrates collaboration between academic researchers and agency practitioners. ●





The 20<sup>th</sup> edition of South Africa's National Science Festival (Scifest Africa 2016) was held in Grahamstown, in the Eastern Cape Province, from 2 to 8 March 2016.

The theme this year was "A Matter of Time". AIMS South Africa was represented by Ms Lindiwe Tshuma and Mr Dakalo Ramufhi from AIMSSEC, who conducted learner-based practical activities for learners of all age groups. Mr Ramufhi, a new tutor at AIMSSEC said, "This was an awesome experience for me because I have never inspired and put so many smiles on different learners' faces from

different parts of the country, all at the same time! Quite a lot of the learners kept asking for more information about AIMSSEC's activities. I hope I'm part of the team that attends Scifest Africa 2017 next year and I can't wait to be given the opportunity. It was an emotional experience at times to keep up with the learners' eager requests to have more mathematics sessions at their schools." ●

## SciFest Africa 2016



Participants at AIMS South Africa's 3<sup>rd</sup> Machine Learning JEDI workshop

The 3<sup>rd</sup> Machine Learning JEDI workshop funded by the Harry Oppenheimer Foundation, the National Research Foundation and AIMS South Africa was held from 6 to 14 February 2016. The workshop brought together fifteen students, post-docs and researchers interested in machine learning and artificial intelligence. Drawn from a variety of fields with the goal of building new, interdisciplinary collaborations, the participants worked on a number of projects including source extraction in radio astronomy, digital anthropology and deep learning.

The workshop on System Identification and Forecasting with Neural Networks, held from 4 to 8 April, was for researchers and practitioners working in optimisation, machine learning and designing complex systems. The main speaker was Dr Hans-Georg Zimmerman, from Siemens Corporate Technology, who has decades of experience in applying neural networks to industrial problems, for example energy demand and price forecasting, prediction of electricity output in renewable power systems and systems diagnosis. The 50 attendees, including students from AIMS South Africa, and the universities of Cape Town, Stellenbosch and KwaZulu-Natal, had the opportunity to learn about theory and practice of neural network system design and use.



Participants at the workshop.

### AIMS SÉNÉGAL

## AIMS Sénégal participates at the NEF Global Gathering 2016

Prof. Mouhamed Moustapha Fall, AIMS Sénégal's Research Chair, was honoured as a NEF Fellow and participated in the forum. As part of the Einstein Challenge, Prof. Fall hopes to understand the interplay between non local geometry and relativistic quantum mechanisms (RQM).

He stated in a press conference that he wants to make mathematics accessible to both the educated and illiterate in Africa by demonstrating the practical applicability of mathematics and benefits of optimisation.

This year's AIMS Master's class was also in attendance on all three days of the forum. Master's student El Hadji Ngom said, "NEF allowed me to be in direct contact with leaders in the field, both the scientific and political. For me, it was a moment for exchange with leading researchers and policymakers from universities and enterprises from around the world." ●

## Nadji.Bi partners with AIMS Sénégal on R&D activities

The pan-African start-up Nadji.Bi Group, one of the major African-based leaders in the Off-Grid Solar solutions industry, and AIMS Sénégal signed a partnership convention in March 2016 to enable AIMS students following the Co-op program to participate in the Research & Development activities of Nadji.Bi Group, within its innovation laboratory. The partnership will also include collaboration in terms of conferences, workshops etc. ●





## Falling Walls Lab competition

**EL Hadj Ngom, an AIMS Sénégal student was a finalist at the **Falling Walls Lab** competition for Sénégal.**

**H**is project was about breaking the walls of communication: helping decision makers take impartial optimal decisions about the most efficient way to mass communicate a message (whether through an advertisement or a warning about an epidemic, Ebola for example) via a mathematical model/problem solving tool he devised. He was one of 116 candidates to begin with and made it through to the final 18. As a finalist he received a certificate and will receive training from Promotion des Investissements et Grands Travaux (APIX). ●

### AIMS TANZANIA

## AIMS Tanzania supports Pi- Day

*AIMS Tanzania continued to co-host the international Pi-day event with the Mathematics Association of Tanzania. The event took place on 14 March 2016 and AIMS was represented by Dr Wilson Charles Mahera and a delegation of ten students.*

**A**IMS students made a presentation on the different uses of maths software like Sage, Latex and others. Many scholars from different schools were attracted to the AIMS Tanzania booth and asked the students a lot of questions concerning AIMS and how to excel in mathematics.

AIMS Tanzania donated two laptops as prizes to students who had been selected for their excellence in mathematics. AIMS also donated assorted gifts to the best performing girls in both the junior and senior categories of the competition and a total of 72 students



from different schools in Tanzania were awarded certificates supplied by AIMS.

Ms Paulina Mukonongo, the Director of Secondary School Education, was the main guest speaker at the event. She was one of many who recognised AIMS Tanzania for its efforts in promoting mathematics in the country. This year's event was attended by 300 students of which 170 were girls. ●

## AIMS Tanzania students visit local school



*On 17 February 2016, the MasterCard Foundation Scholars at AIMS Tanzania organised a visit to Eagle Secondary School, located in Bagamoyo, approximately 2km away from the centre.*

**T**he overall goal of the visit was to encourage and motivate students to work hard in their studies, with special emphasis on motivating students towards Science and Mathematics subjects. Twenty-two AIMS students participated in the exercise.

A total of 479 scholars took part in the activities which lasted about two and a half hours. Both the students and the teachers expressed their appreciation for the very useful activity and invited the AIMS students to come back and do more sessions. ●



## AIMS Students join University of Dar Es Salaam Research Masters' Program

**The AIMS Tanzania and University of Dar Es Salaam partnership has led to the admission of eight students to the Research Master's program at the University of Dar Es Salaam.**

**T**he students are: **Alaka David** (Nigeria), **Jason Sussan Anquandah** (Ghana), **Mawutor Kofi Amanfu** (Ghana), **Pacifique Batungwanayo** (Burundi), **Emanuel Ongondia** (Uganda), **Gaspar Laban** (Tanzania) and **Samwel Peter** (Tanzania). ●



# AIMS Tanzania partners with British Gas Tanzania to establish Centre of Excellence in Mtwara

AIMS Tanzania has partnered with British Gas (BG) Tanzania to come up with a master plan for a Centre of Excellence at Mtwara Teachers College at the extreme south coast region of the country.

The centre will deliver science teacher training targeting pre- and in-service primary and secondary school science teachers. The implementation of the project began in earnest in January 2016 and is scheduled to run till September 2016.

BG Tanzania is involved with the mining of gas in Mtwara region. As part of their commitment to provide enduring benefits to the communities and societies in which they work, they fund social investment programs and projects with a focus on STEM/post-primary education, higher education and livelihoods programs. Prompted by discussions with the Mtwara Local Government Authorities, it has identified the Mtwara Teachers' Training College as a potential focal point for social investment in STEM/post-primary education in the region.

Under its Big Results Now (BRN) initiative, the national government has made education one of six priority areas. There is a strong focus on teacher training, including expanding the provision and improving the quality of science and technology-related teacher training, both pre-service and in-service. BG Tanzania and AIMS Tanzania understand that the government, in collaboration

with its development partners, is providing funding to boost a number of 'Centres of Excellence' for science teachers' training across the country, prioritising teachers' training institutions that already have facilities for providing such training.

The Mtwara region is currently not benefiting from this support, because it does not have any local facilities where in-service teachers and teacher-trainees could be trained in the delivery of science and technology-related education. At the same time, this region is developing as a hub for the rapidly evolving on and offshore natural gas sector and is poised to experience increased demand for skills and services that require labour with good secondary education, including knowledge in science and maths. Among the local population there are high expectations about the employment opportunities that the natural gas sector should be harbouring. However, the region's educational attainment is well known to lag behind the national average.

In the longer term, the master plan and its implementation is meant to interest other funders to support BG's initiative. It is hoped that the centre of excellence model established in Mtwara will be rolled out to other parts of the country. ●



Mark Heerden visits AIMS Tanzania.

Prof. Kambarage, Vice-Chancellor of Malimu Julius Nyerere University of Science and Technology.

Executive Vice-President of AIMS-NEI Dr Dorothy Nyambi addressing students.

## Industry Initiative visits AIMS Tanzania

From 4 to 9 April Mr Mark Heerden, Director of the AIMS Industry Initiative, visited the centre and gave presentations to the students on career choices encouraging them to also consider entrepreneurial careers.

This visit coincided with a visit by Prof. Kambarage, Vice-Chancellor of Mwalimu Julius Nyerere University of Science and Technology, a new university located in the Lake Victoria region of Tanzania. He told AIMS students of his dream of creating a self-sustaining university which will in turn impart practical skills to its students to enable them to sustain themselves. He added that he was ready to offer job opportunities to those qualified to work with the university. The University of Science and Technology and

AIMS Tanzania have plans to enter into a working partnership and the MoU is at an advanced stage.

On 12 April, Dr Dorothy Nyambi, Executive Vice-President of AIMS-NEI, also visited the centre. She met with students and advised them that through the AIMS Secretariat they can be linked to industry or other institutions of higher learning. Dr Nyambi together with Prof. Mark Roberts, Rector of AIMS Tanzania, also had meetings with key officers in the Ministry of Education and the African Development Bank. ●

## AIMS UK

### New Partnerships

The Royal Statistical Society (RSS) and AIMS-NEI have signed the first AIMS ForExcellence MoU in the United Kingdom.



David Kribs (AIMS-NEI Canada), Prof. Ian Strachan (UG), Irene Tamajong (AIMS-NEI UK), Angela Tabiri (AIMS Alumnus & UG PhD student), Dawn MacDonald (AIMS-NEI Canada), Prof. Ulrich Kraemer (UG).



(Front) Irene Tamajong (AIMS-NEI UK) (Back) Hetan Shah (Executive Director, RSS), Prof. Peter Diggle (President RSS), Jenny Church (RSS), Prof. Ian Plewis (University of Manchester), David Kribs (AIMS-NEI Canada), Dawn MacDonald (AIMS-NEI Canada), Tendai Mugwaga (AIMS Alumnus).

The official signing ceremony took place on 3 May 2016 at the RSS offices in London. Another signing took place shortly afterwards on 5 May between AIMS-NEI and the University of Glasgow (UG).

The AIMS "ForExcellence" program has a mandate to collaborate with academic institutions worldwide, and includes partnerships with businesses,

foundations and private individuals. ForExcellence partners support AIMS educational centres in Africa in a variety of ways, including scholarships to support AIMS students, funding to support research initiatives and operation of the centres, fundraising support and in-kind contributions, internships or other employment opportunities for graduates, faculty guest-lecturers at AIMS centres, collaboration on research projects with AIMS students, post-graduate students to supply teaching





## L'Afrique est à la recherche du "prochain Einstein"

**sciencesetavenir.fr/Olivier Lascar/23 February 2016**

**EXTRACT:** Le "Next Einstein Forum" a lieu du 8 au 10 mars 2016 à Dakar. On y attend 500 participants : le NEF sera l'occasion de célébrer une nouvelle génération de scientifiques issue du continent africain.

<http://www.sciencesetavenir.fr/fondamental/mathematiques/20160217.OBS4865/l-afrique-est-a-la-recherche-du-prochain-einstein.html>

## Maths and science are the keys to unlocking Africa's potential

**theconversation.com/Prof. Neil Turok/26 February 2016**

**EXTRACT:** Computers, mobile communications, and medical technologies are the modern engines of commerce, prosperity and public health. Africa will remain sidelined in these areas unless it nurtures its own experts, pioneers, and innovators. This is the motivation behind AIMS, a network of training centres across the continent created to empower brilliant young Africans to become agents of change through advanced maths and science.

<https://theconversation.com/maths-and-science-are-the-keys-to-unlocking-africas-potential-55237>

## The Next Einstein Forum begins

**TEDBlog/Kate Torgovnick May/8 March 2016**

**EXTRACT:** Why did Albert Einstein have such a unique scientific mind? Because he came from a disadvantaged background, says TED Prize winner Neil Turok.

"When new cultures enter science, especially disadvantaged cultures, transformation can happen," he said today in his opening remarks at the Next Einstein Forum Global Gathering 2016. "I believe that the entrance of young Africans into science will transform science for the better." "Can you imagine a thinker who combines the brilliance of Einstein and the compassion of Mandela?"

<http://blog.ted.com/the-next-einstein-forum-begins/>

## Germany-Africa maths research collaboration launched

**Universityworldnews.com/Munyaradzi Makoni/9 March 2016**

**EXTRACT:** African and German experts have identified five priority areas in mathematical sciences for collaborative research, which will be pursued over the next three years under a new initiative expected to build research networks and help advance maths in Africa. The Deutsche Forschungsgemeinschaft – the German Research Foundation or DFG – and AIMS, met for two days ahead of the Next Einstein Forum's Global Gathering 2016 in Dakar from 8 to 10 March. The meeting between African and German mathematicians started off as a topic-finding discussion in areas drawn from mathematical modelling in the life sciences and the physical sciences, optimisation, statistical modelling, geometry and topology, and algebraic structures.

<http://www.universityworldnews.com/article.php?story=20160309144325390>

## Meet 15 of Africa's most brilliant young scientists – one of them could be the next Einstein

**mgafrika.com/9 March 2016**

**EXTRACT:** The first global gathering of African scientists, the "Next Einstein Forum", is taking place in Dakar, Sénégal. With over 1,000 people from more than 100 countries in attendance, it is shaping up to be the most significant global discussion yet in harnessing Africa's scientific talent. Among the delegates is a small group of 15 young African "fellows" who were selected for the impact of their work and to showcase some of the incredible research that Africa's scientists and technologists are doing.

<http://mgafrika.com/article/2016-03-04-africas-best-young-scientists/>

## L'Afrique veut garder sa matière grise

**l'Humanité.fr/Anna Musso/9 March 2016**

**EXTRACT:** Depuis hier, plus de 700 personnes, chercheurs, décideurs, industriels et chefs d'État, tracent l'avenir scientifique de l'Afrique au Next Einstein Forum, à Dakar, au Sénégal.

<http://www.humanite.fr/lafrique-veut-garder-sa-matiere-grise-601450>

## Einstein Forum Aims to Stem Africa Brain Drain

**Aljazeera/10 March 2016**

**EXTRACT:** Africa's top scientists, policymakers and start-ups have gathered for a landmark conference aimed at stemming the continent's brain drain and encouraging governments to nurture research in fields from virology to maths.

<http://www.aljazeera.com/news/2016/03/einstein-forum-aims-stem-africa-brain-drain-160310095834426.html>

## Interview with an African genius: why the next Einstein will come from Africa, the surprising countries leading the way and what's holding us back

**mgafrika.com/Samantha Spooner/11 March 2016**

**EXTRACT:** Neil Turok, is one of Africa's (and indeed the world's) best physicists, whose work has focused on understanding the universe's very beginnings. Together with Stephen Hawking, he developed the Hawking-Turok instanton solutions, describing the birth of an inflationary universe, asserting that, big bang or not, the universe came from something, not from nothingness.

<http://mgafrika.com/article/2016-03-09-africa-scientists-challenges-opportunities>

## A new forum hopes to bring Africa's scientific researchers together

**The Economist/12 March 2016**

**EXTRACT:** These four scientists are among 15 fellows who, together with 800 other academics, business folk and politicians (including the presidents of Sénégal and Rwanda), are gathered at the Next Einstein Forum, being held this week in Dakar in Sénégal. Next Einstein, the brainchild of Thierry Zomahoun, a Béninois administrator, is an attempt to scale up African science. . . The forum has grown out of the African Institute for Mathematical Sciences (AIMS), of which Mr Zomahoun is president.

<http://www.economist.com/news/science-and-technology/21694514-new-forum-hopes-bring-africas-scientific-researchers-together-crucible>

## New research and exchange initiatives to boost science

**universityworldnews.com/12 March 2016**

**EXTRACT:** A flurry of initiatives ended last week's Next Einstein Forum Global Gathering 2016 in Sénégal – including five new chairs to strengthen research and scientific exchange, a mathematics postgraduate training and research institute in Nigeria, a 'women in science' initiative and a visiting scientist programme involving IBM Research.

<http://www.universityworldnews.com/article.php?story=20160312145815896>

## Next Einstein Forum : la science africaine se réveille

**Le Monde Science et Techno/David Larousserie/14 March 2016**

**EXTRACT:** « Quelque chose de grand commence. La science revient à la maison ! », lance, triomphal, Neil Turok, directeur sud-africain de l'Institut Perimeter de physique théorique au Canada, le 8 mars, jour de l'ouverture du Next Einstein Forum. Et d'appuyer son propos sur l'importance historique de l'Afrique dans les sciences par des images d'une pierre gravée de motifs géométriques datés de 70000ans, trouvée en Afrique du Sud, et des célèbres os d'Ishango, des bâtons vieux de 20000ans découverts au Congo et considérés comme les premières preuves d'opérations arithmétiques. Il aurait pu ajouter que la première université fut créée à Fez, au Maroc, en 859, par une femme.

[http://www.lemonde.fr/sciences/article/2016/03/14/next-einstein-forum-la-science-africaine-se-reveille\\_4882711\\_1650684.html#THgVLI0Br1oSZ43a.99](http://www.lemonde.fr/sciences/article/2016/03/14/next-einstein-forum-la-science-africaine-se-reveille_4882711_1650684.html#THgVLI0Br1oSZ43a.99)

## Six Africaines qui font avancer la science

**jeuneafrique.com/Aimie Eliot/14 March 2016**

**EXTRACT:** Le continent est aussi un bouillon de culture scientifique ! Voilà ce que le Next Einstein Forum (NEF), qui se tenait du 8 au 10 mars à Dakar, a voulu démontrer en invitant les savants du continent à présenter leurs travaux. Parmi les invités, 40 % de femmes. L'occasion de dresser une liste - non exhaustive - des plus talentueuses savantes africaines.

<http://www.jeuneafrique.com/308295/societe/six-africaines-avancer-science/>

## Africa's Elite

**Nature/16 March 2016**

**EXTRACT:** How can architects and town planners help clinicians to tackle tuberculosis? What is space-time? These are among the questions being explored by African scientists who last week joined together to open the world's first truly pan-African scientific gathering. The Next Einstein Forum (NEF), held in Dakar, Sénégal, deserves to become a regular feature of the global science landscape. Its purpose: to publicly celebrate and support some of the most outstanding young researchers active in, or closely tied to, the continent.

<http://www.nature.com/news/africa-s-elite-1.19558>

## Et si le prochain Einstein était africain?

**Le Figaro/Cyrille Vanlerberghe/16 March 2016**

**EXTRACT:** Le prochain Einstein viendra-t-il du continent africain? Le rêve énoncé à voix haute en 2008 par le cosmologiste sud-africain Neil Turok a pris la semaine dernière la forme d'un grand rassemblement en faveur de la recherche en Afrique, le Next Einstein Forum, qui s'est déroulé du 8 au 10 mars à Dakar, au Sénégal. Pour les deux présidents qui ont inauguré la conférence, le Sénégalais Macky Sall et le Rwandais Paul Kagame, l'enjeu était clair: la formation des très nombreux étudiants africains dans les disciplines scientifiques et la recherche sont indispensables au développement du continent.

<http://www.lefigaro.fr/sciences/2016/03/16/01008-20160316ARTFIG00355-et-si-le-prochain-einstein-etait-africain.php>

## Start-up für den Kontinent

**zeit.de/Andreas Sentker/17 March 2016**

**EXTRACT:** Schulen bauen oder Universitäten gründen? Malaria heilen oder Schwarze Löcher erkunden? Im Sénégal diskutiert Afrika erstmals darüber, wie es seine Wissenschaft fördern will.

<http://www.zeit.de/2016/13/senegal-afrika-wissenschaft-next-einstein-forum>

## Africa's slow journey to becoming a global science hub

**nation.co.ke/26 March 2016**

**EXTRACT:** At first it seems improbable — a continent overwhelmed by conflict, poverty, hunger and illiteracy becoming the next hub of scientific research and innovation. But a gathering of world-leading scientists, heads of state, policymakers and business leaders at the Next Einstein Forum in Dakar, Sénégal was upbeat. Africans, they say, are stepping up after decades of academic isolation and inadequate support for science and technology from their leaders.

<http://www.nation.co.ke/newsplex/-/2718262/3134146/-/7oit6pz/-/index.html>

## Could one of these young African women scientists be the next Einstein?

**nation.co.ke/Dorothy Otieno/26 March 2016**

**EXTRACT:** It was this dismal record that led African and world leaders, policymakers, leading scientists and company executives from over 100 countries to the first global gathering of scientists in Africa in Dakar, Sénégal, to commit to prioritising the enrolment of women in STEM programmes at tertiary level. The leaders pledged to target 30 per cent women at the tertiary level by 2020, and increase the proportion to 40 per cent by 2025.

<http://www.nation.co.ke/newsplex/womeninscience/-/2718262/3134110/-/gqngpcz/-/index.html>

## Will the Next Einstein Come From Africa?

**BBC World Service/5 April 2016**

<http://www.bbc.co.uk/programmes/p03p862v>



**AIMS**

African Institute for  
Mathematical Sciences  
NEXT EINSTEIN INITIATIVE

**DAAD**



Federal Ministry of  
Education and Research

Alexander von Humboldt  
Stiftung/Foundation



**Google**

**Canada**

The MasterCard  
Foundation

**SCHOLARS  
PROGRAM**

**UKaid**  
from the British people



**IDRC**



**CRDI**

Robert Bosch Stiftung