



Network News

Note from the President & CEO

The year is shaping up to be a revolutionary one for science

Astronomers in Sutherland, South Africa, discovered the country's first new comet in 37 years, C/2015 G2 (MASTER), using the recently commissioned unmanned robotic telescope MASTER-SAAO in the Northern Cape region.

Scientists in the United States believe a new drug candidate, potent against all forms of HIV, could produce an effective vaccine against AIDS. Other discoveries include the first new antibiotic in 30 years, Teixobactin, found using an electronic chip to grow microbes in soil, physicists slowing the speed of light using a special device and changing our understanding of light and a European automaker finding a synthetic formula for diesel made from water and carbon dioxide, which could significantly impact climate change.

“ I believe our message is resonating with many audiences. ... the momentum for our cause is building and the consensus is that we need to place STEM among Africa's top investment priorities if we wish to see the type of long term development that will benefit Africans and the world. ”

Japan's Tokai University's best overall student this year was robotics and electrical engineering student Ufot Ekong of Nigeria. He began his impressive scientific career solving a 30-year old mathematics equation in his first semester that was previously deemed unsolvable. He then went on to win a Japanese language award for foreign students and developing two patents. His most recent achievement was developing an electric automobile that reached speeds of 128 km/h.

Stories like Ufot's confirm the importance of our task. Africa has many Einsteins who just need the right type of exposure and support to impact the world. AIMS, together with our partners, are working hard to offer this opportunity to more brilliant young people. We are also working to influence key stakeholders to invest in Science, Technology, Engineering and Mathematics (STEM) education and research to accelerate Africa's inclusive growth and position Africa as a hub of knowledge and discovery.



From left: Thierry Zomahoun, His Excellency Paul Kagame, President of Rwanda, and Prof. Neil Turok. See page 2 for more on this story.

I believe our message is resonating with many audiences. Whether with academics at Columbia University in the United States, business leaders in Morocco, e-learning experts in Ethiopia, the African Development Bank delegates in Ivory Coast, or world leaders at the World Economic Forum on Africa in South Africa, the momentum for our cause is building and the consensus is that we need to place STEM among Africa's top investment priorities if we wish to see the type of long term development that will benefit Africans and the world.

These last few months have been exciting. In addition to the many speaking engagements noted above, in May, AIMS Chair and Founder Prof. Neil Turok and I met with His Excellency Paul Kagame, President of Rwanda, to discuss plans for an AIMS centre in Rwanda. He immediately directed his Ministers of Finance and Education to work with AIMS for rapid implementation of the AIMS proposal.

Also in May, we partnered with Michigan State University (MSU), a first of many fruitful partnerships with higher education institutions in the United States. Our agreement with MSU provides a financial investment and faculty lecturers and researchers to support training and discovery at our newest centre in Tanzania.

Just recently, we held a panel discussion to officially launch a 5 year \$25 million partnership with The MasterCard Foundation. The panel discussion took place on the fringes of the World Economic Forum (WEF) on Africa held in Cape Town, South Africa, and discussed why and how STEM education and research needs sustained investment for Africa to reap the benefits of a scientific revolution.

On the public engagement front, AIMS played an influential role at the first Gender Summit on the continent in April. A delegation led by AIMS Executive Vice President Dr Dorothy Nyambi, which included several alumni, shared AIMS approach to engagement and increasing the number of women in mathematical

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The year is shaping up to be a revolutionary one for science

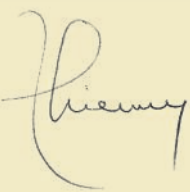
Continued from page 1

sciences in general. The Gender Summit came on the heels of the signing of an important Memorandum of Understanding with the Forum for African Educationalists (FAWE), a key partner in delivering on our targets to increase the pipeline of girls going into mathematical sciences and STEM more broadly.

A warm welcome to Prof. Aboubaker Beye, the new president of AIMS Sénégal and Patrick Hoese, the new representative for AIMS in Central Europe based in Germany. I look forward to working with you both to fulfil our mission to develop a generation of scientific leaders with global impact.

Let me conclude with a brief message to our graduating class of 2015. As you go out into the world, I am sure you are looking forward to new challenges in academia, civil society, business or government. On behalf of the executive team and AIMS as a whole, let me wish you the very best as you begin the next phase of your journey. We are proud of you.

Sincerely,



Thierry Zomahoun
President and CEO

Network News

AIMS Rwanda set to open in 2016



AIMS Rwanda alumni.

On 12 May 2015, AIMS Chair and Founder, Prof. Neil Turok and AIMS President and CEO Thierry Zomahoun met with Rwanda's President Paul Kagame who enthusiastically endorsed AIMS and tasked senior cabinet members, the Ministers of Finance and Education, to work with AIMS for the rapid implementation of the AIMS Rwanda proposal.

The proposal is an estimated \$60 million over five years. Prior to the meeting, Prof. Turok and Mr Zomahoun laid a wreath at one of the mass graves at the Kigali Genocide Memorial Centre where 250,000 people are buried, victims of the 1994 genocide in Rwanda.

During the visit to Rwanda, Prof. Turok visited with young entrepreneurs at Kigali's knowledge lab (kLab) before giving a public lecture on 'Mathematical Science: Driving Innovation and Transformation' at the University of Rwanda which was attended by six AIMS alumni from Rwanda, approximately 80 students from various scientific backgrounds including chemistry, engineering and architecture as well as the Deputy Vice Chancellor, Deans and Principals of the various Colleges at the University of Rwanda. In the



Prof. Turok and Mr Zomahoun laid a wreath at one of the mass graves at the Kigali Genocide Memorial Centre.

same week, Mr Zomahoun met with the Kigali Shapers, the World Economic Forum's Global Shapers hub in Rwanda to discuss "STEM Education: Key to an Emerging Africa" with participants enthusiastically asking questions around innovation. ●

Partnership agreement with Michigan State University

In April 2015, a partnership agreement was finalized with Michigan State University (MSU), which, as noted by AIMS Chair and founder, Prof. Neil Turok, "is a landmark agreement which sets a great precedent for partnerships with US universities." Michigan State University, one of the top research and teaching universities in the United States, will contribute \$50,000/year to the AIMS network, along with a number of MSU faculty lecturers and a PhD student tutor annually. Initially, MSU visiting lecturers and tutors will support AIMS Tanzania.



Mr Thierry Zomahoun and Dean R. James Kirkpatrick, MSU College of Natural Science.

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 and The MasterCard Foundation launch \$25 million partnership

On 4 June 2015, The MasterCard Foundation announced a \$25 million commitment to AIMS over the next five years.

This commitment will enable 500 academically talented yet financially disadvantaged students to pursue their Master's level education in science, technology, engineering and mathematics at all the AIMS centres. It will also support the creation of a teacher training pilot program to improve the quality of secondary-level math and science teaching in Cameroon and the pilot Co-op Master's Program in Sénégal to enhance school to work transition.

"We are excited to collaborate with AIMS, an institution that is changing the way we view the continent," said Reeta Roy, President and CEO of The MasterCard Foundation. "We share AIMS' vision of an Africa whose vast pool of young talent becomes a source of home-grown scientific discoveries and innovations."

The partnership breaks new ground for the Foundation on a number of fronts:

- **1. STEM:** With its focus on mathematical sciences, AIMS will be the first specialized, higher education partner in the Scholars Program.
- **2. Co-op Education Program:** 80 Scholars will have the opportunity to participate in an 18-month pilot cooperative education program. The program, an innovative new initiative, will provide work-integrated learning opportunities and potential career pathways for students.
- **3. Teacher Training:** Another groundbreaking initiative for both AIMS and the Foundation will include a teacher training pilot program that will train 3,000 teachers and improve the quality of secondary-level math and science teaching in Cameroon.
- **4. Women in Science:** AIMS will host an annual "Women in Science" event that will bring together partners, women scientists, AIMS and MasterCard Foundation Scholars to not only promote women's contributions to science, but also to highlight how science can make a difference to the lives of women.

The partnership was announced alongside a panel 'Investing in STEM for Africa's future' with H.E. Naledi Pandor, Minister of Science and Technology, South Africa, Thierry Zomahoun, President and CEO of the African Institute for Mathematical Sciences, Prof. Phillip Clay, former Chancellor of MIT and member of The MasterCard Foundation Board of Directors and Dr Tolu Oni, a 2015/16 Next Einstein Forum Fellow, and was moderated by the BBC's Alan Kasujja, Presenter



SCHOLARS PROGRAM



Above: H.E. Gaston Barban. Above right: The panellists: Dr Tolu Oni, Prof. Phillip Clay, H.E. Naledi Pandor and Thierry Zomahoun.

of Newsday. His Excellency Gaston Barban, Canada's High Commissioner to South Africa, gave an introductory speech. View highlights of the panel here:

<http://youtu.be/9a7bBqe8IH4>

In the lead up to the launch of the partnership, AIMS held various Program Implementation and Planning workshops (PIP) starting with a network wide meeting at the Secretariat in February 2015. In March 2015, a PIP was held in Sénégal on the Co-operative Master's Program.

The two-day meeting was attended by private sector companies working in ICT and renewable energy as well as representatives of the public sector and AIMS Staff. Following the PIP in Sénégal, a PIP workshop was held on the Secondary School Mathematics Teacher Training Program was held in Cameroon. The workshop brought together 39 participants including 21 from the Ministries of Higher and Secondary education, High Teacher Training Colleges (HTTCs) of Cameroon, inspectors and resource staff from the academic and scientific community in Cameroon and seventeen AIMS network staff. To hear more on the PIP in Cameroon, see the report from the *Cameroon Radio Television (CRTV)* (in French): <https://docs.google.com/a/nexstein.org/file/d/0Bx94o0p4kLE8REhLRkLaaksxSWc/edit> ●



The moderator, Alan Kasujja



Cameroon PIP



Sénégal PIP



Cameroon PIP

Countdown begins for Next Einstein Forum Global Gathering

The Next Einstein Forum (NEF) has made a lot of progress towards making its vision a reality in the last few months.

In March 2015, the International Steering Committee met in Dakar, Sénégal, where H.E. Prof. Mary Teuw Niane, Minister of Higher Education and Research of Sénégal, confirmed the intention of the Government of Sénégal to host the NEF Global Gathering from 8 to 10 March.

In parallel, the NEF has been building its profile in the world of science. In April, Dr Nkem Khumbah, the NEF's Executive Curator as well as Dr Mohlopheni Jackson Marakalala, a 2015/2016 NEF Fellow, attended the Africa Grantmakers' Affinity Group (AGAG) conference in New York where he spoke of the importance of empowering young people to go into STEM fields in addition to investments in early career scientists.

This coincided with the launch of the second round of NEF Fellows applications for 2015/2016 that closed on June 15. This round will see the last 8 of 15 Fellows selected to round off this year's NEF Fellows class. The NEF is excited to see the diversity of regions, scientific and technical disciplines in applications as well as the growing pool of female applicants.

The NEF team has been very active in rallying support for the NEF with various stakeholders. On 30 April to 1 May, Dr Nkem Khumbah attended the AAAS Forum on Science Policy and Technology Policy in Washington, DC where he met with key policy stakeholders. In the same week, Dr Khumbah spoke at the Clinton Global Initiative Middle East and Africa Conference on 'Investing in Youth: Basic Education: Bridging Access and Quality Gaps'. In the discussion, Dr Khumbah said, "We are now faced with the demographic environment where the tsunami of upcoming youth in this area will be African....the world has to conform to the African youth bulge and see it as a future breakthrough of development, the



From left to right: Dr Ingrid Wünnig Tschol, Senior VP – Robert Bosch Stiftung, Mr Thierry Zomahoun, President and CEO – AIMS and H.E. Mary Teuw Niane, Minister of Higher Education and Research – Republic of Sénégal at the recent NEF International Steering Committee meeting held in Dakar, Sénégal.

future of scientific creativity that will develop the next Microsoft, the next Apple corporation, the next Walmart, whatever they are. This is the talent creative pool. The world is coming to Africa. We [at the NEF] imagine that these young folks will not be recipients of something from our side, but the creators of a new world."

Also from 26 to 28 May, 2015, Mr Arun Sharma, NEF Managing Director, attended the Global Research Council meeting in Tokyo, Japan, where he lead discussions on 'Building Education and Research Capacity in Africa' and introduced the NEF concept to leaders within the global research community. In early June, Dr Khumbah presented the NEF at the Conference of Rectors, Vice-Chancellors and Presidents of African Universities held in Kigali, Rwanda. This meeting was critical to not only raise awareness among heads of African universities but also to get buy-in from academia on the continent on the need for a scientific platform where academia meets policy, industry and empowers young scientists.

In early June, another 2015/2016 NEF Fellow Dr Tolu Oni, participated in the AIMS-MasterCard Foundation panel discussion on 'Investing in STEM for Africa's Future'. Dr Oni represented early career female scientists and discussed the importance of interdisciplinary collaboration between scientific fields to solve common societal challenges as well as the barriers to progress that early career female scientists face and what needs to be done to overcome these.

In other news, the NEF recruited Denise Brennan as Operations and Project Manager, completing the NEF team. ●

AIMS attends the first Gender Summit on African soil

On 28 to 30 April 2015, AIMS staff and alumni attended the first Gender Summit on Africa soil held in Cape Town, South Africa under the theme "Poverty Alleviation and economic empowerment through scientific research and innovation: Better Knowledge from and for Africa"

In her keynote address, H.E. Naledi Pandor, Minister of Science and Technology said, "we need dedicated incentives to support and recognize women in research, we need to be creative in encouraging girls and women to pursue careers in science because if we do not address the pipeline our ambitions will not be realized." She went on to say, "we have to educate our nation to have a deeper appreciation of the brotherhood we must share on the African continent. Only through shared effort can we face the challenges that face our continent."

Through participation at the Gender Summit, AIMS strengthened its position as a leader in promoting women in STEM and gender equality in science in Africa. Dr Dorothy Nyambi, AIMS Executive Vice-President, gave a presentation titled: "Increasing female participation in Science through international collaboration as part of the panel session, International Collaboration in Gender and Science where she highlighted the need for continental partnerships to scale up models like AIMS



Minister Naledi Pandor visits the AIMS Exhibition at the Gender Summit.

which are increasing the pipeline of women scientists.

In a parallel session on Youth Engagement in STEM, AIMS alumni Dr Tendai Mugwagwa and Wole Solana and AIMS Director of Gender Equality and Inclusion Karen Craggs-Milne elaborated on how the AIMS educational model engages women and men in the promotion of gender equality and inclusion in science. Wole's thoughts on the role of men in promoting gender equality encouraged participants to engage in discussions that are also inclusive of men. AIMS alumnus Savannah Nuwagabai was appointed as a rapporteur and provided a wrap up for the theme: "Gender Expertise and People."

As chair of the session entitled "Benefits of STEM diversity in Operation," Karen Craggs-Milne closed the session by outlining the key elements of a more inclusive and holistic framework for generating better science. This framework was considered a key outcome of the conference. ●

Gender and Inclusion Training across AIMS

As part of AIMS commitment to promote gender equality and inclusion, AIMS has introduced network wide training that will be delivered on an annual basis to all staff, students and tutors.

Since January 2015, these sessions have been delivered in AIMS South Africa (February), AIMS Sénégal (March) and AIMS Cameroon (March) with an overwhelmingly positive response from both men and women. AIMS Tanzania and AIMS Ghana will follow in the coming months. ●

AIMS Cameroon students: Who think gender equality is important?



AIMS signs strategic partnership with pan-African gender equality partner FAWÉ

On 18 March 2015, AIMS signed a strategic partnership with pan-African gender equality partner Forum for African Women Educationalists (FAWE). Headquartered in Kenya, FAWÉ works in 33 countries to empower girls and women through gender responsive education using advocacy, research and key education interventions to impact government policies, build public awareness and encourage adoption of best practices to support girls' education. FAWÉ has developed a Science, Mathematics and Technology (SMT) model to increase and sustain access, interest and participation, and performance of girls in SMT subjects at all levels as well as a Gender Responsive Pedagogy (GRP) model to improve the quality of teaching and to ensure improved retention and learning outcomes for girls. AIMS will partner with FAWÉ to integrate their gender responsive pedagogy model into our teacher training program in Cameroon. We will also raise awareness about AIMS and engage FAWÉ's all-girl alumni networks across Africa to encourage girls to continue studies in mathematical sciences. ●

Gender training AIMS Cameroon students and staff.



AIMS Alumni



Ekoutiamé Ahlonkor

AIMS Ghana 2013

"AIMS enhanced my ability to be independent and confident, thereby opening new doors of opportunity. Going through AIMS provided me with more ideas about what to do with the centre and now we have many projects."

Applying mathematical skills to support policy-making and development

Ekoutiamé attended the Institute of Empirical Research in Political Economy in Benin and graduated with a Master's in Public Economics and Applied Statistics in 2009. Upon graduation, he identified the lack of accurate data for policy-making. As a result, he teamed up with two

like-minded young people and founded the Center for Research and Opinion Polls (CROP). The centre has become a reference for the dissemination of reliable statistical data in Togo, and provides data in various areas of development for policy making and implementation. It now serves both national and

international institutions for projects in Togo.

Looking for new tools to develop CROP, Ekoutiamé realized he needed further mathematical skills. AIMS provided him the perfect opportunity to immerse himself in mathematical sciences education. "AIMS enhanced my ability to be independent and confident, thereby opening new doors of opportunity. Going through AIMS provided me with more ideas about what to do with the centre and now we have many projects."

High quality data has become a currency for

accountability. It is essential for governments, institutions and donors to plan, implement and evaluate development projects, social initiatives and economic policies. For example, in 2011, Shanta Devarajan, Chief Economist of the World Bank's Middle East and North Africa Region, wrote that the 2005 estimates for poverty "represents robust statistics for only 39 countries for which we have internationally comparable estimates. And they are not even comparable over the same year."

Ekoutiamé believes that Africans, especially the youth, can contribute significantly to Africa's development challenges. "AIMS is not only a centre of excellence for training students in mathematics, but also bringing together African leaders of tomorrow, people who want to make Africa a better place for the future generations." ●



AIMS Cameroon

Prof. Neil Turok visited AIMS Cameroon in February 2015 where he lectured on “Electromagnetism and Relativity”. Prof. Turok accompanied Prof. Cedric Villani on a visit to the University of Buea, a partner university of AIMS Cameroon where they gave a public lecture to the scientific community. On the day of Prof. Turok’s departure, students presented a farewell speech in five different languages, showing how truly pan-African AIMS is.

AIMS Cameroon held its first AIMS family week from 13 to 19 April 2015. Students prepared and organized activities to show the surrounding community that AIMS was not only about the books but also about engaging their surroundings. Students, tutors, staff and associates participated in different sports and socio-cultural activities like a fashion show and a singing competition. There were also housekeeping, cleaning and catering competitions. A special ceremony was held on the last day to celebrate the winners. ●

AIMS Tanzania

In March 2015, AIMS Tanzania held an “Employment, Engagement and Enterprise Week” for its students and tutors in Bagamoyo where AIMS Tanzania plans to move. Workshops during the week focused on developing innovative ideas for new projects with facilitators from potential partners Ifakara Health Institute, Tanzania Meteorological Agency and the insurance company AAR. Another series of workshops investigated different approaches to engage the public with mathematical sciences. Members of the Tanzanian astronomy groups *Universe Awareness* and *Telescopes to Tanzania* introduced AIMS students to the idea that astronomy can be a powerful motivator of science and technology learning in schools. The creators of *Ubongo Kids*, a Swahili mathematics television animation series for children, described how they develop storylines and programmes. Facilitators from the UK creative engagement project *Einstein’s Garden* led a joint workshop with participants from TaSUBa, the Bagamoyo College of Arts, that culminated in a very lively performance of mathematical ideas on the final day of the workshops.

Also in March, the students and staff of AIMS Tanzania visited the University of Dar Es Salaam to thank members of the University, and in particular the head of its Department of Mathematics, Prof. Massawe, for their enthusiasm and dedication to establishing an AIMS Centre in Tanzania. Students were also introduced to members of staff from across the university who are keen to

collaborate with AIMS on the supervision of research projects.

In Tanzania ‘Pi-Day’ celebrations this year were organized by the Mathematics Association of Tanzania and AIMS



Students and tutors in Bagamoyo



Tanzania “Pi DAY”

Tanzania at a city centre showground in Dar Es Salaam where AIMS Tanzania students were joined by several hundred school children. The guest of honour, the Director of Secondary Education Hon Paulina Mkonongo, spoke of the Government of Tanzania’s recognition of

the importance of mathematical sciences in development. In his speech, Rector of AIMS Tanzania, Prof. Mark Roberts, emphasized the need to develop collaborations: “Mathematics does not live on an island. Its full potential as an agent of change can only be realized in partnerships with other disciplines and activities, and the crucial roles of teachers and schools. We need to ensure that students not only understand fundamental mathematical concepts and are adept at mathematical skills, but also that they see clearly the relevance of mathematics to the world around them.” ●

AIMS Ghana

Ms Regina Agyare, a social entrepreneur, spoke to students on 20 March 2015 about entrepreneurship. Ms Agyare, an Ashoka Fellow and a World Economic Forum Global Shaper, was featured on CNN as one of 12 inspirational women in STEM. She was also named one of the six women making an impact in Tech in Africa and one of ten female entrepreneurs to watch in emerging economies. She challenged the students, especially the women, to venture into entrepreneurship with the dream of impacting their communities. She encouraged students to pursue their dreams and never neglect Africa when they make it to the top. ●



Ms Regina Agyare



AIMS Ghana students with Ms Agyare

AIMS Sénégal

As part of industry activities, selected students from AIMS Sénégal attended the 10th edition of the AfricTalents Recruitment Forum held at the King Fahd Palace Hotel from 17 to 18 April 2015. On 25 April, students also went on an industry visit to Nestlé Sénégal. The visit was useful for both students and Nestlé, and it is hoped that this visit will help facilitate internships for students in Sénégal and in other countries where Nestlé has offices.

The German company, Energy Konzepte, visited AIMS Sénégal on 22 April 2015 to discuss a possible future collaboration for the Co-op program. Energy Konzepte works in the renewables sector.

On 18 May 2015, H.E. Bernhard Kampmann, German Ambassador to Sénégal visited, AIMS Sénégal to meet with Prof. Mouhamed Moustapha Fall, the Endowed Chair in Mathematics and its Applications based in the AIMS Sénégal Research Centre. The Chair is funded by the German Federal Ministry of Education and Research via the Alexander van Humboldt Foundation and the German Academic Exchange Service (DAAD).

A workshop titled "Mathematical Sciences for understanding real world



problems in Africa: Georgia Tech meets Sénégal" was held at the centre from 18 to 21 May 2015. The workshop was co-organized by the Ministry of Higher Education and Research, Georgia Tech and AIMS Sénégal. Its main objectives were to draw up a list of specific mathematical modeling projects of current interest to researchers in Sénégal and Georgia working on applied mathematics and computer sciences; and to build sustainable scientific and academic cooperation. ●



Above: Debriefing sessions with students and the management team of Nestlé Sénégal.

Far left: Fidèle Sonon, Francis Mandy, Dr Amadou Tall, Dr Dorothy Nyambi, H.E. Bernhard Kampmann, Prof. Moustapha Fall and Prof. Aoubaker Beye.

Left: Prof. Emeritus Evans Harell, Georgia Tech and the Minister of Higher Education Prof. Mary Teuw Niane at the workshop.



Dr Simukai Utete

AIMS South Africa

Earlier this year, Dr Simukai Utete was appointed as a Senior Researcher at the AIMS South Africa Research Centre specializing in robotics, with a focus on intelligent sensor networks for robotics applications. Dr Utete's undergraduate degree was in electrical engineering from the University of Zimbabwe and

she completed her MSc and DPhil studies at the University of Oxford and went on to do a Junior Research Fellowship and further research there as a Research Assistant. She moved to South Africa in 2008 to join the CSIR's Mobile Intelligent Autonomous Systems (MIAS) field robotics group, and in 2009 was appointed Research Leader of MIAS.

the state of Hessen, announced that five scholarships and travel grants had been awarded to AIMS South Africa for students to visit Hessen Summer Universities from June to August this year.

AIMS South Africa and AIMSSEC exhibited at the Scifest

Exhibition which was held in Grahamstown from 18 to 24 March 2015. Scifest Africa, South Africa's National Science Festival, was established in 1996 to promote the public awareness, understanding and appreciation of science, technology, engineering, mathematics and innovation. The theme for this year's exhibition was "Science Alight!" and the festival formed part of the United Nations International Year of Light and Light-based technologies. AIMS attended to give learners and students an insight into the various different applications of mathematical science through presentations and posters AIMS researchers worked on.

Mr Ian Solomon, Vice President of Global Engagement at the University of Chicago also visited the centre on 2 June 2015. ●

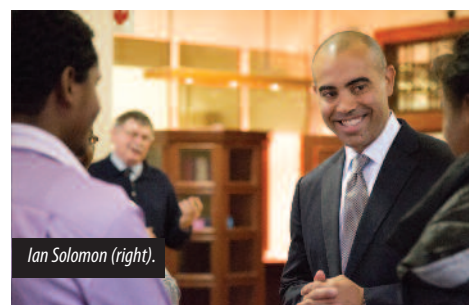


Scifest, Africa



Mr Volker Bouffier (left) and Prof. Barry Green (right).

On a visit to AIMS South Africa on 18 March 2015, the German Delegation led by Mr Volker Bouffier, President of the Federal Council of Germany and Prime Minister of



Ian Solomon (right).

More AIMS South Africa photos on page 8.



The 8th Summer School in Mathematical Finance
was held at AIMS South Africa from 19 to 21 February 2015.



The 3rd International Workshop on Nonlinear and Modern Mathematical Physics, held from 9 to 11 April 2015, was co-organized by AIMS South Africa, the University of South Florida, and North West University.



The African Symposium on Genome-Wide Association Studies for complex diseases (ASGWAS) conference held from 23 to 24 April 2015 at False Bay College, exposed an interdisciplinary group of scientists to the potential of GWAS and to key strategic considerations in designing and performing gene-mapping studies in the African Continent.



The workshop titled "Medical population genetics and Genome-Wide Association (GWAS) for complex diseases" was held at AIMS South Africa from 20 to 22 April 2015.

AIMS Visits

Members of the IDRC visit AIMS South Africa

On Monday 27 April 2015, Ann Weston, Director of Special Initiatives Division and Pèlagie Lefebvre, Program Management Officer with Science and Innovation, both from the Canadian International Development Research Centre (IDRC) visited AIMS South Africa

They followed several presentations including those of Dr Wilfred Ndifon and Dr Gaston Mazandu, IDRC Joint Career Development Chairs, Computational Biology and Bioinformatics at AIMS South Africa and AIMS Ghana, Dr Antoine Tambue, AIMS ARETÉ Junior Research Chair at AIMS South

Below: Dr Tendai Mugwagwa gives her presentation. Below right: Prof. Green welcomes the visitors.



Africa, and Dr Tendai Mugwagwa, an AIMS South Africa Alumnus currently at Imperial College London. Dr Mpfareleni Rejoyce Gahvi-Molefe, a postdoctoral fellow at AIMS South Africa, also gave a presentation and facilitated a session on mentoring for female AIMS South Africa students. ●





AIMS approach to science for development discussed in Ottawa

The African Union's Agenda 2063: Assessing the Development Vision for Africa conference was held in Ottawa, Canada on 12 March 2015.

Irene Tomajong, Director of AIMS-NEI UK was a speaker at the event. Angus Grant, Program Manager, Advancement and Habiba Chakir, Director, International Partnerships and Government Relations also attended the event. The conference provided the opportunity for AIMS to present AIMS' model of mathematical science education and its approach to STEM in Africa, through the lens of the African Union Agenda 2063, and, more pointedly, the Science, Technology and Innovation Strategy for Africa 2024 (STISA 2024). The AIMS' approach to science for development in Africa generated interesting discussions during networking periods. ●



Doaa El-Sakout,
Huma Malik,
Prof. Green and
Irene Tomajong.

AIMS presents at British Mathematics and Applied Mathematics Conference

Prof. Barry Green together with AIMS South Africa alumna Ms Doaa El-Sakout, presently working on a PhD at Heriot Watt University, gave a presentation at the joint British Mathematics and Applied Mathematics Conference held from 30 March to 2 April 2015 at the University of Cambridge. The visit was arranged by members of the AIMS-NEI UK Chapter, Ms Irene Tomajong, Director and Ms Huma Malik.

AIMS rallies for investment in STEM at Symphos Conference in Morocco

As the African economy continues to grow and transform, the agriculture and resource extraction sectors remain primary drivers for Africa's future prosperity.

AIMS, represented by President and CEO Thierry Zomahoun argued for the importance of investing in mathematical sciences education as a response to the skills gap and youth unemployment and as a tangible economic driver for the continent at the International Symposium on Innovation and Technology in The Phosphate Industry (Symphos) held in Marrakesh, Morocco, on 20 May 2015. "There can be no innovation without discovery and no discovery without research" Mr Zomahoun emphasized the need to reinvent our universities to be able to produce critical thinkers and problem-solvers that cut across all sectors. ●

AIMS model discussed at Columbia University African Economic Forum 2015

Mr Thierry Zomahoun, AIMS President and CEO, spoke on "Africa's Transformation through Innovation" at the African Economic Forum 2015 organized by Columbia University.

The presentation, which centred on the critical role scientific research and development in driving innovation, was followed by a lively discussion. Ms Bukekile Dube, the organizer of the conference had this to say on the AIMS presentation, "Your talk... was the most well attended of the conference. Our faculty, staff, students and guests are still talking about it. It's always nice to actually hear something pragmatic and useful, specifically your ideas on how maths and physics education are leading this transformation through solution-driven innovations. Your ideas certainly sparked a lively debate among all of those in attendance. I too do believe that the next Einstein will be from Africa! It was an honor for the Columbia University community to be able to hear your ideas." ●



AIMS stands for academic education at debate at e-Learning 2015 Conference in Ethiopia

In a lively parliament style debate on whether vocational education was not more valuable than academic education, AIMS stood against the motion saying that while we could not ignore vocational education, given high unemployment rates, academic education, especially higher education and research, were the critical foundation necessary to drive knowledge and innovation, the foundation of today's economic opportunities. Those for the motion focused on the inability of academic institutions to graduate work-ready students, and rising unemployment rates. Thierry Zomahoun, AIMS President and CEO, said, "vocational education is important but cannot replace the critical need for academic and research knowledge. This knowledge and research drives discoveries and innovation and therefore economies. Africa will continue to be a follower if we do not invest here." ●



AIMS challenges African Development Bank Young Leaders to place science at centre of development model



At the 2015 Annual Meetings of the African Development Bank, AIMS participated in a unique discussion with young leaders.

Unlike other sessions, this session placed young leaders at the centre of the discussion with experienced leaders participating as discussants. After a presentation by Mr Isaac Kwaku Fokua Jr. who spoke about the African Leadership Network's (ALN) vision of building leaders across Africa, AIMS President and CEO, Thierry Zomahoun, challenged ALN to look beyond their current model of mostly entrepreneurship and business as the only drivers for the continent's emergence. ALN has a 1500 strong network across public, non-profit and private sectors with a heavy focus on leadership. Mr Zomahoun argued that science education was critical to nurturing a new generation of leaders who will drive Africa's influence on a global scale. "From the make-up of the members of ALN, I can see that there are very little research scientists and very little venture capital in fundamental scientific research and development. For Africa to lead, we cannot invest only in process improvement or repackaging – which we have mistaken for innovation. We cannot just focus on commodities or the new commodities - services; to lead, we must be the ones discovering and developing technologies," said Mr Zomahoun. ●

AIMS urges full cycle investment in STEM education & research at World Economic Forum on Africa

On 3 June 2015, AIMS attended the World Economic Forum on Africa held in Cape Town to discuss one of three economic outlook trends for Africa: Education and Skills Development.

Thierry Zomahoun, AIMS President and CEO, urged participants to particularly focus on full cycle investment in Science, Technology, Engineering and Mathematics (STEM) education and research. Mr Zomahoun challenged the leaders present to look at best practice models as they pertain to using donor funds to fund STEM education; he also challenged them to invest in gender-responsive teacher training, scientists and science infrastructure, and long-term research and development, as well as look to innovative funding models which include global diaspora remittances. Mr Zomahoun also spoke about AIMS and Ashesi University as models that are reinventing Africa's universities to incubate problem-solvers. ●

AIMS in the News

L'Afrique à la recherche du prochain Einstein

Le Monde Afrique/Joan Tilouine/4 June 2015

EXCERPT: Depuis 2011, M. Zomahoun est PDG de l'Institut africain des sciences mathématiques (AIMS), un réseau panafricain de centre d'excellences pour la formation post-universitaire, la recherche scientifique et l'innovation qui a déjà formé plus de 750 diplômés. Sur un continent qui produit moins de 1 % de la recherche mondiale, l'AIMS est une expérience unique et originale. « L'accès à l'éducation de base, à l'électricité et autres, est la condition nécessaire pour un développement de l'Afrique. Mais les sciences peuvent indéniablement jouer un rôle crucial pour y parvenir, explique Naledi Pandor, ministre sud-africaine des sciences et des technologies. Il est temps que l'Afrique se soucie de ses scientifiques, les encourage, les valorise. »

Read the full article: http://www.lemonde.fr/afrique/article/2015/06/04/l-afrique-a-la-recherche-du-prochain-einstein_4647497_3212.html

Investment to boost African scientist numbers

Business Day/Tamara Khan/5 June 2015

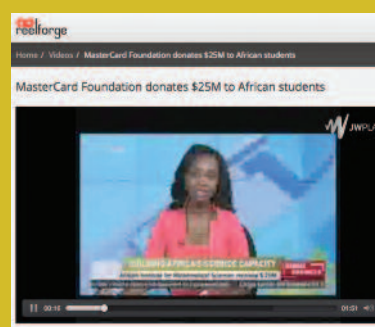
EXCERPT: "If we want to make good use of our resources we need homegrown scientists. Côte d'Ivoire produces cocoa, and look at the price we pay for chocolate," he said during an event taking place on the sidelines of the World Economic Forum Africa meeting under way in Cape Town this week."

Read the full article: <http://www.bdlive.co.za/national/science/2015/06/05/investment-to-boost-african-scientist-numbers>

A piece by CCTV:

View the full video:

<http://www.reelforge.com/reelmediad/video/2789625>.



SUMMARY:

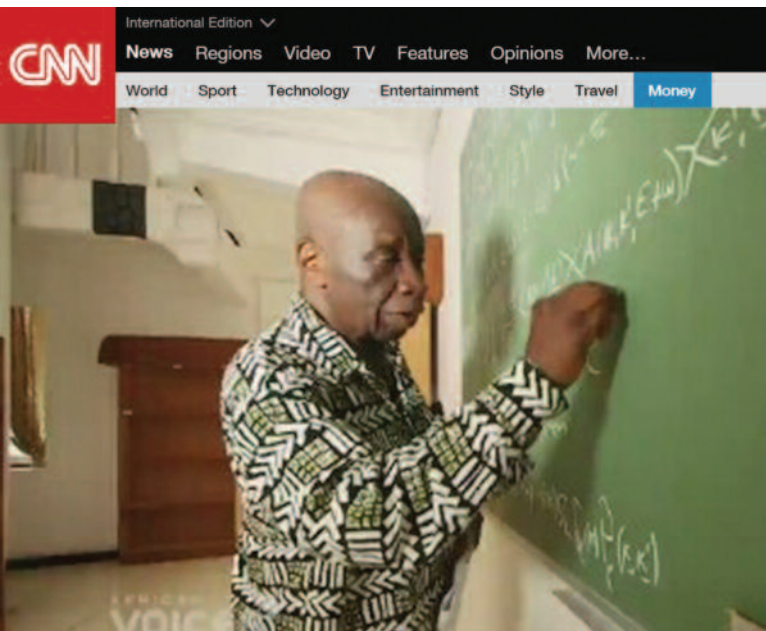
Science, Technology, Maths and Engineering students received a boost of \$25million commitment to the African Institute for Mathematical Sciences, this has been donated by MasterCard Foundation.

Africa's transformation is directly tied to a radical boost in access to STEM education

Thierry Zomahoun/venturesafrica.com/4 June 2015

EXCERPT: "Our goals are to train Africa's future mathematical scientists; invest in curiosity-driven science and discoveries that respond to African and global challenges; grow the pipeline of STEM students by engaging their teachers; and launch the Next Einstein Forum, Africa's first science forum."

Read the full article: <http://venturesafrica.com/aficas-transformation-is-directly-tied-to-a-radical-boost-in-access-to-stem-education/>



CNN African Voices

All Africa/Puneet Kollipara/27 October 2014

SUMMARY: Prof. Francis Allotey the President of AIMS Ghana appeared on CNN African Voices on 22 March 2015. He believes the next Einstein should come from Africa and is working to inspire the next generation of African scientists.

View the full video: <http://edition.cnn.com/videos/tv/2015/03/24/spc-african-voices-francis-allotey-a.cnn>



Mathematics and sciences to help solve Africa's problems

Rise and Shine Rwanda/15 May 2015

SUMMARY: The African Institute for Mathematical Sciences is a network of centres of excellence, including masters and PhD level training, teacher training and research. It includes ICT, physics, financial mathematics, robotics, and much more. About fifty students a year per centre come from forty two countries across Africa, to learn in an innovative way how to use mathematics to solve challenges across the continent. With five countries already on board, AIMS hopes to launch its sixth centre here in Rwanda.

View the full video: <https://www.youtube.com/watch?v=aSpKVXMvtXU>

Girls Who Love Math and Science Just Got \$25 Million Worth of Good News

Esha Chhabra/takepart.com/3 June 2015

Read the full article: <http://www.takepart.com/article/2015/06/04/mastercard-stem-education-Africa>

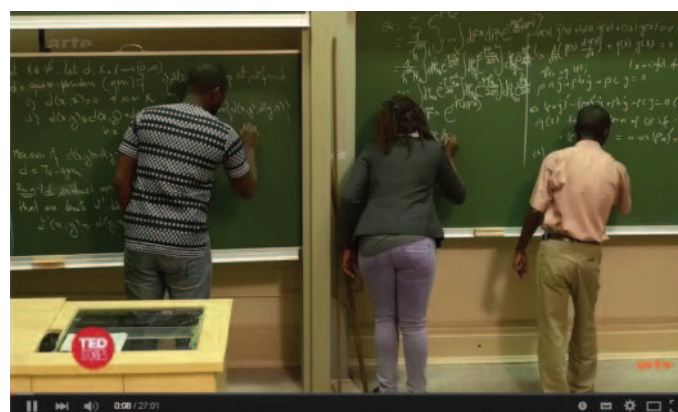
Cédric Villani: Mathematics is about progress and adventure and emotion



Carole Cadwalladr/The Guardian/1 March 2015

EXCERPT: "It's a project of the African Institute of Mathematical Sciences," he says via a crackly line. "I go every year and teach. I have a link as well with Algeria because my parents were born there. But anyway, I also consider it part of life, to do such cooperative things. And Africa is such a warm and joyful place that I always come back to Europe full of energy."

Read the full article: <http://www.theguardian.com/science/2015/mar/01/cedric-villani-mathematics-progress-adventure-emotion>



Neil Turok - Square TED Stories - ARTE

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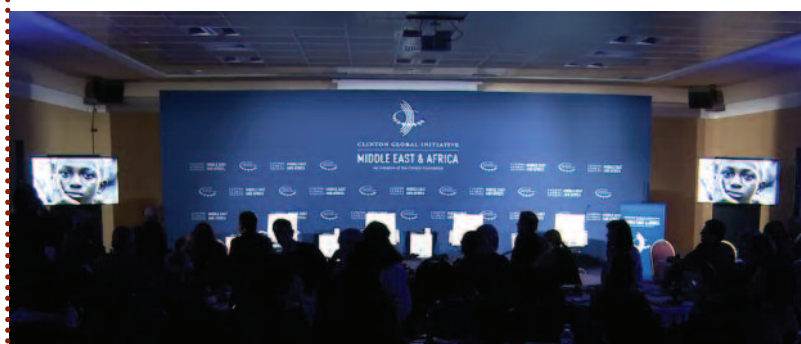
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Prof. Neil Turok featured on ARTE television

SUMMARY: The Franco-German TV network, ARTE, did a documentary on the journey of ideas exposed at the TED conference. The first in the series about Prof. Neil Turok and AIMS and was aired on 26 April 2015.

View the full video: <https://www.youtube.com/watch?v=fYG-hM2n85k>



NEF at 2015 CGI Middle East & Africa

SUMMARY: NEF's Executive Curator Dr Nkem Khumbah, was on a panel at the 2015 Clinton Global Initiative Middle East & Africa. The panel was titled "Investing In Youth: Basic Education: Bridging Access and Quality Gaps"

View the full video: <http://livestream.com/CGI/events/4008170/videos/86368738>

Bridging the Gender Gap

B Pollitzer, Portia UK Ltd/Scidev.net/13 May 2015

EXCERPT: "STEM and the economies are threaded together. It leads to job creation, with secondary ripple effects seen in areas such as housing and community development," said Dorothy Nyambi, head of global networks and programmes of the South Africa-based African Institute for Mathematical Sciences (AIMS).

Read the full article: <http://www.scidev.net/sub-saharan-africa/gender/news/gender-gap-in-science-technology.html#>

Will the Next Einstein Be a Woman from Cameroon?

MAKERS/13 March 2015

EXCERPT: "Around the world, women only represent 30% of researchers, but these four women are making a name for themselves and encouraging more girls to get involved in science, technology, engineering, and math (STEM fields), particularly in Africa. They all participated in a program called AIMS - the African Institute for Mathematical Sciences - that recruits students from across the continent to participate in a postgrad program taught by international professors. AIMS is building mathematical momentum so the next Einstein might very well be from Africa, and she'll be a brilliant woman."

Read the full article: <http://www.makers.com/blog/will-next-einstein-be-woman-cameroon>

Women and the mathematical sciences should make an amicable pair in Africa

Thierry Zomahoun/The East African/
14 March 2015

EXCERPT: "Over the past 10 years, the African Institute for Mathematical Sciences has actively changed perceptions and trained almost 800 African men and women who have gone on to make significant contributions in Africa and abroad. Our students are producing world class research and impacting industry in areas like financial modelling, which optimizes banking operations, mobile technologies, Big Data and infectious and non-infectious diseases. They are changing the continent's scientific landscape and impacting communities."

Read the full article: <http://www.theeastafrican.co.ke/OpEd/comment/Women-and-mathematical-sciences-an-amicable-pair-in-Africa/-/434750/2653178/-/11e89wl/-/index.html>

AIMS Alumnus to attend Noble Laureate Meeting in Lindau

Didam Duniya, a 2011 graduate from AIMS South Africa and currently an Astrophysics PhD student at the University of the Western Cape (UWC) will be attending this year's Lindau Nobel Laureate Meeting, from June 28 to July 3, where up-and-coming young scientists have the opportunity to interact with Nobel laureates.

EXCERPT: "This trip isn't just about me. What's important is what my selection shows: progress in science at UWC, and in Africa as a whole. It is my sincere hope that this will inspire young scientists at UWC and across Africa to work harder and aim to be among the world's top-ranking researchers. I believe the sky will be our limit - and the sky is limitless."

Read the full article: <http://www.uwc.ac.za/News/Pages/UWC-PhD-Selected-for-Lindau-Nobel-Laureate-Meeting-2015.aspx#.VSz7iuUd8E>



Prof. Neil Turok receives honorary degree from SU

Stellenbosch University/
22 March 2015

EXCERPT: At a graduation ceremony on 26 March 2015, Prof. Neil Turok, founder of AIMS and Director of the Perimeter Institute for Theoretical Physics in Canada was awarded the Degree of Doctor of Science from Stellenbosch University for his "innovative approach and excellent work to enhance the science landscape through exceptional scholarly contributions of global importance as well as programmes advancing science education at grassroots level in Africa."

Read the full article: <http://www.sun.ac.za/english/Lists/news/DispForm.aspx?ID=2334>

AIMS Statement on Xenophobic violence

AIMS joined various other organizations, governments, corporations and individuals in condemning the violence, while reaffirming one of AIMS most cherished values, pan-Africanism. The statement was published in media both in Africa, South America and in North America. The countries we reached included: Brazil, Ghana, South Africa, Rwanda, Guinea-Bissau, Liberia, Morocco, Zimbabwe, Ivory Coast, Mauritania, Tchad and the US.

Read the full article: <http://www.africa.com/blog/aims-condemns-recent-xenophobic-violence-in-south-africa/>



AIMS

African Institute for
Mathematical Sciences
NEXT EINSTEIN INITIATIVE



Robert Bosch Stiftung