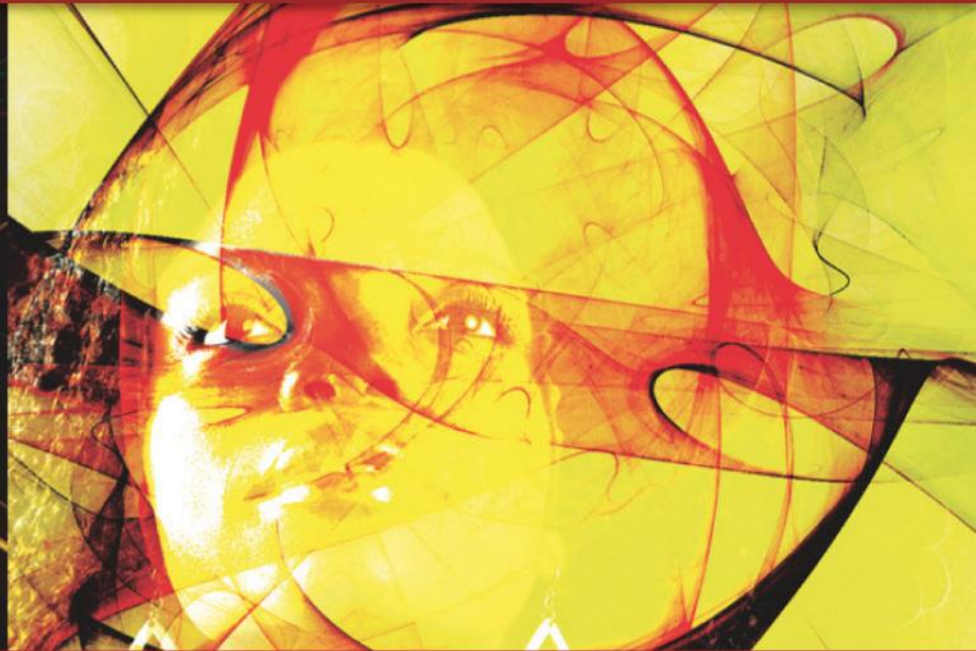




**AIMS
NEI**

**African Institute for
Mathematical Sciences**

NEXT EINSTEIN INITIATIVE



Regional Integration for Economic and Technical Cooperation

Dr. Christian Gruenler ETH Zurich 20 October 2014

About Us

- **African Institute for Mathematical Sciences (AIMS):**
A pan-African network of centres for training and advanced scientific research in the field of STEM.
- **AIMS Next Einstein Initiative (AIMS-NEI):**
An initiative to establish 15 AIMS centres across Africa by 2023.
- **Next Einstein Forum (NEF):**
A new global forum for science in Africa, an AIMS initiative in partnership with the Robert Bosch Stiftung.
The first forum planned for October 2015 in Senegal.



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NEXT EINSTEIN FORUM

An  AIMS initiative in partnership with the Robert Bosch Stiftung

Our Vision and Mission

- **Our Vision:** to lead the transformation of Africa through innovative scientific training and research.
- **Our Mission:** to enable Africa's brightest talents to flourish as independent thinkers, problem solvers and innovators.

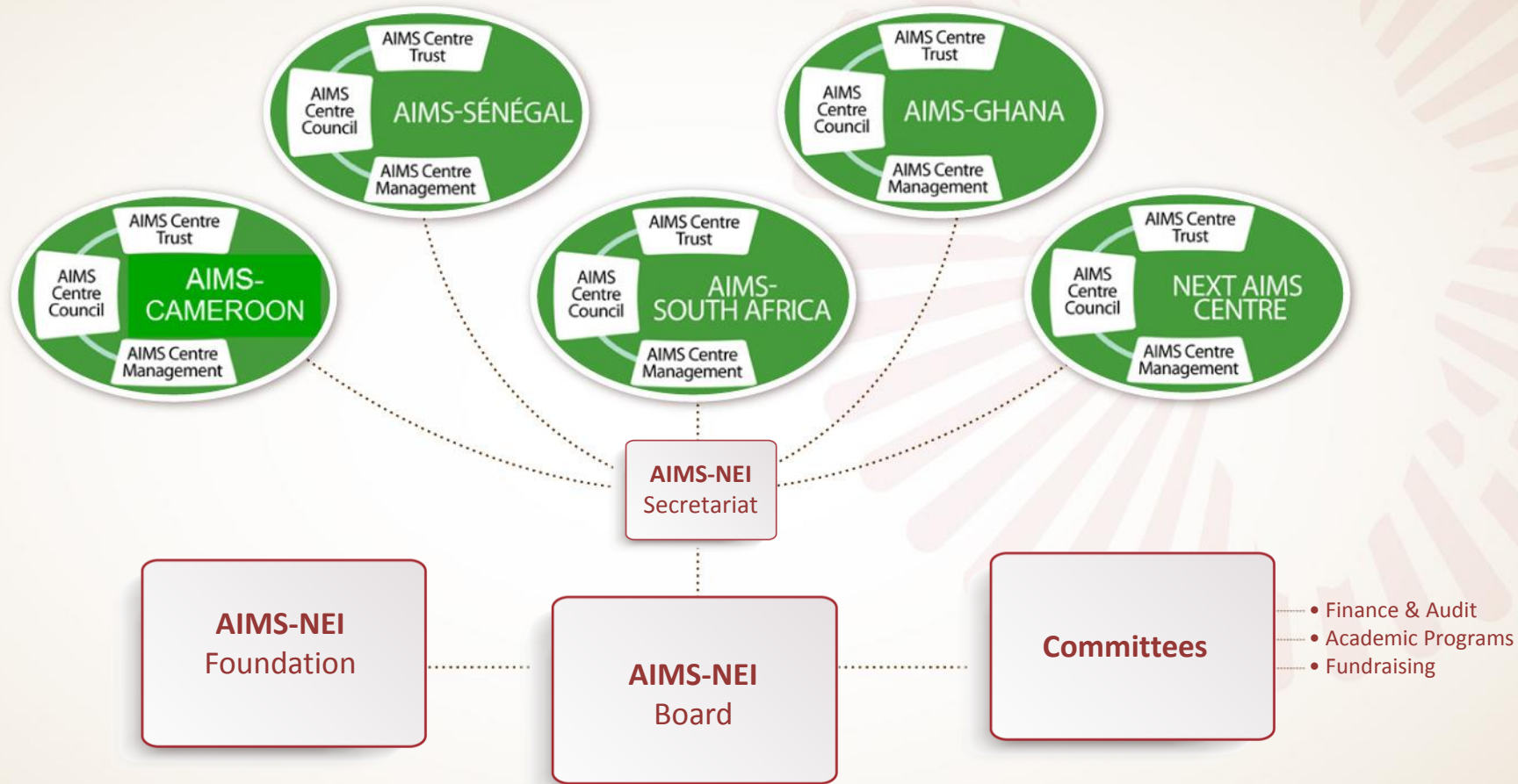
Also those who cannot afford to pay for university.



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The AIMS Model - Governance



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The AIMS Model - Taught Programme

A STRUCTURED ONE YEAR MASTER'S PROGRAM IN MATHEMATICAL SCIENCES



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The AIMS Model - Learning Environment

- **24/7:** Students, tutors, lecturers live together within a highly supportive community encouraging constant engagement and interaction
- **Excellent facilities:** Computer lab, top internet connection access to international scientific data bases, ...
- **Flexible:** A curriculum that can easily be adapted to industry and development needs and opportunities. Small study groups
- **International:** Students from all over Africa and researchers, lecturers and tutors from all over the world



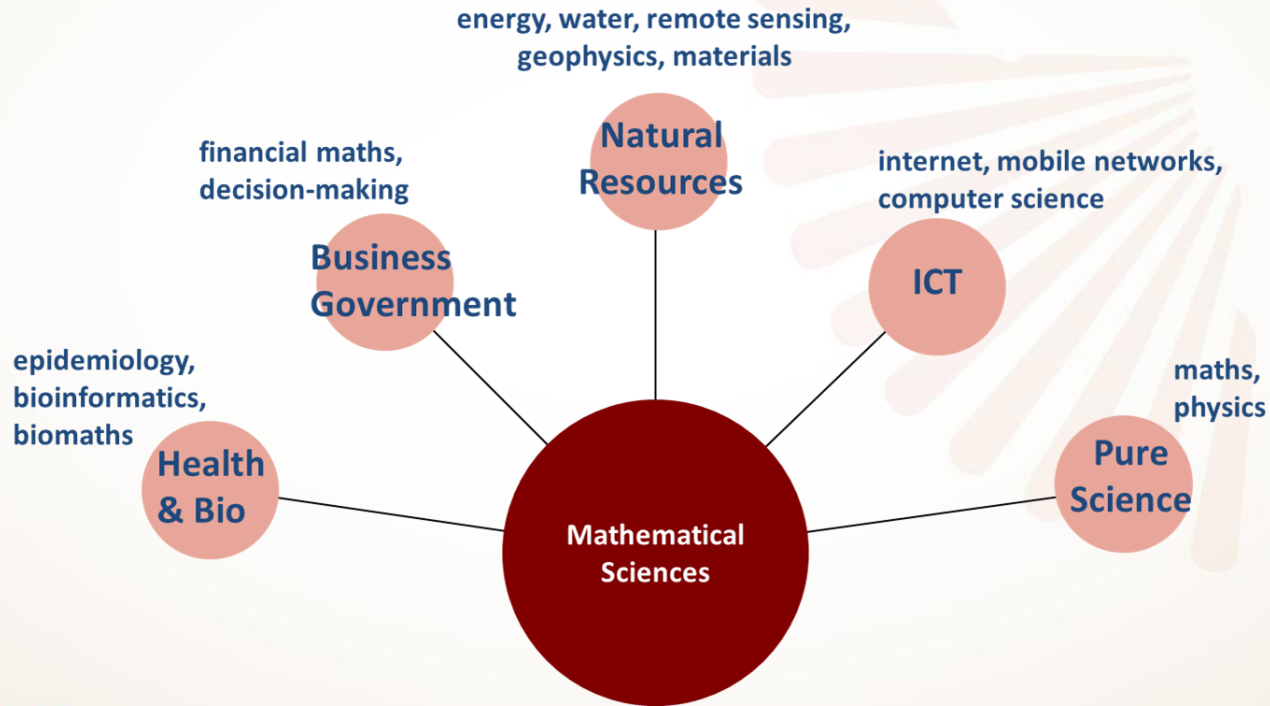
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The AIMS Model - Research

Mathematical Sciences research:

cheap, impactful, broad in scope - from traffic control to smartphone apps



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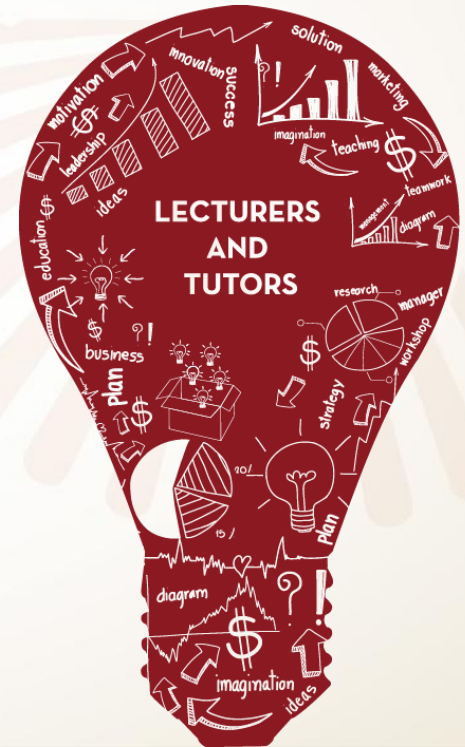
The AIMS Model - Lecturers and Tutors

Lecturers

- Outstanding pool of international lecturers - over 500 have volunteered so far
- Each centre selects 25 lecturers per year, each providing a 3-week course
- Local and international lecturers are encouraged to co-teach
- Opportunities for international exchange and collaboration

Tutors

- Each centre recruits 5-8 tutors per year
- Provide continuity and mentoring throughout the year
- Mix of African and international tutors



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Academic and Scientific Partnerships in Africa

- University of Cape Town
- Stellenbosch University
- University of the Western Cape
- SA Centre for Epidemiological Modelling
- SA Astronomical Observatory
- Centre for High Performance Computing
- Council for Scientific and Industrial Research, SA
- National Institute for Theoretical Physics, SA
- University of Cape Coast
- University of Ghana
- Kwame Nkrumah University
- Institute for Mathematical Sciences, Ghana
- University of Cheikh Anta Diop
- University Gaston Berger
- University of Thies
- University of Ziguinchor
- University of Bambey
- University of Buea
- University of Yaounde I
- ENS Cameroon
- Institut de Mathematique et Science Physiques, Benin
- Nelson Mandela AIST, Abuja and Arusha



Academic and Scientific Partnerships ex-Africa

- University of Cambridge
- University of Oxford
- University of Paris-Sud XI
- Centre for Discrete Mathematics (Rutgers)
- CRM, University of Montreal
- University of British Columbia
- University of Illinois at Urbana-Champaign
- Matheon/Berlin Math School
- TU Chemnitz
- Uni Kaiserslautern
- Uni Frankfurt
- Catholic University of Louvain
- University of Ottawa
- Simon Fraser University
- University of Victoria
- University of Waterloo
- Pierre et Marie Curie University
- Durham University
- Karlstaad University
- Nanyang University
- European School of Management and Technology



Other Partnerships

Host Governments

- Cameroon
- Senegal
- South Africa
- Ghana

Other Governments

- Canada
- UK
- Germany

Agencies, Institutes, Companies, Foundations

- Robert Bosch Stiftung
- NEPAD
- African Union
- UNESCO
- Perimeter Institute for Theoretical Physics
- International Centre for Theoretical Physics
- Cambridge University Press
- Blackberry
- Google



Achievements (2003-2014)

4 CENTRES OF EXCELLENCE

- AIMS-South Africa
- AIMS-Senegal
- AIMS-Ghana
- AIMS-Cameroon

731 ALUMNI

- 31% women
- 41 nationalities
- 60% currently in Africa

Post-AIMS Degrees

	Completed		In Progress	
	PhD	Masters	PhD	Masters
Total	70	260	180	112
Male	56	184	135	72
Female	14	76	45	40

164 scientific publications
by AIMS researchers

4 research chairs
at AIMS centres





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For further information:

Tutor Calls: <http://www.nexteinstein.org/teaching-assistants>

Teaching Slots for AIMS South Africa:

<http://www.aims.ac.za/en/apply/structured-masters-course-proposals>

Course Program:

<http://www.aims.ac.za/en/programmes/aims-structured-masters-in-mathematical-sciences>

Office Central Europe: Christian Gruenler cgruenler@nexteinstein.org



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