

# THE AFRICAN NETWORK FOR ECONOMICS OF LEARNING, INNOVATION, AND COMPETENCE BUILDING SYSTEMS

### 2<sup>nd</sup> International AfricaLics Conference 2015 Conference Proceedings

Theme 'Unpacking systems of innovation for sustainable development in Africa'

17 November - 19 November 2015 University of Rwanda, Kigali, Rwanda



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#### **ACRONYMS**

AAiT Addis Ababa Institute of Technology

AAU Addis Ababa University

ACET African Centre for Economic Transformation
ACTS African Centre for Technology Studies

AfricaLics African Network for Economics of Learning and Competence Building Systems

AJSTID African Journal of Science, Technology, Innovation and Development

ASB AfricaLics Scientific Board

Asialics Asian Network for Economics of Learning and Competence Building Systems

BRIC Brazil, Russia, India and China
CBE College of Business and Economics

CICALICS China Innovation Circles and Academy – Learning, Innovation and Competence Systems

CODESRIA Council for the Development of Social Science Research in Africa

DVC Deputy Vice Chancellor

EuroLics European Network for Economics of Learning and Competence Building Systems
Globelics Global Network for the Economics of Learning, Innovation, and Competence Building

Systems

GLT General Lecture Theatre

IERI Institute for Economic Research on Innovation

Indian Network for Economics of Learning and Competence Building Systems

KLARO Agricultural Research Organisation

KLARO Livestock Agricultural Research Organisation

Latin American Network for Economics of Learning and Competence Building Systems

LDCs Least Developed Countries

LICS Learning, Innovation, and Competence Building Systems

LTK Local Traditional Knowledge
MDG Millennium Development Goal

MEDAlics Mediterranean Area Network for Economics of Learning and Competence Building

**Systems** 

MISTRA Mapungubwe Institute for Strategic Reflection

PBL Problem-based Learning

SciSTIP Scientometrics and Science, Technology and Innovation Policy
Sida Swedish International Development Cooperation Agency

STI Science, Technology and Innovation

STIPRO Technology and Innovation Policy Research Organization

UAV Unmanned Aerial Vehicle

UDPK United Disabled Persons of Kenya

UNCTAD United Nations Conference on Trade and Development

UNDP United Nations Development Programme

UNESCO United Nations Educational, Scientific and Cultural Organization

UNU-MERIT United Nations University - Maastricht Economic and Social Research Institute on

Innovation and Technology

#### **EXECUTIVE SUMMARY**

The African network for Research Training on Innovation and Competence Building Systems (AfricaLics) is a network of scholars in Africa and beyond who are interested in innovation and development focused on Africa's development. One of the objectives of AfricaLics is to increase quality research in innovation within specific relevant areas for Africa's development and encourage its increased use by scholars and policy makers in the region and globally. One proposed activity towards this end is the conduct of annual conferences thus creating a platform for domestic scholars and international scholars to meet up towards achieving this endeavour.

The 2<sup>nd</sup> AfricaLics conference was the first conference to be held in Africa specifically focusing on the current state of research on African Innovation and Development. It took place in Rwanda from 17 – 19 November 2015 and was hosted by University of Rwanda, College of Business and Economics (CBE). It brought together 220 leading scholars from 30 countries working on innovation and development in Africa with the foremost scholars from outside Africa. It follows as successful 1<sup>st</sup> International miniconference that was held in Maputo, Mozambique in December 2013. This mini conference brought African innovation and development scholars together to consider neglected areas of research in the field of innovation and development. The output of this mini-conference was the funding of six collaborative small research and book projects that presented their findings during the 2<sup>nd</sup> International Conference in Kigali.

The Conference programme comprised of interactive activities namely research paper sessions and a series of special panel sessions discussing 'neglected' topics in the field. It also run a set of lunch hour sessions devoted to teaching and learning in the area of innovation and development targeting African universities. The event also consisted of an Open Symposium devoted to showcasing innovation and development in Rwanda and Africa in general. The Symposium allowed the public to attend and engage in debates on innovation and development in Africa, and Rwanda specifically. This report highlights the deliberations as well as other non-academic activities that contributed to a very successful training. Details of each of the activity are annexed to this report.

#### 1. BACKGROUND

Since AfricaLics' launch in 2012, it has since grown to having around 300 scholars who participate in our activities, most of them based in universities in Africa. AfricaLics has been running a research capacity building project since June 2013 (funded by Sida) that works with scholars, universities and policymakers to build research capacity on innovation and development. AfricaLics is run out of a Secretariat based at the African Centre for Technology Studies (ACTS), a research policy think tank based in Nairobi, Kenya, devoted to issues of science, technology, innovation and development (<a href="https://www.acts-net.org">www.acts-net.org</a>).

#### 1.1 The first AfricaLics Conference

The African network for Research Training on Innovation and Competence Building Systems (AfricaLics) is a network of scholars in Africa and beyond who are interested in innovation and development focused on Africa's development. AfricaLics is part the world-wide research network, The Global Network for the Economics of Learning, Innovation, and Competence Building Systems (Globelics), http://www.globelics.org/

The AfricaLics main objective is to promote the development of research capacity in Africa with strong links to users – including policy makers, private sector and rural communities. The work of AfricaLics intends to complement the research and capacity building activities of other players in innovation studies both in the academic and policy arena. One of the objectives of AfricaLics is to increase quality research within specific relevant areas for Africa and encourage its increased use by scholars and policy makers in the region and globally. One proposed activity towards this end is the conduct of an AfricaLics Conference as an annual event that typically combines an 'inner circle' of domestic scholars with an 'outer circle' of international scholars contributing to events and research training.

The first International Conference was held in Maputo in 2013. It was organised in from of a research workshop aimed at bringing together researchers from the innovation and development community towards providing a space for creative thinking concerning new research projects or research dissemination projects in this area. It was a first step towards the possible funding of new networked research projects that take cognisance of Africa's development in view of its unique context. The theme of the first conference were guided by a number of thematic areas that were agreed upon during the Dar es Salaam work as essential to the development of African economies and livelihoods. These are:

- The role of women in Africa's innovation systems.
- Work organization and competence building in formal and informal sector.
- Overcoming raw material curse through new manufacturing and service activities.
- National strategies to stimulate spill overs from BRIC-presence in Africa.
- Engineering design capacity building and economic development in Africa.
- Building Low-carbon Energy Innovation Systems.
- Agro-industrial innovation systems and food security.
- The role of financial institutions in relation to innovation and development in Africa.
- Other areas of interest (e.g. health innovation)

The workshop was also part of the efforts by AfricaLics network to enable groups of researchers to apply for seed funding for research projects and book projects (see section 2.7).

### 1.2 The 2<sup>nd</sup> AfricaLics International Conference

The 2<sup>nd</sup> AfricaLics conference was the first conference focusing on the current state of research on African Innovation and Development to be held in Africa specifically targeting the academic and policy communities. It took place in Rwanda from 17 – 19 November 2015 and was hosted by University of Rwanda, College of Business and Economics (CBE). It brought together over 200 leading scholars from 30 countries working on innovation and development in Africa with the foremost scholars from outside Africa.

The objectives of the conference were:

- To determine the state of the art within research community in Africa working in the field of innovation and development.
- To provide a much needed arena for researchers in Africa, particularly early career researchers, to build capacity in presenting and networking skills as well as learning about new methods and theories.
- To promote networking and create space for new collaborations amongst researchers in the field of innovation and development focusing on Africa.
- To build capacity to teach high quality, fit for purpose, curricula in the field of innovation and development in Africa.

The 2015 conference resulted in a range of outputs including learning and partnerships building aimed at enhancing improved research, training and policy work in the field of innovation relevant to Africa's development. It was discussed on social media, through the Rwandese press and also repeated on AllAfrica.com among other platforms.

#### 2. HIGHLIGHTS OF THE CONFERENCE

The second AfricaLics Conference was a three days event hosted by University of Rwanda, in Kigali, Rwanda. Two other events were held back to back with the conference. These are; the ASB 3<sup>rd</sup> annual meeting that took place on 16 November, and the AfricaLics Small Research and Book Projects Dissemination workshop that took place on 20<sup>th</sup> November 2016.

The theme of the Conference was "unpacking systems of innovation for sustainable development in Africa'. The programme comprised of interactive activities namely plenary sessions, paper parallel sessions, special sessions, poster session and teaching track. The event also consisted of an Open Symposium allowing members of the public to attend and engage in debates on innovation and development in Africa, and Rwanda specifically. All of the events were held at the College of Business and Economics, Kigondo Campus, University of Rwanda, Kigali. The Conference brought together over 200 delegates from 30 countries. This report highlights key deliberations during the various and events. Details of each of these activities are annexed to this report.



2<sup>nd</sup> AfricaLics Conference group photo

### **2.1** Overview of the Conference Programme

The Conference programme was structured around a set several different sets of activities:

Conference	Guest: Dr. Celestine Ntivuguruzwa, the Permanent Secretary, Ministry of
opening	Education, Rwanda. He was flagged by other speakers namely the Vice
ceremony	Chancellor, UR and AfricaLics ASB president
Plenary	A number of sessions will take place in plenary. These include the: opening
Sessions	ceremony, open symposium, keynote addresses, expert panel session and the
	closing ceremony.
Open	This was combined with the official opening of the conference. The theme of
Symposium	the symposium was: "Innovation and Inclusive Development in Rwanda and
	globally" "The symposium consisted of a series of opening speeches by several
	guests.

	Paper Parallel sessions	Each paper parallel session included three papers and lasted 90 minutes. The paper presenters highlighted key issues relevant to their own work. A discussant subsequently commented on all papers presented in the session. The chair of sessions moderated the session while ensuring time was observed.  The standard time schedule for the sessions devoted to presentation:  Introduction = 5 minutes  First paper presentation by the author = 15 minutes  Second paper presentation by the author = 15 minutes  Third paper presentation by the author = 15 minutes  Discussant of all three papers = 15 minutes  General discussion and replies from the authors = approximately 25 minutes.
	Poster Session	Selected papers were selected during the papers' review process for posters presentations. Presenters highlighted on their work and got opportunities to answer questions during the poster sessions as well as during session breaks. The aim of the posters was to elicit a discussion and presenters most of whom are PhD students to receive feedback about their work.
	Special sessions	Three Special Sessions were organized during the conference as round table/panel discussions and focused on specific themes.
	Teaching track sessions	These were lunch hour sessions organized comprising of three sessions that focused on education and teaching of innovation and development at African Universities.
	Small grants project workshop	This one-day research dissemination workshop was held on 20 November. It provided an opportunity for the projects to present their major findings to other researchers and policymakers; as well as gain feedback on their project activities and ideas for next steps.
	Social events	There were dinners hosted for the participants during the conference.
	Closing ceremony	This was on 19 <sup>th</sup> November and the guest of honour was the Vice Chancellor, University of Rwanda.

#### 2.2. Conference paper submission and review process

The Secretariat initiated an open call that invited submission of original unpublished papers applications for the conference in line with main conference theme or one of the sub-themes. The requirements included submission of full paper (in PDF) not exceeding 8,000 words (including notes, tables, appendices, list of references, etc.) through ConfTool helped in management of the paper review process. The call encouraged participation of young researchers. The selection of the papers was based on a peer review process. The Conference Scientific Review Committee was made up of members of the University of Rwanda staff and senior scholars from the AfricaLics community and AfricaLics Scientific Board and Secretariat. Each paper went through a a double blind peer review with each paper being reviewed by two reviewers and scored on relevance to the conference themes, originality, research methods, relevance, academic and scientific quality and originality. A total of 110 full paper submissions were made from which 70 (papers and posters) were selected for presentation.

#### 2.3 The Opening Ceremony

#### 2.3.1 Welcome remarks by Prof Philip Cotton, Vice Chancellor, University of Rwanda

The Vice Chancellor welcomed they guest of honour and all participants the University of Rwanda. He mentioned that the University is two years old after a merger of 12 higher institutions into one university. This he said signifies courage, creativity and oneness that are reflected in the University's blue logo. Blue in particular represents courage.

He told the participants that he believes that innovation brings about transformation which is a complete overhaul of the values and philosophy that underpins everything that is done. He hoped that the Conference would speak to this thinking about innovation. He also urged people to rethink education and innovation in terms of its value to service of humanity and also in terms of entrepreneurship. He finally welcomed all delegates and encouraged them to find out more about Rwanda as a country and the university. For the detailed speech, see Annex 8.



Prof Philip Cotton, Vice Chancellor, University of Rwanda

#### 2.3.2. Welcome remarks from AfricaLics by Dr. Bitrina Diyamett, President, AfricaLics

On behalf of the AfricaLics Scientific Board, Dr. Diyamett, thanked a number of people who had made it possible to make the Conference take place as scheduled. She particularly thanked government of Rwanda for taking keen interest in the conference as evidenced by the presence of the Permanent Secretary, Ministry for Education. She reminded the participants on the mission of AfricaLics as a network. She reminded the delegates of the importance of innovation in Africa's development. She emphasized that for Africa to escape marginalization, it must address the existing innovation knowledge imbalance by producing more knowledge that is relevant to its context; work more on connecting existing knowledge to use. She argued that this cannot happen in the absence of adequate capacity for

such activities. She added that this is the reason why AfricaLics was formed to build this requisite capacity on innovation.

She lastly spoke to Rwanda as a host country which she noted would benefit most from the conference in various ways. She considered Rwanda as an example in terms of social and economic development of its people, which she attributed to ST&I. Dr. Diyamett full speech, is annexed to this report (Annex 9).

#### 2.3.3. Official Speech by the guest of honour

The Conference was officially opened by Dr. Celestine Ntivuguruzwa, the Permanent Secretary, PS Ministry of Education, Rwanda. He made the following highlights.

He welcomed the participants and referring to a popular Kinyarwanda song, he noted that people from Rwanda love to receive guests. He reiterated the impotence of innovation to the nation development and economic growth. He noted that Rwanda has invested a significant effort mainly in putting in place the governance and physical infrastructure as enablers for sustainable development of national science, technology and innovation systems.



Dr. Celestine Ntivuguruzwa, the Permanent Secretary, PS Ministry of Education, Rwanda

He drew the attention of participants to the first institution for East Africa community that was officially launched in Rwanda. He argued that this is evidence of Rwanda's commitment to support science innovation and technology in all aspects. He mentioned that it is a honor for Rwanda through the University of Rwanda to host the second AfricaLics Conference and appreciated choice of the theme which he noted is aligned with the country's and global innovation agenda. He concluded by thanking the sponsors the conference, notably ACTS, Sida, other partners, University of Rwanda and all the

organizing and scientific committees that worked very hard to make the forum take place. He did not forget to thank the Vice Chancellor of University of Rwanda for hosting the conference. He wished all participants fruitful discussions and deliberations and consequently declared the second AfricaLics conference with the theme "Unpacking systems of innovation for sustainable development in Africa" officially open. The full speech is attached to this report as Annex 7.

#### 2.4 Half Day Open Symposium

A half day open symposium was held to officially open the Conference and provide an opportunity for the members of the public, government representatives, the private sector, the research community and students to participate in the event to deliberate on the challenges and opportunities facing Rwanda and Africa in general. It also aimed at discussing on how opportunities can be harnessed to promote innovation and inclusive development. It took place on 17<sup>th</sup> November 2015 and was coorganized by University of Rwanda, College of Business and Economics (CBE) and the AfricaLics Secretariat. The University of Rwanda is known for its role in the development of Rwanda through advancement of relevant knowledge and is committed to the highest standards of academic excellence. It therefore grabbed this opportunity to show case the different programmes and activities being run by the University and the issues affecting its operating environment/country as a whole. The University also used this platform to demonstrate how different departments and activities are meeting a variety of innovation and development challenges faced by Rwanda.

The theme of the symposium was: "Innovation and Inclusive Development in Rwanda and globally" "and attracted 220 participants from 30 countries. The symposium also attracted renowned key note speakers who through their inspiring presentations and discussions helped the participants deliberate on this subject.

The symposium consisted of a series of opening speeches including welcoming remarks from Prof. Philip, the Vice Chancellor of University of Rwanda and Prof. Nelson Ijumba. DVC, University of Rwanda, welcome remarks on behlf of AfricaLics by Dr. Bitrina Diyamett, CEO, Science, Technology and Innovation Policy Research Organization (STIPRO), Tanzania & Chair, AfricaLics Scientific Board, opening remarks by Dr. Pernilla Rafiqui, First Secretary, Senior Porgramme Manager, Research and higher Education, Embassy of Sweden and an official opening speech made on behalf of Dr. Papias Musafiri, Minister of Education, Rwanda by Dr. Celestine Ntivuguruzwa, the Permanent Secretary, PS Ministry of Education, Rwanda. A vote of thanks was delivered after the first session of the symposium by Prof. Verdiana Grace Masanja, Chair, Conference Scientific Committee. The prorgamme of the the Open Symposium is annexed to this report (Annex 3).

Following these opening speeches, a series of presentations were delivered that spoke to the theme of the Conference more generally. These are:

- Innovation and Development: perspective from Europe by Prof. Per Eriksson, University of Lund,
   Sweden.
- The role of innovation in developing countries, by Prof. Bengt-Åke Lundvall, Aalborg University & Secretary General Globelics (via video).
- STI and development research in Africa: how does it look like in the future? by Dr. Geci Karuri-Sebina, IERI, South Africa

- Overview of STI in Rwanda by Dr. Marie Christine Gasingirwa, Director General, Science, Technology and Research, Rwanda.
- A discussion facilitated by Dr. Ignatius Gatare, The Director General of Science and Technology Commission.

#### 2.5 The teaching Track

AfricaLics has been working with stakeholders, mainly academic institutions to amongst other things, develop new curricula within universities focusing on the linkages between innovation and development. As part of the conference programme, there were sessions devoted to teaching and learning in the area of innovation and development targeting African universities. These sessions were titled:

• Experience with education in innovation and development in Africa.

This session was motivated by the growing interest in incorporating enquiry led and PBL approaches into teaching. It outlined examples of teaching currently available in African universities in the area of innovation and development.

Three setting the scene presentations were delivered as follows:

**Prof. Peter Lating**, Makerere University, Uganda. Experience with education in innovation and development: the case of Makerere University

**Dr. Robert Aidoo**, Kwame Nkrumah University of Science and Technology (KNUST). Experience with education in innovation and development: the case of KNUST

**Dr. Rebecca Hanlin**, ACTS, Kenya. Experience with Master Module on Innovation & Development, the case of AfricaLics

The presentations generated a productive discussion around innovation and development in relation to Africa's education systems.

Experience with use of Problem Based Learning in education in Africa.

This session considered one option for revitalizing teaching through the use of innovative pedagogic approaches. It focused specifically on experiences from selected academic institutions on the use of PBL learning approach in their teaching. The speakers were:

**Dr. Samuel Akomea**, Kwame Nkrumah University of Science and Technology (KNUST), Ghana. Experience with introducing course-based PBL model at African universities.

**Dr. Dorothy Okello**, Makerere University, Uganda: Experience with introducing course-based PBL model at Universities: the case of Makerere University.

Visions for future teaching and education in innovation and development in Africa (Msc and PhD level).

This session was a moderated discussion that focused on a how to introduce more innovation training into teaching at universities. The session considered how the future of innovation and development postgraduate teaching might look like, the challenges and opportunities in meeting these future scenarios.

The speakers were:

Prof. Peter Lating, Makerere University, Uganda

**Dr. Bitrina Diyamett**, Science, Technology and Innovation Policy Research Organization, Tanzania **Dr. Tomas Kjellqvist**, Research Manager, Technoscience Studies, Bleking Institute of Technology, Sweden & Vice-Chair Swedish National Commission for Unesco

#### 2.6 The special sessions

The special sessions were organized around key thematic areas in line with the overarching conference theme. They were organized to stimulate exchange of ideas among participants. The time limit for each session was 1.5 hours with some time reserved for open discussion with participation from the floor. Each of the session had a maximum of 5 participants including the chairperson. The Conference attracted the following special sessions.

Special session	Focus	Speakers/papers
Science, Technology and Innovation (STI) for Africa's Development Convener: Dr Nicholas Ozor, ATPS.	The overall objective was to engage key STI stakeholders in dialogue that will identify the best approaches for achieving an STI-led development in Africa.	<ul> <li>Prof Benjamin Ozumba, Vice Chancellor, University of Nigeria</li> <li>Dr. Marie-Christine Gasingirwa, Director, Ministry of Education, Science and Technology, Rwanda.</li> <li>Dr. Tomas Kjellqvist, Research Manager, Technoscience Studies, Bleking Institute of Technology, Sweden</li> </ul>
Gender, youth and disabled in inclusive innovations Convener: Dr. Ann Kingiri, ACTS.	This session was convened with the aim of achieving the following objectives; -Understand the meaning of inclusive innovation in different contexts and sectoral areas (e.g. ICT, health etc) or in sectors that are labour-intensive and labour-extensive like agriculture and livestock farming systems in developing countries; -Explore the understanding of the inclusive innovation concept as it relates to women, youth and disabled; -Share experiences in different contexts on how the marginalized have been included or excluded in innovation process.	<ul> <li>The role of youth in innovation in Kenya by Winnie Asiti – ACTS</li> <li>Disabled in income generating activities: challenges and opportunities by Judy Nyaga – UDPK</li> <li>Role of youth and disabled in STI and development in East Africa: Herbert, Logel, East Africa</li> <li>Gender concerns in banana production and marketing: their impacts on resource poor households in Kenya. Lydiah Miriti – KLARO, Kenya</li> </ul>
Inclusive innovation for development in Africa: reflections and projections. Convenor: Julius Mugwagwa, Open University, UK Chair: -Maurice Ochieng Bolo, The	This session attempted to explore how and to what extent current innovation and development agendas are both inclusive and exclusive in themselves and how they spawn and intersect with newer forms of innovation.	•The paradox of choice in South African and Zimbabwean health systems: can national health spending decisions be more inclusive? - Julius Mugwagwa •From the global to the local: how can effective and affordable medicines be sustainably produced in Africa? - Geoffrey Banda, University of Edinburgh, UK

Scinnovent Centre		Mineral commodities and the political economy of mining in Africa: the case of Tanzania – Vuyo Mjimba, University of South Africa     Is China as a new source of sustainable
		innovation capabilities for Africa's small
		to medium enterprises? – Richmond
		Attah-Ankomah, Open University, UK
Building national	The panelists discussed South Africa's	South Africa's scientific capacity: Dr
research capacity on	experience in building national capacities	Heidi Prozesky (Research manager - DST-
innovation: the case	for STI.	NRF
of South Africa		•Looking into the future: innovation
Convener: Dr. Erika		capacity needs in South Arica: Professor
Kraemer-Mbula, IERI,		Rasigan Maharajh (Director, IERI)
Tshwane Institute of		Contribution of research capacities to
Technology, South		national objectives: NACI perspective:
Africa		Mlungisi Cele (CEO of the National
		Advisory Council on Innovation (NACI)

#### 2.7 The AfricaLics Small Research and Book Projects Dissemination workshop

This one-day Research Dissemination workshop, which was a follow up to the Writeshop and Grants Management workshop organized in August in Pretoria, South Africa, provided an opportunity for the projects to publicly present their major findings to other researchers and policymakers. It also provided them with the opportunity to gain feedback on their project activities and ideas for next steps.

In the morning, in particular, projects briefly presented their research findings in parallel sessions and gained feedback from invited external scholars. They also discussed progress to date and plans for the future. In the afternoon, all the project participants came together in one room and discussed on the way forward in which obstacles faced, project next steps and expected major outputs were reflected. Annex 4 details the workshop's deliberations as well as the workshop program.

#### 2.8 Social events

A few social events took place as follows:

On the evening of Tuesday 17<sup>th</sup> November 2015, a welcome reception dinner was held at Nobleza Hotel hosted by University of Rwanda. This dinner was crowned by traditional dancers from Rwanda. On 16<sup>th</sup> November, a Conference dinner was hosted for participants by AfricaLics at Nobleza Hotel. On 19<sup>th</sup> November, the University of Rwanda hosted a cocktail to mark the official closing of the conference.

#### 2.9 Media coverage

The conference garnered a significant amount of media coverage including social media platforms. It was also reported on the Rwandese press and also repeated on AllAfrica.com. The event was twitted live and people from different parts of the world followed using the conference hashtag **#AfricaLics2015**. The hashtag had 12,100 impressions, 777 profile visits and 25 new followers.







Opening Remarks by Prof. Philip Cotton Vice Chancellor @Uni\_Rwanda @ACTSNET @Globelics @redLALICS pic.twitter.com/JXm2dY9Clq

Top media Tweet earned 1,235 impressions



View Tweet activity

View all Tweet activity

Twitter November, 2015 summary

#### 2.10 Closing Ceremony

Dr. Bitrina Diyamett gave a vote of thanks on behalf of AfricaLics Scientific Board (ASB). She in particular thanked the people who submitted papers, those who reviewed, scientific committee, chairs of sessions, discussants, etc. people should keep the friends they made for networking purposes. Authors of the papers were reminded that they should keep on perfecting their papers taking into accounts comments they received; reminded them to make use of the papers for policy debates at home and elsewhere, find avenues to publish them; reminded of the AJSTID journal, etc.

#### 3. CONFERENCE COMMITTEES

#### 3.1 Conference Local Organizing Committee

- Alphonse Muleefu, College of Arts and Social Sciences, University of Rwanda
- Bideri Ishuheri Nyamulinda, College of Business and Economics (CBE), University of Rwanda
- James A. McWha, University of Rwanda
- Leon Niyibizi, College of Agriculture and Veterinary Medicine, University of Rwanda
- Michele Ndahimana, College of Business and Economics, University of Rwanda
- Nelson Ijumba, University of Rwanda
- Oreste Niyonsaba, Ministry of Education, Rwanda

- Prudence Rubingisa, University of Rwanda
- Remy Twiringiyimana, Ministry of Education, Rwanda
- Said Rutabayi Ngoga, College of Science and Technology, University of Rwanda
- Théogène Nyandwi, College of Medicine and Health Sciences, University of Rwanda
- Theophile Niyonzima, College of Business and Economics, University of Rwanda
- Tsinda Aime, College of Education, University of Rwanda
- Verdiana Grace Masanja, University of Rwanda

#### 3.2 Conference Scientific Committee

- Abdelkader Djeflat, University of Lille, France/Algeria
- Anna Kingiri, African Centre for Technology Studies, and AfricaLics Secretariat Kenya
- Aschalew Tigabu, African Centre for Technology Studies, and AfricaLics Secretariat Kenya
- Banji Oyelaran-Oyeyinka, UN-HABITAT, Nairobi, Kenya
- Bideri Ishuheri Nyamulinda, University of Rwanda
- Bitrina Diyamett, Science, Technology and Innovation Policy Research Organization, Tanzania
- Boladale Abiola, National Centre for Technology Management, Obafemi Awolowo University,
   Nigeria
- Erika Kraemer-Mbula, Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa
- James A. McWha, University of Rwanda
- Mammo Muchie, Department of Science and Technology and the National Research Foundation,
   Tswane University of Technology, South Africa
- Margrethe Holm Andersen, Globelics Secretariat and Aalborg University, Denmark
- Nelson Ijumba, University of Rwanda
- Rasigan Maharajh, Institute for Economic Research on Innovation, Tshwane University of Technology, South Africa
- Rasmus Lema, Globelics Secretariat and Aalborg University, Denmark
- Rebecca Hanlin, African Centre for Technology Studies and AfricaLics Secretariat Kenya
- Thomas Kjellqvist, Blekinge Institute of Technology, Sweden
- Verdiana Grace Masanja, University of Rwanda

#### 3.3 AfricaLics Secretariat

- Ann Kingiri, African Centre for Technology Studies, and AfricaLics Secretariat Kenya
- Aschalew Tigabu, African Centre for Technology Studies, and AfricaLics Secretariat Kenya
- Fridah Nkirote, African Centre for Technology Studies
- Margrethe Holm Andersen, Globelics Secretariat, Denmark
- Rebecca Hanlin, African Centre for Technology Studies, and AfricaLics Secretariat Kenya

#### 4. FUNDING AND BUDGET

#### 4.1 Funding

The Conference would not have been a success were it not for the following sources of funding.

- Sida (Swedish International Development Cooperation Agency, Sweden)
- ACTS (African Centre for Technology Studies)
- GLOBELICS (Global Network for the Economics of Learning Innovation and Competence Building Systems)
- University of Rwanda

#### 4.2 Budget: Summarized account for the Kigali Conference events

ltem	Total Cost US\$
Travel – paper presenters/ facilitators & ASB members (reimbursed tickets)	57,994
Accommodation (facilitators, papers presenters, ASB members and small grants project workshop participants comprising of dinner, bed and breakfast)	31,033
Lunch/ refreshments / Evening Reception	10,777
Miscellaneous expenditure (Taxi hire etc.)	5,488.23
TOTAL	108,067.23

Rwanda University provided in-kind contributions as follows:

- Transport for students and facilitators to and from the venue and airport/ accommodation
- The venue for the event (conference hall, 6 breakout rooms and lunch area) for 3 days
- Students volunteers to assist with various aspects of the conference (video conferencing and other audio-visual equipment, guiding participants, registration etc)
- Programme printing, Conference bags, banners etc
- Reception Dinner and Closing cocktail.

#### 4.3 Acknowledgements

The following people and organizations committed their time, services and resources in ensuring the success of the Conference.

- Hotel Chez Lando
- Some specific persons from University of Rwanda, Fidele Abimana, Daniel Nyapidi, Olivier Mugwaneza, Christine Ingabire and Chris.

#### 5. ANNEXES

#### **Annex 1: Concept: AfricaLics Conference 2015**





The African network of researchers in learning, innovation and competence building systems (AfricaLics) conference will be the first dedicated conference focusing on the current state of research on African Innovation and Development specifically for the academic community to be held in Africa. It is being hosted by University of Rwanda, College of Business and Economics (CBE). It will bring together all leading scholars working on innovation and development in Africa with the foremost scholars from outside Africa.

The conference will take place in Rwanda from 17 - 19 November 2015 and will bring together up to 200 early career and established researchers and lecturing staff working in the field of African innovation and development issues.

The objectives of the conference are:

- To determine the state of the art within research community in Africa working in the field of innovation and development.
- To provide a much needed arena for researchers in Africa, particularly early career researchers, to build capacity in presenting and networking skills as well as learning about new methods and theories.
- To promote networking and create space for new collaborations amongst researchers in the field of innovation and development focusing on Africa.
- To build capacity to teach high quality, fit for purpose, curricula in the field of innovation and development in Africa.

This conference follows a successful mini-conference held in December 2013 that bought African innovation and development scholars together to consider neglected areas of research in the field of innovation and development. The output of this mini-conference was the funding by AfricaLics of six collaborative small research and book project grant. These projects will present their finding at the 2015 conference.

The 2015 conference is also expected to result in a range of outputs. These include the development of new collaboration of researchers to address the gaps in research in the field leading to the production of new research, book and special journal issue proposal. In addition, a number of lecturing staff and researchers trained in pedagogy and/or research methods that should improve the quality and quantity of teaching conducted in this area, the job prospects of graduates in the field of innovation and development and quality research conducted.

The conference will ideally be held over three days. A minimum of two days will be devoted to paper presentation from participants scholars at different stages of their careers, In addition, a half day open

symposium will be devoted to showcasing innovation and development in Rwanda and is being organized by University of Rwanda.

#### **Organisation and funding**

The conference is co-organized by the AfricaLics secretariat, from its base at the African Centre for Technology Studies (ACTS) in Nairobi, Kenya and University of Rwanda.

The AfricaLics Secretariat has funding from the Swedish International Development Cooperation Agency (Sida) to cover the majority of the costs of putting on the conference. Some counterpart in-kind funding has already been pledged by the University of Rwanda. Both parties will be expected to also look for additional funding from other sources to cover some of the costs in order that more of the available Sida funding can be put towards supporting travel costs for participants from African countries.

#### **Timeline for organisation**

Activity	Completed by
Identification of local partners (University of Rwanda)	January 2015
Logistics (formation of various committees, conference	January - August 2015
programme, speakers, budget, venue etc)	
Additional fundraising	January – September 2015
Call for papers/Participation	April 2015
Selection of participants/Papers	July/August 2015
Logistics including travel support	August – October 2015
Conference held	17 – 19 November 2015

#### **Expected Benefits for the local partner?**

Organising an international conference is no small task. It requires commitment on the part of all organizing partners and dedicated personnel to manage and organize the event. However, if organisations are willing to put in the effort, the rewards are enormous.

#### National and international exposure of innovation and development training and research taking place in Rwanda.

AfricaLics has found that holding open symposiums that are organized by the local organizing committee based in the host country enable media coverage and policy maker attention on innovation efforts by the partner organisation. It may include an exhibition of new locally developed and produced product innovation for participants to view and ask questions on.

#### New collaborations which potentially lead to new funding streams.

The last conference AfricaLics was involved in organizing has led to the opportunity for PhD students from the host country to apply for a visiting PhD Fellowship at Aalborg University in Denmark. This in addition to other networking and capacity building opportunities provided under AfricaLics and partner networks.

#### • Capacity to run large conferences.

New or further experience of running international conferences which provide a well-tested means of attracting new funding, collaborations and students.

#### **Background to AfricaLics**

The African network of researchers in learning, innovation and competence building systems (AfricaLics) is the African regional network for researchers involved in innovation and development research with a specific interest in promoting learning, innovation and competence building systems approaches. The

network currently includes scholars from Algeria, Kenya, Mozambique, Nigeria, Senegal, South Africa, and Tanzania.

AfricaLics is the African Chapter of the Global Network for Economics of Learning, Innovation, and Competence Building Systems (Globelics), an international network of scholars who apply the concept of "learning, innovation, and competence building system" (LICS) as a framework for promoting inclusive and sustainable development in developing countries, emerging economies and societies in transition. Other regional chapters of Globelics have been developed in Asia, Latin America, the Mediterranean region and Europe (Asialics, Lalics, MEDAlics and Eurolics). In some big countries national networks have been established (CICALICS in China and Indialics in India).

AfricaLics was founded during an 'All Africa Innovation and Development Workshop' in March 2012 in Dar es Salaam, Tanzania. The workshop was co-organized by the Globelics Secretariat and the Science, Technology and Innovation Policy Research organization (STIPRO), a Tanzanian independent think tank.

The formation of AfricaLics was centred on the following two rationales:

- A need to understand innovation and learning in the context of Africa both from theoretical and practical perspectives.
- Given the fact that Africa lacks adequate capacity for the above purpose, a need for capacity building arose.

It was envisioned that the AfricaLics network can become a strong dynamo for capacity building in the specific field of innovation and economic development, both at the individual, institutional and country levels. This can allow African countries to design policies suitable and responsive to their own needs, and instigate corrective measures to ensure the smooth production, dissemination and use of knowledge for economic development, including poverty alleviation.

AfricaLics has received funding from the Swedish International Development Agency (Sida) to conduct research capacity building activities to build research capabilities in the field of innovation and development. This includes funding to support this 2<sup>nd</sup> AfricaLics research conference.

#### ANNEX 2: CONFERENCE PROGRAM IN DETAIL





#### TUESDAY 17TH NOVEMBER

08.00 BUSES DEPART FROM HOTELS FOR THE CONFERENCE VENUE

08.30 - 09.00 REGISTRATION

All plenary sessions today will be held in the ground floor lecture theatre on the left hand side of the building: GLT

#### **OPENING SESSION**

Chair: Prof. Nelson Ijumba, DVC, University of Rwanda

9.00 - 9.10	WELCOME REMARKS
	Prof. Philip Cotton, Vice Chancellor, University of Rwanda
9.20 - 9.30	WELCOME REMARKS
	Dr. Bitrina Diyamett, Executive Director, Science, Technology and Innovation
	Policy Research Organization (STIPRO), Tanzania & Chair, AfricaLics Scientific
	Board
9.30 - 9.45	REMARKS
	Dr. Pernilla Rafiqui - First Secretary, Senior Programme Manager, Research and
	Higher Education, Embassy of Sweden
9.45 - 10.10	OFFICIAL OPENING
	Dr. Papias Musafiri - Minister of Education, Rwanda
10.10-10:15	VOTE OF THANKS
	Prof. Verdiana Grace Masanja – University of Rwanda & Chair, 2 <sup>nd</sup> International
	AfricaLics Conference Scientific Committee

#### **10.15 – 10.45 BREAK AND GROUP PHOTO**

#### **OPEN SYMPOSIUM WITH KEYNOTE ADDRESS**

Chair: Dr. Ignatius Gatare, Director General of Science & Technology Commission

10.45 – 11.15	INNOVATION AND DEVELOPMENT: PERSPECTIVE FROM EUROPE Prof. Per Eriksson, University of Lund, Sweden	
11.15 – 11.30	<b>THE ROLE OF INNOVATION IN DEVELOPING COUNTRIES</b> Prof. Bengt-Åke Lundvall, Aalborg University & Secretary General Globelics	

#### 11.30 – 12.00 OVERVIEW OF STI IN RWANDA

Dr. Marie Christine Gasingirwa, Director General, Science, Technology and Research, Rwanda.

#### **12:00-12.40 KEYNOTE ADDRESS**

STI AND DEVELOPMENT RESEARCH IN AFRICA: HOW DOES IT LOOK LIKE IN THE

**FUTURE?** 

Speaker: Dr. Geci Karuri-Sebina, IERI, South Africa

#### 12.40-13.15 OPEN DISCUSSION

**Chair:** Dr. Ignatius Gatare, Director General of Science & Technology Commission

13.15 - 14.15 LUNCH

#### 14.15 – 15.45 EXPERT PANEL SESSION

#### STI FOR AFRICA'S DEVELOPMENT

Chair: Dr Nicholas Ozor, ATPS Network, Kenya

Panelists:

Prof Benjamin Ozumba-Vice Chancellor, University of Nigeria.

Dr Peggy Oti-Boateng, UNESCO, Zimbabwe

Dr. Marie-Christine Gasingirwa, Science Technology and Research Rwanda

Dr. Tomas Kjellqvist, Research Manager, Technoscience Studies, Bleking Institute of Technology,

Sweden & Vice-Chair Swedish National Commission for Unesco

#### 15.45 - 16.15 BREAK

#### 16.15 - 17.45 PAPER PARALLEL SESSION 1

#### PAPER SESSION 1A: WORK ORGANIZATION AND FIRM PERFORMANCE

Room: GL1

Chair: Edward Lorenz
Discussant: Mike Awoleye

 The Impact of Technological Innovation on the Performance of Nigerian Outdoor Advertising Firms

Titilayo O. Olaposi, Joshua B. Akarakiri and Omolola O. Ijidakinro

• Innovation barriers, external search strategies and firms' performance: An analysis of manufacturing firms in Nigeria

Mammo Muchie and Abiodun Egbetokun

• Drivers of eco-innovation in the manufacturing sector of Nigeria

Sanni Maruf and Michael Francis

#### PAPER SESSION 1B: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GL2

**Chair:** Margrethe Holm Andersen

**Discussant:** Peter Lating

Proposed Model of Coupling Modules at Higher learning Institutes to Achieve Tangible
 Research Outcomes to Enhance Innovation and Growth

Gaurav Bajpai and Jaya Shukla

• The role of formal, higher education in sustainable development within the context of globalization: Kenya

Gladys Nthenya Kivati and Joel Onyango

• Usability and Pedagogical Design: Evaluating Learning Management Systems Raymond Mugwanya

#### PAPER SESSION 1C: INCLUSIVE INNOVATION

Room: GR1

Chair: Rasigan Maharajh
Discussant: Bibi Ishrat Hassan

• Local Traditional Knowledge (LTK) Weather Forecasting in the midst of Climate Change in Domboshawa, Zimbabwe

Vincent Itai Tanyanyiwa

 Re-thinking the Power of indigenous Knowledge for Advancing Innovation in the Development of Rural Communities in Africa

Manir Abdullahi Kamba

• Zikism: the Fourth Pillar, Indigenous Knowledge and Africa's Advancement Chika Ezeanya

# PAPER SESSION 1D: THEORETICAL, CONCEPTUAL, ANALYTICAL DISCUSSIONS ON INNOVATION AND DEVELOPMENT

Room: GR2

Chair: Joanes Atela

Discussant: Kalu Ukpai Ifegwu

• Status of Environmental Sustainability as One of Millennium Development Goal (MDG 7) in Rwanda

Jules Kazungu, Gislain Ngoga Tenge and Juvenal Mukurarinda

- Unlocking the Potential of Vulnerable Communities for Sustainable Development through Conservation Agriculture Practices in Homa Bay County, in Kenya Pamella Were-Koqoqo
- Yield Differentials Among Participating and Non-Participating Rice Farmers in Public Private Partnership in Benue and Ogun States, Nigeria

Jonathan Akinwale

#### PAPER SESSION 1E: INNOVATION, DEVELOPMENT AND ORGANIZATIONAL FORMS

Room: GR3

**Chair:** Bitrina Diyamett

Discussant: Bideri Ishuheri Nyamulinda

- The role of higher education and financial institutions in the promotion of innovation Industrial development, manufacturing and SMEs as part of the innovation system *Eric Njoroge Ndugire*
- A review of implications for building livelihood assets through innovation partnerships on smallholder farmers' food security in Kenya

Lilian Kidula Lihasi, Christopher Onyango and Washington Ochola

 Proposed Model of Coupling Modules at Higher learning Institutes to Achieve Tangible Research Outcomes to Enhance Innovation and Growth Gaurav Bajpai

17.45 – 18.45 EXHIBITION: RESEARCH POSTERS & INNOVATIONS

**RESEARCH POSTERS** 

Room: GR1

- Spread Effect of Small and Medium Enterprises on Economic growth of Rwanda Jaya Shukla
- Improving Exergy Efficiency of Geothermal Power Plants Condensers. (Case study of Olkaria II Geothermal Power Plant in Kenya)

Nyambane Nahshon

- Development and use of STI indicators in Africa: Challenges and Prospects
   Niringiye Aggrey
- The challenges faced by women entrepreneurs in business expansion: A case study of women members of handicraft cooperatives in Nyarugenge District Bajpai Gaurav
- Jugaad Innovation: The Concept and the Controversy An Innovation Systems Perspective from India

Fayazahmad Sheikh

- Review of linkage between innovation and agricultural research in Africa Opeyemi E. Ayinde
- Effects of absorption capacity on the development of innovation in the developing countries: a prospect of emerging

  Ndiaye Alphonse Kossiga

19.00 BUSES DEPART THE CONFERENCE VENUE FOR NOBLEZA HOTEL

20.00 – 22.00 WELCOME RECEPTION AT NOBLEZA HOTEL

#### WEDNESDAY 18<sup>TH</sup> NOVEMBER

08.00 BUSES DEPART FROM HOTELS FOR THE CONFERENCE VENUE

08.30 - 08.45 BREAK

08.45 – 10.15 PAPER PARALLEL SESSION 2

PAPER SESSION 2A: WORK ORGANIZATION AND FIRM PERFORMANCE

Room: GL1

Chair: Fidele Abimana

Discussant: Opeyemi E. Ayinde

- How innovation conditions the search for external knowledge: a study of Nigerian firms
  - Abiodun Egbetokun and Mammo Muchie
- Influence of Absorptive Capacity on Innovativeness of Information Technology Products and Service Providers in Lagos, Nigeria

Stanley Ibeku and Williams Nwagwu

Knowledge Acquisition and Assimilation for Innovation in Less Developed Countries:
 Exploring the role of returnee entrepreneurs in Kenya
 Mreji Pamela Adhiambo

PAPER SESSION 2B: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GL2

Chair: Robert Aidoo

Discussant: Ndikubwimana Philippe

• Inclusive innovation for poor farmers: the case of e-wallet in Nigeria Emmanuel, Ejim-Eze

• Social enterprise innovations and capital accumulation among small holder farmers in Kenya

Gideon Wafula Wekesa

 Mobile Money services and socio-economic development in Rwanda: a gender perspective

Liberata Mukamana and Eugenie Byukusenge

PAPER SESSION 2C: INCLUSIVE INNOVATION

Room: GR1

**Chair**: Herbert Lwanga **Discussant**: Chika Ezeanya

- Stimulating Innovation and Entrepreneurship among the Kenyan Youth Victor Awino, Maurice Bolo, and Dorine Odongo
- Enhancing growth in communities by harnessing grassroots innovation and indigenous knowledge for improved livelihoods in the lake Victoria basin, Kenya, a case study of Kajulu-Kisumu

Mary Akinyi Adada

• Exploring Business Incubation Practices in Developing Economies: Lessons for Nigeria Adelowo Caleb, Ukpabio M. G, Olaopa O. R. and Siyanbola W. O

PAPER SESSION 2D: THEORETICAL, CONCEPTUAL, ANALYTICAL DISCUSSIONS ON INNOVATION AND DEVELOPMENT

Room: GR2

Chair: Ntsane Moleleki

Discussant: Raymond Mugwanya

Nanotechnology, the MDGs/SDGs and Sustainability

Hailemichael Teshome Demissie

• Innovative use of unmanned aerial vehicle (uav) technology in quelea-control: can it fly?

Shira Efron and Julius Gatune Kariuki

A Perspective on Satellite Technology Capacity in Africa
 Kayode Odimayomi, Michael O.Kolawole and Joe Amadi-Echendu

10.15 – 10.45 BREAK

#### 10.45 - 12.15 SPECIAL SESSIONS A & B

#### **SPECIAL SESSION A**

#### BUILDING NATIONAL RESEARCH CAPACITY ON INNOVATION: THE CASE OF SOUTH AFRICA

Room: Lecture Theatre GLT

**Chair:** Dr. Erika Kraemer-Mbula (IERI/ Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy - SciSTIP, South Africa)

#### **Presenters**

**Dr. Heidi Prozesky**, Research Manager - DST-NRF SciSTIP: South Africa's scientific capacity

**Prof. Rasigan Maharajh**, Director, IERI; Nodal Head SciSTIP: Looking into the future: innovation capacity needs in South Arica

**Dr. Ntsane Moleleki**, Senior Specialist, the National Advisory Council on Innovation, NACI: Contribution of research capacities to national objectives: NACI perspective:

**Discussant** 

Professor Fred Gault, UNU-MERIT & TUT-IERI

This panel will discuss South Africa's experience in building national capacities for STI.

#### **SPECIAL SESSION B**

#### **GENDER, YOUTH AND DISABLED IN INCLUSIVE INNOVATIONS**

**Room:** Lecture Theatre GRT

Chair: Dr. Ann Kingiri, African Centre for Technology Studies (ACTS)

#### **Presenters**

Winnie Asiti, ACTS, Kenya: The role of youth in innovation in Kenya

**Judy Nyaga**, United disabled persons of Kenya (UDPK): Disabled in income generating activities: challenges and opportunities

**Herbert Lwanga**, Coordinator, Log`el Project, Uganda: Role of youth and disabled in STI and development in East Africa

**Lydiah Miriti**, Kenya Livestock Agricultural Research Organaisation (KLARO): Gender concerns in banana production and marketing: their impacts on resource poor households in Kenya.

This session explores understandings of inclusive innovation in different contexts in relation to marginalized groups.

#### 12.15 – 13.15 EDUCATION AND TEACHING TRACK 1

#### **EXPERIENCE WITH EDUCATION IN INNOVATION AND DEVELOPMENT IN AFRICA**

Room: GL1

Chair: Dr. Ann Kingiri, ACTS, Kenya

#### **Speakers**

**Prof. Peter Lating**, Makerere University, Uganda. Experience with education in innovation and development: the case of Makerere University

**Dr. Robert Aidoo**, Kwame Nkrumah University of Science and Technology (KNUST). Experience with education in innovation and development: the case of KNUST

**Dr. Rebecca Hanlin**, ACTS, Kenya. Experience with Master module on Innovation & Development, the case of AfricaLics

This discussion session outlines examples of teaching currently available in African universities in the area of innovation and development. Short presentations will be followed by an open Q&A.

#### 13.15 - 14.15 LUNCH

14.15 - 15.45 PAPER PARALLEL SESSION 3

PAPER SESSION 3A: WORK ORGANIZATION AND FIRM PERFORMANCE

Room: GL1

Chair: Gaurav Bajpal

Discussant: Ameha Mulugeta

 Production, innovation capability and performance: empirical study of ict clustered firms in developing countries

Olusesan M. Awoleye, Mathew O. Ilori and Timothy O. Oyebisi

• Technological learning and competence building in the Micro, small and medium enterprises: A Case of the Wood furniture Industry

Musambya Mutambala

• Evidence-based assessment of innovation capability in the gulf cooperation council countries

Michael O. Awoleye, Ruth Wambui and Pamela Mreji

#### PAPER SESSION 3B: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GL2

**Chair:** Erika Kraemer-Mbula **Discussant:** Sanni Maruf

- Innovating in a Resource Based Economy: role of R&D and non-R&D activities

  Jegede Oluseye Oladayo
- Empirical Analysis and Policy Options for National Growth: Innovation, Technological Learning and Investment

Adeyemi Adepoju and Abiodun Egbetokun

PAPER SESSION 3C: INCLUSIVE INNOVATION

Room: GR1 Chair: Ann Kingiri

Discussant: Julius Gatune Kariuki

• Economic Analysis of On-Farm Trial of Drought Tolerant Maize in Kwara State Nigeria: A Gender and Innovation Approach

Opeyemi Ayinde, Tahirou Abduolaye, Felix Takim, Adeola Oloyede and Folusho Bankole

- Gender order and horticultural value chain Ruth Githiga
- Meal cultures and Indigenous vegetables

Anne Aswani

Gender roles and Indigenous vegetables

Emma Oketch

# PAPER SESSION 3D: THEORETICAL, CONCEPTUAL, ANALYTICAL DISCUSSIONS ON INNOVATION AND DEVELOPMENT

Room: GR2 Chair: Ben Muok

**Discussant**: Caleb Adelowo

- Assessing the exposure of Kenya's food crops to the impacts of climate change Joanes Atela
- Evaluation of knowledge integration and dissemination along innovation supply chain

in Ilorin metropolis, Kwara state, Nigeria: a case study of Moriga products

Opeyemi E. Ayinde; Jubril O Animashaun; Mammo Muchie, Ifedotun V. Aina and Oladotun E. Ojo

15.45 – 16.15 BREAK

16.15 – 17.45 PAPER PARALLEL SESSION 4

PAPER SESSION 4A: WORK ORGANIZATION AND FIRM PERFORMANCE

Room: GL1

**Chair:** Rasmus Lema **Discussant:** Jegede Oluseye

• Exploring Roles of a Religious Organization in Renewable Energy Technology Diffusion:

A Case of Ethiopian Orthodox Tewahedo Church

Kassahun Y. Kebede and Toshio Mitsufuj

• Technological Capability Development Opportunity for Africa through Infrastructure Development Projects

Ameha Mulugeta

• Assessment of National Technological Capability for Sustainable Biofuels Development in Nigeria

Ibikunle O. Ogundari, Joshua B. Akarakiri and John-Felix K. Akinbami

#### PAPER SESSION 4B: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GL2

**Chair:** Tomas Kjellqvist **Discussant:** Samuel Akomea

• Building Local Innovative Communities in Sub-Saharan Africa: Does Huge Investments in Early Childhood Education Really Matter?

Ayodele Shittu

• Technological Capability Building in Tanzania: A Comparative Analysis of the Metal Entrepreneurs Attended Vocational Training against those attended Apprenticeship

Heric Thomas Mtei

#### PAPER SESSION 4C: INCLUSIVE INNOVATION

Room: GR1

**Chair:** Micheline Goedheys **Discussant:** Abiodun Egbetokun

Productivity spillover from Foreign Direct Investment in the Ethiopian manufacturing:

Evidence from quantile regression

**Evidence from quantile regression** 

Abdi Yuya Ahmad

• The Knowledge Failure: Muslim World and the National Innovation System

**Perspective** *Bibi Ishrat Hassan* 

## PAPER SESSION 4D: THEORETICAL, CONCEPTUAL, ANALYTICAL DISCUSSIONS ON INNOVATION AND DEVELOPMENT

Room: GR2
Chair: Fred Gault

**Discussant**: Rebecca Hanlin

 Poverty and Socio-Economic Profile of Some Selected Communities in Nigeria: The Use of Innovation Instruments

Douglason Omotor, Bernhard Ishioro and Freeman Orubu

- Poverty alleviation in rural Kenyan communities: Do self-help groups play a role? Dolphine Caroline Anyango
- Survey of the Role of Communication in Community Development: Discourses of Poverty Reduction in Ethiopia

Mengistu Tulu Balcha

#### PAPER SESSION 4D: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GR3 Chair: Jaya Shukla Discussant: Geoff Banda

Horticultural System Innovation in the Kenya's Credence Goods Export Industry: A
 Value Chain Management Perspective

Martin Kang'ethe

- The role of financial institutions and SMEs in promoting innovation in Rwanda Ndikubwimana Philippe
- Why African microfinance organizations are not transforming and what is needed Olaide Rufai Akande and Hephzibah Obekpa

18.00 BUSES LEAVE CONFERENCE VENUE FOR HOTELS

19.00 – 22.00 DINNER AT HOTELS

#### THURSDAY 19<sup>TH</sup> NOVEMBER

08.00 BUSES DEPART HOTELS FOR CONFERENCE VENUE

08.30 - 08.45 BREAK

08.45 - 10.15 PAPER PARALLEL SESSION 5

PAPER SESSION 5A: WORK ORGANIZATION AND FIRM PERFORMANCE

Room: GL1

Chair: Abdelkader Djeflat

Discussant: Philippe Ndikubwimana

Patent Licensing in Spatial Competition – Does Pre-innovation Cost Asymmetry Matter

Bouguezzi Fehmi

• Effet de l'innovation financièresur la stabilité de la demande de monnaie au Cameroun: uneapproche par le modeleARDL

Gregory Mvogo and Desire Avom

#### PAPER SESSION 5B FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GL2 Chair: Lydia Miriti Discussant: Ruth Githiga  Bringing Traditional Cereals Back to The Dinner Table- What can we learn from Resilience of Cassva in West Africa to Strengthen Traditional Grains Innovation Systems

Julius Gatune

 Arguments For and Against 'Sack' Potato Production in Zimbabwe: An Urban Planning Perspective on Food Systems Innovations

Elmond Bandauko

• Incentives for community-level, inclusive, climate-smart water innovations in Kenya Joel Onyango and Gladys Nthenya Kivati

#### PAPER SESSION 5C: FINANCING AND SUPPORTING INNOVATION AND DEVELOPMENT

Room: GR1

Chair: Aschalew Tigabu

Discussant: Mreji Pamela Adhiambo

• Factors influencing adoption of technologies and innovations in smallholder honey production in south-western Nigeria

Temitope O. Olatubosun, B.A. Oluwale, and M.O. Ilori.

Factors Influencing Entrepreneurial Orientation of Smallholder Farmers in Southwestern Nigeria

Ibraheem A. Akangbe, Billy A. Oluwale, Titilayo O.Olaposi, and Caleb M. Adelowo

 Assessing Agricultural Production Systems from a Sustainability Perspective: Some Findings from Agro-Ecological Zones of Africa

Kalu Ukpai Ifegwu

10.15 - 10.45 BREAK

10.45 - 11.45 KEYNOTE ADDRESS 2

#### SCIENCE, TECHNOLOGY AND INNOVATION STRATEGY FOR AFRICA AND MEASUREMENT/INDICATORS

**Speaker:** Fred Gault, UNU-MERIT & TUT-IERI

Room: Lecture Theatre GLT

#### 11.45 – 12.45 EDUCATION AND TEACHING TRACK 2

#### EXPERIENCE WITH USE OF PROBLEM BASED LEARNING (PBL) IN EDUCATION IN AFRICA

Room: GL1

**Chair:** Dr. Margrethe Holm Andersen, Aalborg University, Denmark

**Speakers** 

**Dr. Samuel Akomea**, Kwame Nkrumah University of Science and Technology (KNUST), Ghana. Experience with introducing course-based PBL model at African universities. **Dr. Dorothy Okello**, Makerere University, Uganda: Experience with introducing course-based PBL model at Universities: the case of Makerere University

This session will consider one option for revitalizing teaching through the use of innovative pedagogic approaches.

12.45 – 13.45 LUNCH

13.45 – 14.15 NOTICES

#### **BOOK LAUNCHES, AFRICALICS ONLINE FORUMS, OTHER NEWS**

#### 14.15 – 15.45 SPECIAL SESSION C & EDUCATION AND TEACHING TRACK SESSION 3

#### SPECIAL SESSION C

#### INCLUSIVE INNOVATION AND DEVELOPMENT: REFLECTIONS AND PROJECTIONS

Room: Lecture Theatre GLT

Chair: Maurice Bolo (SCINNOVENT Centre)

#### **Speakers**

**Dr. Julius Mugwagwa**, The Open University, UK: The paradox of choice in South African and Zimbabwean health systems: can national health spending decisions be more inclusive?

**Dr. Geoffrey Banda**, University of Edinburgh: UK From the global to the local: how can effective and affordable medicines be sustainably produced in Africa?

**Dr. Vuyo Mjimba**, University of South Africa: Mineral commodities and the political economy of mining in Africa: the case of Tanzania –

**Richmond Attah-Ankomah**, The Open University, UK: Is China as a new source of sustainable innovation capabilities for Africa's small to medium enterprises?

This session will analyse the historical causes of and responses to some of the challenges facing African economies, through the lens of inclusive innovation, interrogating the analytical and predictive strengths of innovation systems thinking.

#### **EDUCATION AND TEACHING TRACK 3**

# VISIONS FOR FUTURE TEACHING AND EDUCATION IN INNOVATION AND DEVELOPMENT IN AFRICA (MSC AND PHD LEVEL)

Room: Lecture Theatre GRT

**Chair:** Rebecca Hanlin, AfricaLics Secretariat

#### **Speakers**

Prof. Peter Lating, Makerere University, Uganda

Dr. Bitrina Diyamett, Science, Technology and Innovation Policy Research Organization, Tanzania

Dr. Tomas Kjellqvist, Research Manager, Technoscience Studies, Bleking Institute of Technology, Sweden & Vice-Chair Swedish National Commission for Unesco

This session considers where the future of innovation and development postgraduate teaching might look like, the challenges and opportunities in meeting these future scenarios.

15.45 – 16.00 BREAK

16.00 - 16.30 CLOSING CEREMONY

16.45 BUSES BACK TO HOTELS OR DIRECT TO AIRPORT

#### **Annex 3: Open Symposium Programme**





## HALF DAY OPEN SYMPOSIUM ON INNOVATION AND INCLUSIVE DEVELOPMENT: THE CHALLENGES AND OPPORTUNITIES FACING RWANDA AND AFRICA IN GENERAL

Date: Tuesday, 17<sup>th</sup> November 2015

Venue – University of Rwanda, Kigali

#### **Background**

The African network for Research Training on Innovation and Competence Building Systems (AfricaLics) is a network of scholars in Africa and beyond who are interested in innovation and development focused on Africa's development. AfricaLics is part the world-wide research network, The Global Network for the Economics of Learning, Innovation, and Competence Building Systems (Globelics).

The University of Rwanda is known for its role in the development of Rwanda through advancement of relevant knowledge and is committed to the highest standards of academic excellence.

An Open Symposium on "Innovation and Inclusive Development in Rwanda" will take place on 17<sup>th</sup> November 2015. This event is co-organized by University of Rwanda, College of Business and Economics (CBE) and the AfricaLics Secretariat and is open to the members of the public, government representatives, the private sector, the research community and students.

The objective of the Open Symposium is to allow the different communities of practice to deliberate on the challenges and opportunities facing Rwanda and Africa in general and how opportunities can be harnessed to promote innovation and inclusive development. Key note speakers have been invited to help the participants deliberate on this subject.

University of Rwanda will also show case the different programmes and activities being run by the University and the issues affecting its operating environment/country as a whole. The University will also demonstrate how different departments and activities are meeting a variety of innovation and development challenges faced by Rwanda.

#### **Tentative Programme**

TIME	ACTIVITY	RESP	ONSIBLE PERSON
8.30-9.00 Innovators exhibition		Unive	ersity of Rwanda
8:30-9.00	Arrival & registration	Confe	erence Organising Committee
9:00-10:45 OPEN SYMPOSIUM			
	Session 1: Opening of the AfricaLics Conference		
Chair: Prof. Nelson Ijumba. DVC, University of Rwanda			
9:00 - 9:10	9:00 – 9:10 Welcome remarks- University Vice Chancellor, University of Rwanda		Jniversity of Rwanda

	of Rwanda		
9:20 - 9:30	Welcome remarks - AfricaLics	Dr. Bitrina Diyamett, CEO, Science, Technology and	
		Innovation Policy Research Organization (STIPRO),	
		Tanzania & Chair, AfricaLics Scientific Board	
9:30-9.40	From Globelics to Regional -	Prof. Bengt-Åke Lundvall, Aalborg University &	
	Lics	Secretary General Globelics	
9:40 – 9:50	Remarks from Sida	Dr. Pernilla Rafiqui,	
		First Secretary, Senior Programme Manager,	
		Research and higher Education, Embassy of Sweden	
9:50 - 10:10	Official opening	Dr. Papias Musafiri, Minister of Education, Rwanda	
10.10-10:15	Vote of thanks	Prof. Verdiana Grace Masanja, Chair, Conference	
		Scientific Committee	
10:15 - 10:45	TEA BREAK & GROUP PHOTO -	PLUS EXHIBITIONS	
	10.4	45 <b>–</b> 13.15	
	Session 2 : Ple	enary presentations	
		General of Science and Technology Commission	
10:45 - 11:15	Innovation and	Prof. Per Eriksson, University of Lund, Sweden	
	Development: perspective		
	from Europe		
11:15-11:30	The role of innovation in	Prof. Bengt-Åke Lundvall, Aalborg University &	
	developing countries	Secretary General Globelics	
11.30 – 12.00	Overview of STI in Rwanda	Dr. Marie Christine Gasingirwa, Director General,	
		Science, Technology and Research, Rwanda.	
12:00-12:40	STI and development	Dr. Geci Karuri-Sebina, IERI, South Africa	
	research in Africa: how does		
	it look like in the future?		
12.40 – 13.15	Discussion	Dr. Anna Kingiri, AfricaLics & ACTS, Kenya	
13:15-14:15	LUNCH BREAK - EXHIBITIONS		
		ssion/Expert panel (plenary)	
14:15 – 15.45	Science, Technology and	Convener/chair: Dr Nicholas Ozor- ATPS Network,	
	Innovation (STI) for Africa's	Kenya.	
	Development	Panelists:	
		-Prof Benjamin Ozumba-Vice Chancellor, University	
		of Nigeria.	
		- Dr Peggy Oti-Boateng, UNESCO, Zimbabwe	
		- Dr. Marie-Christine Gasingirwa, Rwanda	
45 45 46 66	T54 8854W 0 577775775	- Dr. Tomas Kjellqvist, Sweden	
15.45-16.00	TEA BREAK & EXHIBITIONS	C. C. C. C.	
16.00-17.30	Paper parallel session 1	See Conference programme	
18.30 – 20.00	Conference Dinner at	Local Organising Committee	
	Nobleza Hotel, Kigali		

For more information, please contact  $\underline{secretariat@africalics.org} \ or \ \underline{nbideri@yahoo.com}$ 

Annex 4: The AfricaLics Small Research and Book Projects Dissemination workshop Report

Report: AfricaLics Small Research and Book Projects Dissemination and Next Steps Workshop, Friday 20th November 2015

Venue: College of Business and Economics, University of Rwanda, Kigali

#### **Background**

During the setup of AfricaLics, it was acknowledged that there are many aspects of the innovation and development landscape which were under-researched. These ranged from issues such as the relationship between innovation, engineering and design to the role of innovation for the utilisation of low-carbon energy solutions for poverty reduction. Two main reasons were identified as responsible for this situation. First, the lack of funding available for research in this area. Second, the lack of opportunities for researchers in this area to come together and create collaborative network. In response to this situation, AfricaLics set up a 'Small Research and Book Projects' grant scheme in 2014, with the aim of providing grants of up to US\$ 30,000 for networked projects involving innovation and development researchers in more than one African country. Following a competitive bidding process, six projects were funded in mid-2014, with many running through to November 2015. The grant funds allowed these projects to work up larger research proposals for submission to funders, many involving small pilot studies, and/or the development of edited books based on existing research.

This one-day Research Dissemination workshop, which was a follow up to the Writeshop and Grants Management workshop organized in August in Pretoria, South Africa, provided an opportunity for the projects to publicly present their major findings to other researchers and policymakers. It also provided them with the opportunity to gain feedback on their project activities and ideas for next steps.

In the morning, in particular, projects briefly presented their research findings in parallel sessions and gained feedback from invited external scholars (see the workshop program in Appendix). They also discussed progress to date and plans for the future.

In the afternoon, all the project participants came together in one room and discussed on the way forward in which, obstacles faced, project next steps and expected major outputs were reflected.

The Secretariat also briefed the participants on a possible AfricaLics Phase II project, including the availability of small funding in 2016 for research dissemination support. It was stated that the Secretariat is in the process of applying to Sida. The application has seed-funding as well as medium-sized project schemes. The medium sized money will be available for those who have received seed funding in the current projects. The secretariat encouraged current projects to develop proposals in 2016. This will help them to apply immediately if the funding is secured. However, the Secretariat stressed that the possibility of funding from Sida is still uncertain.

#### **Summary of discussion**

Project	Obstacles faced	Project next steps and expected major outputs
Engineering Design	Overall the project went very well.	The project intends to publish
Capacity Building and	But achievements are uneven. A	journal articles through peer-review
Economic	clear direction was given to each of	process. Three papers are ready for
Development in Africa	the project members from the	peer review. New researchers are
[led and reported by	beginning. However, only three	brought on board and will contribute
Mammo Muchie]	regions have done a good job. Two	chapters. If the team manages to
	were problematic. While one of	obtain extra five papers, it is possible

	them is slowly improving, the other still has a serious issue. The Secretariat must find a way of dealing with this member. The issue with this researcher has been lack of willingness to cooperate and to some extent the quality of the draft manuscripthe produced. It is possible to deliver the expected output if the 'failing' member is committed to deliver.	to have a special issue. With the PI's standing agreement with Routledge, the special issue can also be published as a book.
Work organization, competence building and innovation in formal and informal microenterprises in Africa [led and reported by Erika Kraemer-Mbula]	The key challenge, according to this project PI, has been fluctuations with exchange rates. Payment commitment was made in dollars but the money was saved in South African Rand. Each member has lost a significant amount due to currency exchange rate issues. This should be considered in the future. The secretariat noted that this was also an issue for the Secretariat itself. Addressing the problem will depend on the donor's willingness to consider the problem but there will be a dialogue in the future.	The project aims to develop one journal article collectively. Members are in dicussions if there is a possibility for a special issue in the second half of 2016.
Building low carbon innovation energy systems in Africa [led and reported by Radhika Perrot]	The major challenge with this project was related to members it lost after the project started due to limited financial incentives from the project. These members believed that the project funding was too small compared to the time it required to write the chapter.  The Secretariat responded that the finance may be small and it should be small, as it is a seed-funding project. It has to be positively taken as it is the first of its kind in Africa. The other issue mentioned was: the project did not have a research conceptual framework collaboratively developed at the beginning.	The project intends to deliver an online report by January 30. Its long-term plan is developing a special issue.
The Role of Women in Science and Technology Innovation in	The issue with this project was the fact that most members did not have collaborative research experience before.	The project's major focus is on developing a large proposal. But there may be a possibility of developing a special issue if project

Grassroots Agriculture in Africa [led and reported by Williams Ezinwa		members continue actively participating in the project.
Nwagwu]		
Natural Resource	This project has only two members.	The project members are thinking of
Endowment and	So there was not a major issue with	sending thier papers for publication.
Innovation Behaviour	it	There is also a discussion to write a
of Firms [Led and		bigger proposal for an AfricaLics
reported by Abdi Yuya		funding.
Ahmed]		

### The workshop programme

	T		
08.00 –	Registration		
08.30			
08.30 -	Welcome, introductions and objectives of the day		
08.45	Rebecca Hanlin, AfricaLics Secretariat		
08.45 –	Overivew of project activities and progress to date		
09.15	Ann Kingiri, AfricaLics Secretary-General		
09.15 -	Parallel project sessions A		
11.15			
	A1: Engineering Design Capacity Building and Economic Development in Africa		
	Convener: Mammo Muchie, Tshwane University of Technology, South Africa		
	This session will focus on the future of the project following an introduction to		
	progress to date. Team members will be joined by Dr. John Trimble, Fullbright		
	Professor and Dr. Swapan Patra from Tshwane University of Technology, South Africa.		
	A2: BUILDING LOW CARBON INNOVATION ENERGY SYSTEMS IN AFRICA		
	Conveners: Radhika Parrot, Mapungubwe Institute for Strategic Reflection (MISTRA), South		
	Africa, and Maruf Sanni, National Centre for Technology Management, Nigeria		
	This will be mostly an interactive session with team members discussing progress to		
	date and plans for the future.		
11.15 -	Refreshment break		
11.30			
11.30 -	Parallel project sessions B		
13.30	B1: Does Natural Resource endowment characterize the innovation behavior of African		
	firms? 'Implications to overcome the 'resource curse'		
	Convener: Abdi Yuya, Adama State University, Ethiopia		
	This session will include 2 presentations from team members outlining their pilot		
	research results. This will be followed by a response from, Prof. Micheline Goedhuys,		
	UNU-MERIT, The Netherlands		
	B2: The Role of Women in Science and Technology Innovation in Grassroots Agriculture in		
	Africa		
	Convener: Williams Ngwawu, CODESRIA, Senegal		

	This session will include 3 presentations from team members outlining their pilot research results.			
	B3: Work organisation, competence building and innovation in formal and informal microenterprises in Africa			
	Convener: Erika Kramer-Mbula, Institute for Economic Research on Innovation (IERI), South			
	Africa			
	This session will include 8 short presentations from team members outlining their pilot research results.			
13.30 -	Lunch			
14.30				
14.30 -	Where next?			
15.30	Rebecca Hanlin, AfricaLics Secretariat			
	An interactive session to discuss opportunities and issues for the future			
	This session will discuss the following topics:			
	Projects proposed next steps			
	2. AfricaLics plans for phase II			
	3. Obstacles and opportunities identified during today's workshop			
	4. General comments on how to promote research on innovation and development for			
	Africa			
15.30 -	Close			
15.45				
15.45 –	Tea break and farewalls			
16.30				

Project investigator	Project	Team participants	External participants
Erika Kraemer-Mbula Work organization,		Erika Kraemer-Mbula	Geci Karuri-Sebina
	competence building	Oluseye Jegede	Fred Gault
	and	Musambya Mutambala	
	innovation in formal	Edward Lorenz	
	and	Tukur Garba	
	informal		
	microenterprises		
	in Africa		
Radhika Perrot	Building low carbon	Radhika Perrot	Rob Bryne
	innovation energy	Maruf Sanni	Velaphi Msimang
	systems in Africa	Victor Odhiambo	
		Awino	
		Heric Thomas	
		Aschalew Tigabu	
Mammo Muchie	Engineering Design	Mammo Muchie	Swapan kumar Patra
	Capacity Building and	Abdelkader Djeflat	John Trimble
	Economic	HaileMichael Demissie	
	Development in Africa	Abiodun Egbetokun	
		Khumbulani Mpofu	
Abdi Yuya Ahmed	Natural Resource	Abdi Yuya	Micheline Godheys

	Endowment and Innovation Behaviour	Denis B. Akouwerabou	
	of Firms		
Williams Ezinwa	The Role of Women in	Bosire Onyanch	
Nwagwu	Science and	Dolphine Anyango	
	Technology		
	Innovation in		
	Grassroots		
	Agriculture in Africa		

# Annex 5: List of all participants

No:	Name	Organisation
1	Rebecca Hanlin	AfricaLics Secretariat
2	Aschalew Tigabu	AfricaLics Secretariat
3	Mourine Chepkemoi	AfricaLics Secretariat
4	Moses Owidhi	AfricaLics Secretariat
5	Margrethe Andersen	Globelics Secretariat
6	Ann kingiri	AfricaLics Secretariat
7	Bitrina Diyamet	STIPRO, Tanzania
8	Rasmus Lema	Aalborg University, Denmark
9	Djeflat Abdelkader	University of Lille, France
10	Rasigan Maharajh	IERI, South Africa
11	Erika Kraemer-Mbula	IERI, South Africa
12	Mammo Muchie	Tshwane University of Technology, South Africa
13	Tomas Kjellqvist	Blekinge Institute of Technology, Sweden
14	Nelson Ijumba	University of Rwanda
15	Philip Cotton	University of Rwanda
16	Pernilla Rafiqui	Embassy of Sweden
17	Papias Musafiri	Minister of Education, Rwanda
18	Verdiana Grace Masanja	University of Rwanda
19	Ignatius Gatare	National Commission for Science and Technology, Rwanda
20	Per Eriksson	University of Lund, Sweden
21	Prof. Bengt-Åke Lundvall	Aalborg University, Denmark (by video)
22	Marie Christine Gasingirwa	Directorate General of Science, Technology and Research, Rwanda
23	Fred Gault	UNU-MERIT, The Netherlands
24	Geci Karuri-Sebina	South African Cities Network
25	Nicholas Ozor	ATPS, Kenya
26	Benjamin Ozumba	University of Nigeria
27	Peggy Oti-Boateng	UNESCO, Zimbabwe

28	Heidi Prozesky	DST-NRF SciSTIP, South Africa
20	Nikasaa Malalaki	The National Advisory Council on Innovation, South
29	Ntsane Moleleki	Africa
30	Winnie Asiti	ACTS
31	Judy Nyaga	United disabled persons of Kenya
32	Herbert Lwanga	Log'el Project, Uganda
33	Lydiah Miriti	Kenya Livestock Agricultural Research Organaisation
34	Maurice Bolo	SCINNOVENT Centre, Kenya
35	Julius Mugwagwa	Open University, UK
36	Geoffrey Banda	Edinburgh University, UK
37	Vuyo Mjimba	University of South Africa
38	Richmond Attah-Ankomah	Open University, UK
39	Peter Lating	Makerere University, Uganda
		Kwame Nkrumah University of Science and
40	Robert Aidoo	Technology, Ghana
41	Samuel Akomea	Kwame Nkrumah University of Science and Technology, Ghana
42	Dorothy Okello	Makerere University, Uganda
43	Heric Thomas Mtei	STIPRO, Tanzania
44	Musambya Mutambala	STIPRO, Tanzania
45	Bosire Onyancha	University of South Africa
46	·	Makerere University
47	Aggrey Niringiye Hailemichael Teshome	ACTS
48	Sanni Maruf	
		National Centre for Technology Management, Nigeria
49	Dolphine Caroline Anyango	University of Kabianga, Kenya Tshwane University of Science and Technology, South
50	Abiodun Egbetokun	Africa
51	Swapan Kumar Patra	Tshwane University of Science and Technology, South
	John Trimble	Tshwane University of Science and Technology, South
52		Africa
53	Khumbulani Mpofu	Tshwane University of Science and Technology, South Africa
54	Samir Baha-Eddine Maliki	University of Tlemcen, Algeria
55	Abdi Yuya	Adama University of Science and Technology, Ethiopia
56	Denis Akouwerabou	Université de ouagadougou, Burkina Faso
57	Jegede Oluseye	Obafemi Awolowo University, Nigeria
58	Micheline Goedheys	UNU-MERIT, The Netherlands
59	Timothy Esemu	Makerere University, Uganda
60	Lotta Taka-Greenish	University of Witwatersrand, South Africa
61	Edward Lorenz	University of Nice-Sophia, France
OI	Lawara Lorenz	Oniversity of Nice-Sopilla, Platice

62	Tukur Garba	Usmanu Danfodiyo University, Nigeria
63	Radhika Perrot	MISTRA, South Africa
64	Rob Bryne	University of Sussex, UK
65	Velaphi Msimang	MISTRA, South Africa
66	Bruce Krogh	Carnagie Mellon University in Rwanda
67	Manasse Mbonye	College of Science and Technology, University of Rwanda
68	Kopparthi Murty	College of Business and Economics, University of Rwanda
69	Alphonse Muleefu	College of Arts and Social Sciences, University of Rwanda
70	Laetitia Nyimawamwiza	College of Agriculture, Animal Sciences and Veterinary Medicine, University of Rwanda
71	Fehmi Bouguezzi	University of Carthage, Tunisia
72	Ndikubwimana Philippe	University of Rwanda
73	Manir Abdullahi Kamba	Bayero University, Kano, Nigeria
74	Julius Gatune Kariuki	African Centre for Economic Transformation (ACET), Ghana
75	Mengistu Tulu Balcha	Ambo University, Ethiopia
76	Lilian Lihasi Kidula	Egerton University, Kenya
77	Ann Aswani	Jomo Kenyatta University of Agriculture and Technology
78	Emma Oketch	University of Nairobi
79	Joanes Atela	ACTS
80	Raymond Mugwanya	ACTS
81	Pamela Mreji	gordon institute of Business Science
82	Kassahun Y. Kebede	Addis Ababa University, Ethiopia
83	Ameha Mulugeta	Addis Ababa Institute of Technology (AAiT), Addis Ababa University (AAU), Ethiopia
84	BI BI ISHRAT HASSAN	Tata Institute of Social Sciences Mumabi India, India
85	Olusesan Michael Awoleye	Obafemi Awolowo University, Ile-Ife, Nigeria, Nigeria
86	Eric Njoroge	Kenyatta University, Kenya
87	Gideon Wafula Wekesa	University of Nairobi
88	Gladys Nthenya Kivati	London South Bank University
89	Joel Onyango	ACTS
90	Martin Kang'ethe	Riara University
91	Ruth Wanjiku Githiga	ACTS
92	Victor Odhiambo Awino	The Scinnovent Centre, Kenya
93	Adeola Oloyede	University of Ilorin, Ilorin, Nigeria
94	Adepoju Adeyemi Oluwaseun	National Centre for Technology Management, Nigeria
95	Ayinde Opeyemi Eyitayo	University of ilorin, Nigeria
96	Douglason Godwin Omotor	Delta State University Abraka Nigeria

		Institute of Engineering, Technology and Innovation
97	Ejim-Eze Emmanuel	Management, Nigeria
98	Jonathan Akinwale	University of Ibadan, Nigeria
99	Olaide Rufai Akande	University of Agriculture, Makurdi, Nigeria
100	Temitope Olatubosun	Obafemi Awolowo University, Ilelfe, Nigeria
101	Titilayo Olubunmi Olaposi	Obafemi Awolowo University, Ile-Ife, Nigeria
102	Benard Muok	CENTRE FOR RESEARCH INNOVATION AND TECHNOLOGY, JARAMOGI OGINGA ODINGA UNIVERSITY, Kenya
103	Pamella Were-Kogogo	JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY, Kenya
104	Caleb Muyiwa Adelowo	Obafemi Awolowo University, Nigeria
105	David Adeyeye	National Centre for Technology Management, OAU, Nigeria
106	Ayodele Ibrahim Shittu	University of Lagos, Nigeria
107	Elmond Bandauko	University of Lagos, Nigeria
108	Gregory Mvogo	University of Yaounde II, Cameroon
109	Tanyanyiwa Vicent Itai	Zimbabwe Open University, Zimbabwe
110	Ifegwu, Kalu Ukpai	Redeemer's University, Ede, Nigeria
111	Catherine Kilelu	Wageningen University, Netherlands
112	Kayode Odimayomi	University of Port Harcourt, Nigeria
113	Liberata Mukamana	University of Rwanda
114	Guarav Bajpai	University of Rwanda
115	Jaya Shukla	University of Rwanda
116	Chika Ezeanya	University of Rwanda
117	Fayaz Ahmad Sheikh	Jawaharlal Nehru University, India
118	Abdub Galgallo Huri	University of Nairobi
119	Nahshon Nyambane	University of Nairobi
120	Sunday Ojo	Twasane University of Technology
121	Mary Adada	Jaramogi Oginga Odinga University of Science And Technology
122	Williams Nwangu	CODESRIA
123	Eric Nizeyimana	University of Rwanda
124	Eric Hitimana	University of Rwanda
125	Renee Reagon	Thomson Reuters, Kenya
126	Jean Bosco Micomyiza	University of Rwanda
127	Jean d'Amour Nizeyimana	None
128	Vizir Jean Paul Nsengimana	МОН
129	BENOT SIBOMANA	University of Rwanda
130	Theogene Ingabire	University of Rwanda/CST
131	Sylion Muramira	University of Rwanda_College of Science and

		Technology
132	Job Mutyaba	Swedish Embassy - Kampala Uganda
133	Katri Pohjolainen Yap	Embassy of Sweden Kampala
134	Joy Owango	Thomson Reuters, Kenya
135	Bideri Ishuheri Nyanulinda	University of Rwanda
136	Abimana Fidele	University of Rwanda
137	Sendanyoye Peter	University of Rwanda
138	Gaga Didier	University of Rwanda
139	Tugurumuremyi Damien	University of Rwanda
140	Kayitare Tengera Francoise	University of Rwanda
141	Marvin Mbassana	University of Rwanda
142	Muhoza Dieudonné	University of Rwanda
143	Barayandema Jonas	University of Rwanda
144	Ruhara Charles	University of Rwanda
145	Gasheja Faustin	University of Rwanda
146	Kiyaga Elias	University of Rwanda
147	Nyapidi Daniel	University of Rwanda
148	Nzeyimana Theonesta	University of Rwanda
149	Hakizimana Cesar	University of Rwanda
150	Micomyiza Jean Baptiste	University of Rwanda
151	Rudasingwa Janvier	University of Rwanda
152	Masedi Tshkudu	University of Rwanda
153	Munyazikwiye Theiry	University of Rwanda
154	Malinga Chris	University of Rwanda
155	Mizeyimana Kizito	University of Rwanda
156	Nambajimana Djamani	University of Rwanda
157	Akimana Virginie	University of Rwanda
158	Mugwaneza Olivier	University of Rwanda
160	Munyabugingo Boneventure	University of Rwanda
161	Umugire Emmanuel	University of Rwanda
162	Ndahimana Michel	University of Rwanda
163	Mutaganda Jocelyne	University of Rwanda
164	Ingabire Christine	University of Rwanda
165	Ndibwirende Claude	University of Rwanda
166	Umutoni Christine	University of Rwanda
167	Rubingisa Pudence	University of Rwanda
168	Marvin Mbassana	University of Rwanda
169	Muhoza Dieudonne	University of Rwanda

170	Barayandema Jonas	University of Rwanda
172	Ruhara Charles	University of Rwanda
173	Gasheja Faustin	University of Rwanda
174	Mukuralinda Juvenal	University of Rwanda
175	Gislain Ngoga Tenge	University of Rwanda
176	George Njoroge	University of Rwanda
177	Lakhan Lal Yadav	University of Rwanda
178	Ongol Martin	University of Rwanda
179	Kato Njunwa	University of Rwanda
180	Caleb Tamwesigire	University of Rwanda
181	Rama Rao	University of Rwanda
182	Bizuru Elias	University of Rwanda
183	Theophile Niyonzima	University of Rwanda
184	Leon NIYIBIZI	University of Rwanda
185	Théogène Nyandwi	University of Rwanda
186	Oluwale Billy Adegbola	Obafemi Awolowo University, Ile-Ife, Nigeria
187	Remy Twiringiyimana	Ministry of Education, Rwanda
188	Kazungu Jules	RCID, Rwanda
189	Tajudeen Sanni	Kampala International University
190	Said R Ngoga	UR-CST, Rwanda
191	Patrick Suubi	UR-CE, Rwanda
192	Daniel Tugirumvremyi	University of Rwanda
193	Rehema Abdul	University of Rwanda
194	Solomon Nshi Miuimana	University of Rwanda
195	Mukama Ides	University of Rwanda
196	Muvunyi Eugene	University of Rwanda
467	Mkurikiyimfura Barindikije	Addition of Francisco Afficiency 1.5
197	Ernest	Ministry of Foreign Affairs and Cooperation, Rwanda
198	Emmanuel Ndizaye	University of Rwanda
199	Oguasi Peter	East Africa Education Directory
200	Eugienie Byukusenge	University of Rwanda - CBE
201	Ndayiragije Esperance	10,000 Women/Goldman Sachs UR-CBE
202	Madouluri S Rao	University of Rwanda
	Security guards x 4	
	Cleaners x 5	
	Student Volunteers x 18	220
	TOTAL:	229

Annex 6: Profiles of key note speakers

	Name		Profile
			Bitrina is the Director of STIPRO, an STI think-tank in
			Tanzania and President of AfricaLics. Bitrina's research
1	Bitrina	Diyamett	interests lie in STI policy.
			Tomas is Research Manager at Blekinge Institute of
			Technology, Sweden. He was previously the Director of
2	Tomas	Kjellqvist	Research Cooperation at Sida.
			Marie is Directorate General of Science, Technology and
			Research, Ministry of Education, Rwanda. She holds a
			PhD Degree from University of Namur, Belgium in
	Maria		Biomedical and Pharmaceutical Sciences. She has authored a number of scientific articles in international
3	Marie Christine	Gasingirwa	journals.
3	Christine	Gasirigii wa	Phil Cotton is a Vice Chancellor of the University of
			Rwanda (UR). Before his appointment as Vice Chancellor,
			he was the Principal of one of UR's Colleges – Medicine
			and Health Sciences. He is also a professor of Learning
4	Philip	Cotton	and Teaching at Glasgow medical School.
			Geci is Executive Manager at South African Cities
			Network. She has worked in large research institutions
			mainly providing technical assistance, advisory and
			evaluation services to public sector institutions in areas
			related to infrastructure, development policy and
5	Geci Karuri-	Sebina	planning.
			Fred is a Professor Extraordinaire at the Tshwane
			University of Technology (TUT) in South Africa and a
			member of the TUT Institute for Economic Research on
			Innovation (IERI). He served on the Council of Canadian
			Academies (CCA) Panel on the State of Science and Technology in Canada, the CCA Panel on the Socio-
			Economic Impacts of Innovation Investments, and the
			U.S. National Academy of Sciences Panel on Developing
			Science, Technology and Innovation Indicators for the
6	Fred	Gault	Future.
			Lundvall is a Professor in Economics at the Department of
			Business and Management, Aalborg University. He is an
			eminent researcher on national innovation systems and
			theories of interactive learning. Lundvall has coordinated
	•		major projects on the Danish economy and founded
	Bengt-Åke		Globelics, which is the worldwide network on innovation
7		Lundvall	research.
			Per Eriksson is a Swedish researcher, academic leader and
	Davi	Fullman	government official. He is Professor of signal processing
8	Per	Eriksson	and was a rector magnificus of the University of Lund.
			Pernilla Rafiqui is First Secretary and Senior Programme
9	Pernilla	Pafigui	Manager of Research and Higher Education, Embassy of
9	renillid	Rafiqui	Sweden, Kigali, Rwanda. She is also Deputy Head of

			Development Cooperation at Embassy of Sweden in
			Rwanda.
			Nelson is the Deputy Vice-Chancellor (Academic Affairs
			and Research) of University of Rwanda. Previously he was
			the Deputy Vice-Chancellor of Research at the University
			of KwaZulu-Natal and a Professor of Electrical
9	Nelson	Ijumba	Engineering.

Annex 7: Official opening speech by Dr. Celestine Ntivuguruzwa, PS Ministry of Education, Rwanda

There is a very beautiful song in Kinyarwanda says that in Rwanda we love to receive guests. I am pleased and honored to be with you today on behalf of honorable Minister of Education at this opening of the second AfricaLics International conference with the theme "Unpacking systems of innovation for sustainable development in Africa"

On behalf of the government of Rwanda, the Ministry of Education and on my own behalf I would like to warmly welcome you all especially those of you who have travelled for the first time to Rwanda from different parts of the world. Welcome to Rwanda, welcome to this beautiful country of a thousand hills and please enjoy your stay during and even after the conference activities.

Ladies and gentlemen there is a strong recognition within Rwanda of the importance of innovation to the nation development and economic growth, during the last two decades Rwanda has invested a significant effort mainly in putting in place the governance and physical infrastructure as enablers for sustainable development of national science, technology and innovation systems.

I am happy to recognize that we have the national commission for science and technology, if you have followed the last Friday the first institution for East Africa community which was opened in Rwanda it was East African commission for science and technology, this showed commitment of the government of Rwanda to support science innovation and technology in all aspects.

Distinguished participants ladies and gentlemen Rwanda through the University of Rwanda is proud to host this second AfricaLics Conference and we appreciate the choice of this year's theme "Unpacking systems of innovation for sustainable development in Africa" this theme is in line with our vision as a country but is an important topic at the continent and global scale. As I conclude my remarks allow me to thank sponsors of this conference notably African Centre for Technology Studies, The Swedish International Development Agency and other partners and of course the University of Rwanda. I equally thank all the organizing and scientific committees that worked very hard to make this important forum happen.

Last but not least I once again thank the University of Rwanda, the vice Chancellor for hosting us at the occasion of this conference. I wish all of you fruitful discussions, deliberations and hereby declare this second AfricaLics conference with the theme "Unpacking systems of innovation for sustainable development in Africa" officially open. Thank you very Much.

#### Annex 8: Official welcome remarks by Prof Philip Cotton, Vice Chancellor, University of Rwanda

Permanent secretary, colleagues and friends good morning and welcome to the University of Rwanda. The University of Rwanda is two years old we are now on our third academic year pretty impressive.

We are the merger of the seven public universities in Rwanda and since we merged those seven public universities we have taken into our family five other public institutions. So over the last two years we have merged 12 higher institutions into this one university. We now have thirty one thousand students over fourteen campuses in this country, fourteen hundred and fifty academic staff and just over one thousand administrative staff. We are writing a wonderful beautiful story about education in this country. Let me ask you to look at our logo. The logo is drawn by one of our student as a result of student competition, she chose the color blue because she said that blue for here represent courage. The universities need to have courage and at our university is the merger of twelve institutions needed to know a lot of courage. She drew that arc that almost circle because she said we need to demonstrate our oneness, we need to articulate our oneness, because we all share the mission to serve this beautiful nation through education, through research and through service. She uses stylized letters for U and R because she said those stylized letters speak of creativity, she says the universities need to be creative, need to think differently, need to change mindsets. And if you look closely letters U and R you will see three ribbons crossing through those letters, and she says those represent the three colors that goes through the flag of this wonderful nation, because this is the University of Rwanda, born of Rwanda, reflecting Rwanda and its values and solving the problems of Rwanda.

Innovation if nothing else is about transformation, transformation is something more profound that simply changes, and I am really looking forward for this conference so that I might gain some insights into what do you mean by transformation, because for me transformation is a complete overhaul of the values and philosophy that underpins everything that we do in this place.

His Excellency the president of the republic made a comment time ago about education and he went along this line that what is the purpose, that what is the use of education if you cannot put it in the service of humanity.

Ladies and gentlemen, what is the use, what is the purpose of the programmes we are so proud of if they don't produce graduates that serve human kind, what is the purpose of innovation, what is the use of innovation if we don't put it to the service of our fellow human beings? In reading about this conference I came upon a new word that I hadn't heard of before entrepreneurship, people who work as who acts as entrepreneurs within an organization. Ladies and gentlemen the University of Rwanda welcomes entrepreneurs, and so in celebration of this new word I have discovered forgive my naivety and small brain for not having stumbled on the word before but in celebration of that we will be having our own 5 minutes soap box event in future where I will provide a wooden box for people to stand on and speak for 5 minutes about their ideas for transforming this University so we truly will become one of the finest universities in this region. The University ladies and gentle you will hear a lot more about in the future. So I welcome you 220 delegates from 30 countries you are very welcome, I will not be with you at the welcome reception tonight but I will be with you for the conference dinner tomorrow I wish you well you are very well come my office is on the top floor please come and engage with us and find out more about this remarkable country and this wonderful university. Thank you

#### Annex 9: Welcome and introductory speech by Dr. Bitrina Diyamett, President, AfricaLics

Dr. Celestine Ntivuguruzwa, PS Ministry of Education, Rwanda

Prof. Philip Cotton, Vice Chancellor, University of Rwanda

Deputy Vice Chancellors, Present

Dr. Pernilla Rafiqui - First Secretary, Senior Programme Manager, Research and Higher Education, Embassy of Sweden

Other Development Partners Represented

Members of the Press

Distinguished participants

All protocols observed,

Ladies and Gentlemen

#### Good morning!

On behalf of the AfricaLics fraternity, and my own behalf, let me join colleagues and friends before me in expressing a very warm welcome to all of you to this three days conference on unpacking systems of innovation for sustainable development in Africa

#### Distinguished Participants, Ladies and Gentlemen

The major reason I am standing here is to give a brief background to Africalics, and within this, the objective of the 3 days conference. But before I do this, allow me to say a number of very heartfelt thank you.

On top is the local organizing committee led by Prof. Verdiana Masanja, Director of Research and Postgraduate Studies and Full Professor of Mathematics, UR and Prof. Bideri Ishuheri Ag. Director of Research and Postgraduate Studies, College of Business and Economics, UR, for putting together what is seemingly going to be a very good conference. Very sincere thank you also goes to the Vice Chancellor of UR, Prof. Philip Cotton for accepting to host this conference.

Prof. Nelson Ijumba, Deputy Vice Chancellor, Academic Affairs and Research, University of Rwanda and the Chair of this session, deserves a big thank you. He was our first contact at the University regarding the organization of this conference; he swiftly carried forward the idea, and remained supportive throughout the organization of the conference – we cannot thank him enough.

Above all, I wish to thank the government of Rwanda for taking keen interest in this conference: The presence of the Permanent Secretary, Ministry for Education at this opening is a testimony to this. So thank you very much honorable Permanent Secretary for finding time to be with us this morning.

Finally, but above all, Sida of Sweden – through AfricaLics – for their financial support, without which we would not have been able to organize this conference in its present form.

#### **Distinguished Participants, Ladies and Gentlemen**

Let me now quickly turn to the brief background on AfricaLics, and within this, the objective of this 3 days conference.

AfricaLics, in the long form the African Research Network on Economics of Learning, Innovation and Competence Building systems is a network of researchers and academics interested in strengthening the use of innovation and related activities to speed up social and economic development of African countries.

The network was initiated in 2012 in Dar es salaam, Tanzania; and it is part of a global network by the name of Globelics, in the long form - Global Network for Economics of Learning, Innovation, and Competence Building Systems; there are also similar regional LICS representing Latin America, Asia, China and India.

Prof. Bengt-Ake Lundvall of Aalborg University in Denmark was behind the initiation of the global network, and was very helpful in the initiation of the Africalics; we thank him very much in absentia

#### Distinguished Participants, Ladies and Gentlemen

The major drive behind the initiation of AfricaLics is the centrality of innovation in social and economic development: As we all know, innate in human is innovation: It is a common knowledge that human beings, since time immemorial, have always endeavored to improve on their tools of production and modes of living. However, under current environment of globalization, innovation has taken a new horizon – it is a tool for competitiveness, including survival! Without innovation, the very existence of our firms and farms, and ultimately our nations are at stake.

**Distinguished Participants,** these are not my words; they are the words of researchers – those with empirical evidence on these issues. In fact if I may quote the UNCTAD's Least Developed Countries (LDCs)' Report for 2007: In its in its overall conclusion it argues that unless the LDCs adopt policies to stimulate technological catch up, they will continue to fall behind other more developed countries and face deepening marginalization in the global economy. In this regard Africa does not have options other than implementing good policies to guide innovative activities in their own countries. But good policies require good knowledge produced through high quality research. At this juncture, let me make quick reference to 3 facts about knowledge on innovation as identified by UNDP:

**First**, innovation knowledge is under produced: scholars of innovation may know that we still do not have a complete understanding of the innovation process; and especially regarding poor developing countries, such as those in Africa. Existing innovation theories and concepts have been produced exclusively from empirical evidence from more developed countries; and are not as useful in informing decisions in the African context.

**Second**, Innovation knowledge is underutilized; we all know that even the little knowledge that exists is not put into use. Another major problem that is more prevalent in Africa.

**Third,** innovation knowledge is unevenly distributed: and here poor developing countries, that ironically are more in need of this knowledge, has the smallest share: According to existing studies – identifiable from relevant journals – less than 10% of innovation publications are on developing countries, and most of the authors are from developed countries. This may be because Africa does not have adequate expertise in producing innovation related knowledge.

#### Ladies and Gentlemen,

To avoid marginalization Africa must address this innovation knowledge imbalance by producing more knowledge that is relevant to its context; work more on connecting existing knowledge to use. But this cannot happen in the absence of adequate capacity for such activities.

It is precisely because of these two interrelated major challenges of scarcity of knowledge to inform decision making on innovation, and inadequate human resource to produce this knowledge Africalics was initiated. Consequently, the current objectives of Africalics revolve around two major areas:

#### 1. Capacity Building for knowledge production

Activities under these are;

- i) Research training activities including the holding of PhD Academies; development of *innovation* and development courses at universities.
- ii) A small grant to carry out research research, like any other activity, are best learned through doing it; but also generates knowledge for innovation decision making.

#### 2. Knowledge exchange and facilitation of knowledge use

Here to a large extent what is used is AfricaLics Conferences such as this one.

## **Distinguished Participants, Ladies and Gentlemen**

We have now come to the objective of this specific conference; it is the second AfricaLics conference with major objectives to share and facilitate use of knowledge around the theme of the conference. More than 50 research papers on the subject of science, technology and innovation will be presented; from these we can learn from each other, derive useful knowledge for policy and other decision making in science, technology and innovation, and define new areas for further research.

AfricaLics conferences are also used to take AfricaLics message and activities around the continent.

#### Ladies and Gentlemen,

Let me take this unique opportunity to speak to Rwanda as a host country: While many African countries are today represented here, it is the host country that benefits most:

- i) We have here the press that takes the message around the country many more people in Rwanda will be informed about the subject of the conference than any other African country represented here.
- ii) It is a unique opportunity for Rwanda where high level decision makers can meet with group of expertise on *innovation and development*, because many are here! "If you want to talk to them about something on innovation and development you can easily do that at no cost".
- iii) It is an opportunity to form a long lasting working relationship with the little expertise that is currently available to Africa.

Having this conference here is a rare opportunity for Rwanda: if it is possible for AfricaLics to organize a conference every year, then last African country will receive the conference in 54 years' time.

We know and we admire the way Rwanda is moving forward in terms of social and economic development of its people, and am sure ST&I is part of this process, but if you utilize properly the opportunities presented by this conference, you will move much faster!

**Finally, Ladies and Gentlemen,** If I leave this stage without a word of thank you to my colleagues who in one way or the other have helped in the successful organization of the conference I will be short of gratitude, so thank you colleagues on the Board and those from the Secretariat: I would especially wish

to mention by name, Ann Kingiri and Rebecca Hanlin from the Secretariat who did an excellent job towards the organization of the conference.

## Distinguished Participants, Ladies and Gentlemen,

Thank you all for your attention

### Annex 13. Closing Speech by Prof Philip Cotton, Vice Chancellor, University of Rwanda

Ladies and gentlemen it has been a huge pleasure and Pernilla I think if you allow I will speak for you to, it has been huge pleasure to see so many colleagues and friends join us in this quite beautiful place, and but we make things happen, we are innovators, we are creative, we are curious, we are inquiring and thank you very much for giving us the importance to continue and my special thanks to all of my staff who have worked above and beyond their normal, we haven't given them any time off from any of their ordinary duties and my thanks to them, and thanks again to Pernilla and Sida, Pernilla is a huge friend of the university of Rwanda, and she represents the agency that has the biggest impact on the growth of the university of Rwanda, so thank you Pernilla, and thank you to Globelics and I don't know why you are going somewhere else in 2016, why not come back to Rwanda. We have Remy here representing Ministry of Education, it's good to see you Remy and please join us for cocktail and I now announce ladies and gentlemen that formally and officially this conference is closed.