

CURRICULUM VITAE

PERSONAL DATA

NAME: Gabriel Katana
DATE OF BIRTH: 6th November 1954
PLACE OF BIRTH: Kaloleni, KILIFI
MARITAL STATUS: Married, 4 children
E-mail: katana_gona@yahoo.com
Cell Phone: 0716307144,

ACADEMIC QUALIFICATIONS

1994: Doctor of Philosophy in Physics, Mainz University, GERMANY
1990: Successfully pursued a German Language Course at the Goethe Institute in Mannheim, Germany under DAAD scholarship
1987: Master of Science in Physics, University of Nairobi
1983: Bachelor of Education (science), Physics (Major) and Mathematics, University of Nairobi
1979: Secondary School Teacher certificate (S1), at the Kenya Science Teachers College (Mathematics and Physics)
1974: East African Advanced Certificate of Education (EAACE) (1P, 2 O)
1972: East African Certificate School Certificate (Division Two)
1968: Kenya Certificate of Primary Education

PROFESSIONAL EXPERIENCE

JULY 2015 Professor of Physics Grade 15 (Pwani University)
2009- JUNE 2015 Associate Professor of Physics (Pwani University)
1997-2008 Senior Lecturer of Physics (Kenyatta University)
1994-1996 Lecturer in Physics (Kenyatta University)

1987 -1988	Tutorial Fellow (Kenyatta University)
1987, 1983-1984,	Graduate Secondary School Teacher (Kenya High School and St. Johns Girls School)
May –September 1979	S1 Teacher (Bura Girls High school)

ADMINISTRATIVE APPOINTMENTS

1st August 2009 -3rd Sept. 2012	Served as Deputy Principal in charge of Academic Affairs, Pwani University College and served as member of the Pwani University College Master Plan Committee 2010-2013
2006 -2012	President of the DIES Eastern Africa Alumni Network in Higher Education (REAL), involving member countries Kenya, Uganda, Tanzania, Malawi, South Sudan and Ethiopia, Ruanda and Burundi
19th March 1998 to 2008	Served as Registrar (Academic Affairs) at Kenyatta and member of the Strategic Plan Committee Kenyatta University, 2005-2008
July 1997-19th March 1998	Served as chairman, Physics department at Kenyatta University

SOME MAJOR ACTIVITIES UNDERTAKEN IN UNIVERSITY MANAGEMENT

<i>9th Nov. 2015:</i>	<i>Appointed</i> Member of the Pwani University National Cohesion and National Values mainstreaming committee.
<i>25th August 2016:</i>	<i>Assigned duty of Academic Counselling in the Pwani University Physics Department</i>
<i>9th Feb. 2016:</i>	<i>Appointed</i> Member of 9 th World Council For Psychotherapy Conference
<i>9th Nov. 2015:</i>	<i>Appointed</i> Member of the Pwani University National Cohesion and National Values mainstreaming committee

- Coordination and running of academic activities and programmes including preparation of the academic calendar.
- Member of the task force in the restructuring of Kenya Higher Education Loans Board

- Liaison person with the Rattansi Education trust that support university students
- Member of the Commission for Higher education University exhibition Committee
- Link person and member of the committee on the Barclays Bank Scholarship programme for Teachers.
- Member of Kenyatta University Strategic and Vision Plan Committee
- Strategic leader in the Rapid Results Initiative
- Chairman of the Annual report committee
- Restructuring and streamlining the functions in the Academic Division at Kenyatta University
- Chairman of the Kenyatta University Students Union elections appeals committee.
- Served as a facilitator in leadership and team building training of new students leaders at the Pwani University College

ACADEMIC CARREER DEVELOPMENT

- From 2015:** Liaison person with the Rattansi Education trust to support PwaniUniversity students
- 2011-2014:** Serving as the Legal Entity Appointed Representative (LEAR) for Pwani University College of the European Commission Supported Research Project under International Fellowship programme, “Lyngbya –Kenya 911550, Cyp-450 biosynthesis of Lyngbya majuscula natural products
- 4th -11th oct.2013 Attended A DAAD supported subject-based collaboration meeting at the Technical University of Munich to make roadmap for implementing the joint CBR- Research project between Pwani University and Technical University of Munich
- 2002 to date:** Established and maintained a discipline – based partnership with the Faculty of Physics and Geological Sciences of the University of Leipzig. Through this programme 5 Kenyan students have pursued their doctorate degree programmes in Leipzig up to date
- March – May 97:** Visited the Max-Planck Institute for Polymer Research in Mainz as a visiting scientist supported by DAAD.

Guest Scientist of the collaborative research programme SBF 294, of the Faculty of Physics and Geological Sciences of the University of Leipzig, Germany

Feb. – April 94: Conducted post-doctorial research work at the Max-Planck Institute for Polymer Research in Mainz, supported by Max-Planck Society Research Grant.

SCIENTIFIC PUBLICATIONS SINCE LAST PROMOTION

1. Wycliffe K. Kipnusu, **Gabriel Katana**, Charles M. Migwi, I. V. S. Rathore, and Joshua R. Sangoro, “Electrical Switching in Thin Films of Nandi Flame Seed Cuticles,” International Journal of Polymer Science, vol. 2009, Article ID 830270, 10 pages, 2009. doi:10.1155/2009/830270
2. Wycliffe K. Kipnusu, Gabriel Katana, Charles M. Migwi, I. V. S. Rathore, and Joshua R. Sangoro, “Charge Transport Mechanism in Thin Cuticles Holding Nandi Flame Seeds,” International Journal of Biomaterials, vol. 2009, Article ID 548406, 9 pages, 2009. doi:10.1155/2009/
3. W.K.Kipnusu, **G. Katana**, C.M.Migwi, I.V.S.Rathore, J.R.Sangoro, J.Tsuwi, A,Serghei and F.Kremer, Molecular Dynamics Characterization of Nandi Flame Seed Cuticle Biomaterial 2009.
4. A. S. Merenga and **G. Katana**, “Dynamic Mechanical Analysis of PMMA-Cellulose Blends”, International Journal of Polymeric Materials, 60, 115-123, 2011
5. Agumba O. John, **Katana G. Gabriel** and Karimi M. Patrick; A Survey of Labview-based Conduction of Science Experiments via the Internet with an Illustrative Consideration of Remote Control of An Oscilloscope, International Journal of Current Research Vol. 3, Issue 6 123-127, June, 2011.
6. **Katana Gabriel** and Kipnusu Wycliffe, Charge Transport and Electrical Switching in Composite Biopolymers, chapter 11 in Biopolymers – Physics and Chemistry, In Tech, Nov 2011

EARLIER SCIENTIFIC PUBLICATIONS

7. **G. Katana**, A. Zetsche, F. Kremer, E. W. Fischer. “Dielectric Spectroscopy in Polymer blends: miscibility and Fluctuations”, ASC Polymer Preprints 1992, 33, 122
8. **G. Katana**, F. Kremer, E. W. Fischer, R. Plaetschke. “Broadband Dielectric Study on binary blends of Bisphenol-A and Tetramethylbisphenol-A Polycarbonate”, Macromolecules, 1993, 26, 3075

9. **G. Katana**, E. W. Fischer, Th. Hack, V. Abetz, F. Kremer. "Influence of concentration Fluctuations on the Dielectric α -relaxation in Homogeneous Polymer Mixtures", *Macromolecules*, 1995, 28, 2713
10. A. Schmidt, S. Lehman, M. Georgelin, **G. Katana**, K. Mathauer, F. Kremer, K. Schmidt – Rohr, C. Boeffel, G. Wegner, W. Knoll. "Molecular Dynamics of "hairy rods" Molecules in Solid State: Poly (γ -methyl – L glutamate) – co – (γ -n-octodecyl-L-glutamate) in Solution cast Films", *Macromolecules*, 1995, 28, 5487
11. **G. Katana**, E. W. Fischer, R. Richert, A. Patkowsik C. Hansen, "Coalescence of the α – and β - relaxation processes in methacrylates based polymers and co-polymers and internal plasticisation of "strong" polymers", SAIP 1997 Abstracts
12. **G. Katana**, J. O. Siro, T. S. Dod, "The Switching behaviour in Poly(methylmethacrylate) Thin Films: the effects of Blending, Doping and Temperature", SAIP 1997 Abstracts
13. B. Wafula, **G. Katana**, "Fabrication and Performance Testing of Gas Sensors based on Metal substituted Phythalocyanine and Organic Thin Films", presented at the Vice Chancellor's Research Grant Seminar, Kenyatta University 2002
14. J. K. Tsuiwi, A. S. Merenga, **G. Katana**, C. M. Papadakis, "Dynamic Mechanical Analysis of Injection- Molded Untreated and Treated Talc-filled High Density Polyethelene Composites", *Polymer Materials*, 2003, 20(4), 356.
15. B. Wafula, **G. Katana**, Current- Voltage Characteristics of doped Polystyrene thin Films with view of gas sensing, *East African Journal of Physical Science*, 2004, 5(1), 3
16. **G. Katana**, A. Musyoki, Fabrication of thin organic film devices for gas sensing, *Journal of Polymer Materials* 2007.
17. W.K Kipnusu, **G. Katana**, CM Migwi, IVS Rathore, J. Rume, Current Transport Mechanisms in Thin Cellulose Cuticles Holding Nandi Flame Seeds, *Journal 'CELLULOSE'* (Revised manuscript resubmitted for publication), 2008.
18. W.K. Kipnusu, **G. Katana**, J. Rume, J. Tsuiwi, A. Serghei and F. Kremer, Surface characterization and molecular dynamics in Nandi flame seed cuticle, *East African Journal of Physical Sciences* (Revised manuscript resubmitted for publication in the next issue), 2008.

ONGOING SCIENTIFIC RESEARCH

1. Switching Properties of Organic and Inorganic thin Films for application in Gas Sensors
2. Blending of synthetic polymers with biopolymeric materials
3. Optoelectronic characterization of Marine Based Biomaterial of *Chitosan* Grafted *Polyaniline* derived from *Squid gladius* for batteries and biosensors applications

SCIENTIFIC CONFERENCES

2nd -3rd Aug. 2016 : Organized the “1st South- East-African & European Conference on Refugees and Forced Migrants: Social Rights –Care- Mutual benefits”, hosted in collaboration by the Sociology of Diversity Chair at the Technical University of Munich, the Fellow-Group “Dis[cover]ability and Indicators for Inclusion (2015-2020)” at the Max Planck Institute for Social Law and Social Policy and Pwani University.

20TH APRIL- 2ND MAY 2015 Training in Astronomy and Astrophysics for African Scientists at the Inter-University Centre for Astronomy and Astrophysics, PUNE, INDIA

9th-13th NOV.2009: TAD Regional Astronomy Workshop at Meridian Court Hotel Nairobi

COMPUTER LITERACY

- **Microcal ORIGIN, for simulations and scientific data analysis**
- **MATHEMATICA**
- **Microsoft Word**
- **Microsoft Power point and Microsoft Designer**

STUDENTS SUPERVISION (SINCE LAST PROMOTION)

1. Master of Science (Physics), JUMA HANIF, on “Opto-electronic Characterisation of Marine Based Biomaterials for Batteries and Sensor Applications”, PWANI UNIVERSITY (*completed 17th Jan. 2017*)
2. PhD in Energy Physics, MAERA JOHN, on “Fabrication and Performance Study of Biomass Powered System with Energy Storage, NAROK UNIVERSITY Kenya
3. Master of Science Education, OWIYO, on Safety assessment and Laboratory Management in Secondary Schools in Kenya: Case of Kilifi County”, PWANI UNIVERSITY

INTERNAL EXAMINATION

1. Master Thesis (Science Education), Pwani University, 2014

“The Relationship between Language Proficiency and Performance in Mathematics: A case of District Secondary Schools in Kilifi and Malindi Districts , Kilifi County, by Adidja Nyiramafanga, E55/PUC/2039/011 (completed 17th Jan. 2017)

2. Doctorate Thesis, (Physics) 2014

1. “Characterization of Ionospheric dynamics over the East African Dip Equatorial Region using GPS-Derived total electron content”, by Joseph Olwendo Ouko, I84/PUC/2944/2012.
 2. ‘Effects of Sequential Teaching Methods on Achievements , Rentention and Transfer of knowledge of Biology by secondary school teachers in Kenya’, by Fred Wafula Namasaka , E83/PUC/2042/11
 3. ‘Uchanganuzi wa Nomino mkopo za Kigiryama kwa Mkabala wa Nadharia ya fonologia zalishi asilia’, by Nancy Jumwa Ngowa, C82/PUC/2021/11
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ENGAGEMENT IN HIGHER EDUCATION MANAGEMENT SINCE LAST PROMOTION

2nd -5th March 2009

Participated in the International UNISTAFF Forum “Emerging Transformation in Higher Education, Concepts-Projects-Networking” at the University of Kassel, Germany. The Forum covered the topics:

- Linkages: University and Society
- Quality Assurance: Concepts and Strategies
- Networking: Creating Synergies in processes of transformation
- Capacity Building: Competences for the future

23rd Aug -3rd Sept. 2010

Participated in the Training of Trainers for University Development held at the University of Kassel, Federal Republic of Germany. The training covered the subjects:

- Managing Process of Transformation
- Acquiring Proficiency in Knowledge and Research Management
- Designing Curricula: Inspiring Relevant Learning
- Developing Network-based Training Agendas

19th -20th Nov. 2010

Attended the “Strategic Leadership and Change Management Workshop for Directors of State Corporations” held at the Kenya Institute of Administration.

15th -20th June 2011

Participated in “Capacity Building: Higher Education and Corporate Social Responsibility” workshop, organised by Pwani University College in collaboration with the Max-Planck Institute

for Foreign and International Social Law, held at the Pwani University College in the focus themes:

Quality Management in Higher Education

Topics: “A change in Quality Management by Exchanging Experience”,
“Bench Learning as a new Management Tool”,
“Umoja ni Nguvu, Utengano ni Udhaifu: Best Quality as Best Practice – Corporate Responsibility in Europe a benchmark for Africa

The UN Convention on Rights of Persons with Disabilities

Topics: “The UN Convention on Rights of Persons with Disabilities- Development Contents, Goals”,
“Life-Long Learning”,
“Disability Mainstreaming in Academic Contexts”

Good Governance

Topics: Good Governance in Profile and in Transfer
Funding Accountability and Control
Managing Science – Vision, Mission and Reality

27th June 2011

Attended a Corporate Governance Workshop For University Councils at the Kenya Institute of Administration. Among the themes discussed are Role of University Councils in Setting Strategic Thinking & Direction, Roles and Functions of The University Councils and Chairpersons, Roles and Functions of University Management.

14th -15th Feb. 2012

Participated in a Negotiation Skills Training Programme for Pwani University College held at the Pwani University College in Kilifi, Kenya

ACTIVE ROLES PLAYED IN NETWORKING IN HIGHER EDUCATION MANAGEMENT

2008

Initiated and coordinated a students’ exchange programme between Pwani University College and Technical University of Dortmund. To date 20 students of Pwani University have participated in a two weeks international summer programme hosted by the TU Dortmund. In addition 4 members of staff, 1 postgraduate student have participated on short term study visits lasting a minimum of six months.

Nov. 2006 -2012

President, Regional Eastern Africa UNISTAFF Alumni Network in collaboration with Institute of Socio-cultural Studies (ISOS), University of Kassel.

- 2010-2012** Actively participated in the development of a subject based partnership programme between Pwani University and TU Dortmund that has been approved for support by DAAD w,e, from 2013. The programme focuses on Inclusive Special Needs Education. This programme will involve staff and students exchange and collaborative research in CBR programmes with Max-Planck Institute for International Social Law in Munich Germany
- 2008-2012** Participated in developing a DIES partnership programme “Joint Undertaking to Multiply Power (JUMP)” involving Pwani University, Taita Taveta University College and Technical University of Dortmund which is to be considered for support within the framework of the already existing DAAD DIES Alumni programmes in Kenya.
- 2008 -2012** coordinated a book award programme which is supported by the Rattansi Educational Trust Foundation. Through this programme Pwani University Programme received over 300 hundred books,
- 2011/12012** Member of the Board of Trustees as Co-Director (Programmes and Finance) of the Friends for Pwani University (FOPU) registered in the State of Florida USA under the Pwani University- Florida State University International Research and Educational Cooperation.
- 2010-2012** President of the DIES –Alumni Network in Eastern Africa (REAL). The network has the member countries Kenya, Uganda, Tanzania, Malawi, Sudan and Ethiopia.

ENGAGEMENT IN BASIC EDUCATION MANAGEMENT SINCE LAST PROMOTION

- March 2013** Appointed Chairman of the Kilifi County Education Board for a period of 4 years by the Cabinet Secretary, Ministry of Education, Science and technology in Kenya
- 15th –18th June 2014** Attended an Induction Course for County Education Boards Members at Pride Hotel in Mombasa Kenya

CONSULTANCY

- Jan 2017** Served as a facilitator on the Citizen Participation in Security(CPS) forum, the Nyumba Kumi Initiative held the Tononoka Methodist Church in Mombasa for the six counties in the Coast Province, on the subject “ Education Yesterday, Today and in the Future, What citizens ought to know”

20th Feb 2017	Made a presentation at 2017 Kenya Music Festival Trainers and Adjudicators Workshop held at Tom Mboya Labour college in Kisumu under the Citizen Participation in Security session on the subject “ Corprophilia : Why Kenyans should heed Pope’s Advice”
2nd Dec. 2016	Facilitated at the Ecumenical “Tushauriane” initiative workshop on the role of Religious Institutions, as sponsors of schools, held at Catholic Pastoral Center in Tudor, Mombasa.
2015	Served as reviewer for various research proposals appointed by the Pwani university Ethics Review Committee
2013	Consultant for the Desturi Foundation providing advisory and mentoring services to the Desturi Academy administration in Kakuyuni in Malindi and also preparing a 10 year development plan for the Academy.
2012	Leader of the constancy team that undertook a baseline study for “Securing Land Rights Through Community Leadership and Corporate Accountability Project in Coast Region and Bondo” a project sponsored by ActionAid
2011	Educational advisor for Head Teachers Associations and Boards in Kilifi County
2008-2010	Liaison Officer, in the project “Networking for Higher Education and Capacity Development in (NHECD), An Education Sector Development, Somalia contracted by the European Commission to Centre for British Teachers (CfBT) and Kenyatta University
2008-2009	Participated as member of the consultancy team in developing a Somalia Higher Education Improvement Programme through Networking (SHERNET) contracted by the European Union to Kenyatta University and Somalia Universities. The project was implemented in the period 2009 -2013

CONDUCTED/ATTENDED CONFERENCES and WORKSHOPS IN HIGHER EDUCATION

28th-30th May 2014	Attended a conference on Celebrating 40 Years DAAD Regional Office for Africa, to developing a road map for DAAD future cooperation, and played an active role in introducing the book “40 years of Supporting Excellence : DAAD Regional Office in Africa” during its launch.
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- 3rd - 5th Oct. 2013** Attended the 6th International Symposium on Remedial and Special Education at the Ludwig Maximilian University in Munich.
- 30 -31st May 2013** Attended the Kenya DAAD Scholars Association (KDSA) 2013 Annual Conference on the theme “African Cities of the Future: Smart. Sustainable Participatory” sponsored by DAAD, Konrad Adenauer Foundation in collaboration with UN –Habitat and IFP of Ford Foundation. The focus was to discuss opportunities for Universities working together with County Governments in Kenya
- 13th -15th Feb.2013** Attended the National Conference for the 2013 Gubernatorial (Governors) Candidates at the Great Rift Valley Lodge.
- 2011 -2012** Conducted training of the Managers of the Newly established University colleges and campuses in Kenya as the key DIES quality improvement project in the management of Higher education in Kenya
- February 2012** Invited at the International Deans Course Workshop held in Addis Ababa University, Ethiopia in my capacity as the REAL regional coordinator and made a presentation on the status of the DIES multiplier projects.
- 28th -29th Nov 2011** Attended a DIES-Conference: “Strengthening Universities, Enhancing Capacities –Higher Education Management Development”, organised by DAAD in Bonn Germany
- 29th-30th Sept. 2011** Attended a Departmental Representative Training Workshop on “Concepts of Peer Education, Challenges Facing Prevention, Treatment and Care o HIV/AIDS” held at the Pwani University College
- 16th -17th Sept. 2011** Facilitated in Research Proposal Writing Training Workshop organized by Kenya DAAD Scholars Association (KDSA) in collaboration with the German Academic Exchange Service DAAD and National Council for Science and Technology (NCST), at Pwani University College Kenya
- 16th -17th June 2011** Organised and Facilitated the Conference on “Impact of Social Change: UN Convention on the Rights of Persons with Disabilities (UNCRPD) as a Trigger” held at the Pwani University College, Kilifi Kenya
- 11th -15th Oct. 2010** Organised and attended the International Conference and Training on Staff Development: Key for Quality Higher Education”, held at the Norfolk Hotel and Kenyatta University Conference Centres

- 10th -18th Sept. 2010** Attended a Leadership Development workshop (LEDEV) organised by the Association of African Universities at North Coast Beach Hotel, Kilifi, Kenya
- January 2010** Training of Trainers for Project coordinators for the Multiplier Projects in DIES –Alumni Network in Eastern Africa (REAL) in Malawi, Tanzania, Uganda, Kenya, Sudan and Ethiopia.
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PUBLICATIONS IN HIGHER EDUCATION

- **Katana, Gabriel** and Noah Khaemba, “Quality in Education and Globalization: The Role of Regional Networks”, published, OSSREA Kenya Chapter May 2009, 133-142, ISBN 9966-05-162-7
 - **Katana, Gabriel** and Noah Khaemba, Repositioning of The African University: The Role of UNISTAFF Programme, 2010,257—264, Kassel University Press GmbH, Kassel
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ADMINISTRATIVE APPOINTMENTS

1st August 2009 -3rd Sept. 2012

Served as Deputy Principal in charge of Academic Affairs, Pwani University College and undertook among other roles the following assignments:

- Coordinator of the International Students Exchange Programmes between Technical University of Dortmund and Pwani University, Technical University of Munich, The Max-Planck Institute for Social International Law and Pwani University
 - Involved in developing university master and strategic plans
 - Trained students in leadership, team building and networking
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RESEARCH GRANTS AND AWARDS

23rd Nov. 2015: Awarded Pwani University Annual Research grant of Ksh. 500,000/- to undertake a study on “Characterisation and Utilization of Marine Based Squid Wastes as Management Strategy in Kilifi County

7th Oct. 2013 Received donation from Mr. Konrad Beckel of ADIDAS Dortmund on behalf of Pwani University to enhance the availability of inclusive sports activities at Pwani University especially with focus on young women and people with disabilities.

- 2012** ActionAid Grant to undertake a baseline survey for “Securing Land Rights through Community Leadership and Corporate Accountability Project in Coast Region and Bondo”
- 2008** European commission Grant award for Education sector development, Somalia- Networking for Higher Education and Capacity Development (NHECD), a project jointly undertaken by Centre for British Teachers (CfBT) and Kenyatta University (2008-2010)
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RECOGNITION

- 2013** Appointed by the Cabinet Secretary Ministry of Education, Science and Technology as Chairman, Kilifi County Education Board
- 2012** *JIGOKA* Community Based Organisation Jimba-Jacaranda recognition as a partner in the realization of community development projects in Jimba Kanani (Jacaranda) Watamu Sub location
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MEMBERSHIP

1. Member of the International Astronomy Union (Africa)
 2. Member of the Board of Trustees as Co-Director (Programmes and Finance) of the Friends of Pwani University Corporation (FOPU).
 3. Member of the Kenya DAAD Scholars Association (KDSA)
 4. Member of the Regional KAAD Partner Committee for East Africa
 5. Member of the DIES Alumni Network for Higher Education in Eastern Africa (REAL)
 6. Life member of the Kenya Red Cross Society
 7. Member of the UNISTAFF – Associates for University Staff Development
 8. Member of the Kenya Physical Society (KPS)
 9. Member of the South African Institute of Physics (SAIP)
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COMMUNITY SERVICE

- 1 Chairman of the Kenya Association of Parents of Children with Hearing Impairment (KAPHIC)
 - 2 Member of the Pwani University College Master Plan Committee 2010-2011
 - 3 Consultant and Advisor for the Desturi Foundation and Desturi Academy in Kakuyuni (2013-to date)
 - 4 Chairman, Kilifi County Education Board from January 2014 to date
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LANGUAGE PROFICIENCY

- Kiswahili:** Spoken – Very Good, Written – Very Good
- English:** Spoken – Very Good, Written – Very Good

German: Spoken – Good, Written – Good
