

CURRICULUM VITAE
FORTUNE SOLANI MHLANGA, PHD

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EDUCATOR / RESEARCH SCIENTIST / SENIOR MANAGER / DIRECTOR / ADMINISTRATOR
COMPUTING • TECHNOLOGY • ANALYTICS • SCIENCE • BUSINESS

**PROVEN TRACK RECORD OF DEVELOPING, LEADING, AND MANAGING ORGANIZATIONS IN THE ACADEMIC,
PRIVATE, AND PUBLIC SECTORS WITH A SPECIFIC FOCUS ON COMPUTING AND TECHNOLOGY**

- An accomplished academician and industry leader with managerial and technical expertise at the intersection of business, science, and technology.
- Direct managerial and leadership experience in the areas of operations, computing, technology, and systems, within various industry sectors, government, national laboratory settings, and the academy.
- Reputation for successfully developing interdisciplinary teams of technical professionals of various educational levels and backgrounds to support strategic enterprise initiatives.
- Skilled in planning and administering capital and operating budgets, and in managing people, projects, information, and technology.
- Strong oral and written communication skills, plus demonstrated ability to work across organizational boundaries and interface with both internal and external stakeholders.
- Experienced consultant for both domestic and international organizations.

CORE STRENGTHS

- Extensive operational knowledge of academic institutions, particularly with regard to ABET accreditation and assessment protocols
 - Master teacher at both the graduate and undergraduate levels
 - Comprehensive research skills, as evidenced by an extensive portfolio of intellectual contributions and professional engagement
 - Program / project / process management and execution with an eye towards optimization and efficiency
 - Adept at budgeting, strategic planning, advancing the organizational mission, and managing change
 - Professional practice in analytical problem solving including internal / external consulting
 - R&D management experience that includes oversight of data and information technology development / deployment, as well as procurement / integration of commercial tools and assets
 - Client-facing, with ability to forge partnerships and marshal stakeholders within the organization
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CURRENT POSITION

EXECUTIVE DIRECTOR, DATA SCIENCE INSTITUTE
PROFESSOR OF COMPUTER SCIENCE, DATA SCIENCE, AND SOFTWARE ENGINEERING
Meharry Medical College, Nashville, TN, USA. August 2020 – Present

Interim position with a mandate to elevate the existing Data Science Institute to the school level in fall 2020. Serving as Chief Architect toward creation and establishment of the School of Applied Computational Sciences (SACS).

Focusing on five scaffolding pillars to:

- (i) Create a world-class academic program in Computational Sciences,
- (ii) Create a revenue generating Research and Development Infrastructure,
- (iii) Create a revenue generating Advancement Infrastructure,
- (iv) Create Clinical Enterprise revenue generating streams,
- (v) Recruit and assemble a world-class Faculty, Research Scientists, and Staff.

ACADEMIC LEADERSHIP EXPERIENCE

SENIOR ASSOCIATE DEAN, COLLEGE OF COMPUTING AND TECHNOLOGY
PROFESSOR OF COMPUTER SCIENCE, DATA SCIENCE, AND SOFTWARE ENGINEERING
DIRECTOR OF INNOVATION, GRADUATE AND EXTENDED PROGRAMS
Lipscomb University, Nashville, TN, USA. February, 2020 – July, 2020

DEAN, COLLEGE OF COMPUTING AND TECHNOLOGY
PROFESSOR OF COMPUTER SCIENCE, DATA SCIENCE, AND SOFTWARE ENGINEERING
Lipscomb University, Nashville, TN, USA. August 2014 – February 2020

Served as founding Dean of the College of Computing and Technology (CCT), following recommendation by the Lipscomb Board of Trustees to transition Lipscomb's School of Computing and Informatics to college status. Instrumental in planning, development, and implementation leading to establishment of the College. Positioned the college not only as an educator, but also as a leader with innovative ideas that result in a new degree of collaboration between students, faculty and the community, and built a direct response to the region's labor force constraints through collaboration with local and regional government, business, industry and community to promote development from new and diverse perspectives. Maintained responsibility for all budgetary, personnel, academic, and industry outreach initiatives, as well as day-to-day operations, and served on the Academic Leadership Team of the University.

- Led faculty planning sessions to address anticipated organizational, operational, and cultural changes
- Cultivated additional fundraising opportunities for CCT in four priority areas: *scholarships, missions, program development, and research and development*
- Worked with the CCT Advancement Council to extend the college's impact locally, regionally, nationally and internationally
- Communicated the vision and goals of the College to community and professional constituencies and articulated why the CCT needed external support
- Taught mostly in the graduate program.

EXECUTIVE DIRECTOR (DEAN), SCHOOL OF COMPUTING AND INFORMATICS

Lipscomb University, Nashville, TN, USA. 2011-2014

Lipscomb University elevated the then department of computing and information technology the school level in fall 2011. Pivotal in the creation and establishment of the School of Computing and Informatics (SCI), and becoming its inaugural (and only) administrative and chief academic officer. The SCI was the only stand-alone school on the Lipscomb campus and I reported directly to the Provost, and served on the Academic Leadership Team of the University. Focused on seven scaffolding pillars to:

- (i) expand and strengthen curriculum choices for students,
- (ii) recruit talented faculty and strengthen its commitment to mentoring and teaching of students,
- (iii) promote faculty scholarship,
- (iv) engage students in various co- and extra-curricular activities,
- (v) build relationships with industry and within the community,
- (vi) develop a strategic plan, and
- (vii) build a financial strength for the school.

Witnessing tremendous progress in all fronts, Lipscomb Board of Trustees, President, and Provost approved to elevate the school to college status, effective fall 2014.

DIRECTOR, SCHOOL OF INFORMATION TECHNOLOGY AND COMPUTING

Abilene Christian University, Abilene, TX, USA. 2010-2011

Administrative and chief academic officer in the School of Information Technology and Computing, reporting directly to the Dean, College of Business Administration. The College of Business Administration is an AACSB-accredited school of business. Responsible for undergraduate and graduate program development, faculty recruiting and development, student recruiting and retention, and outreach to alumni and industry stakeholders. Specific responsibilities included quality control of curriculum to ensure currency and relevance, as well as the overall quality and integrity of degree programs; assessment of program and student learning outcomes; advising and mentoring students to ensure career success; and strategic planning for new initiatives. Full budgetary responsibility for salary administration, facilities, and technology resources. Granted tenure in letter dated January 20, 2011 stipulating effective date as September 1, 2011.

CHAIR, DEPARTMENT OF COMPUTER SCIENCES

Faulkner University, Montgomery, AL, USA. 2004-2007

Led the establishment and inauguration of the department of computer sciences, including the reorganization of faculty and staff from other campus departments, and became the founding chair of the department. Created, established, and implemented undergraduate degree programs in computer science (CS) and computer and information science (CSIS), which commenced in fall 2004. Launched a third undergraduate degree in informatics in fall 2005. Maintained responsibility for all budgetary, personnel, academic, and industry outreach initiatives, as well as day-to-day operations, and served on the curriculum committee, computer steering committee, and institutional review board for research policy of the University.

CHAIR, COMPUTER SCIENCE DEPARTMENT

University of Zimbabwe, Harare, Zimbabwe, 1994-1997

A public (or state) institution, the University of Zimbabwe (UZ) is the largest of about twelve universities in Zimbabwe which maintained a student population of more than 15,000 and more than 1,000 faculty members during my tenure there. At the time, the UZ was the envy of African universities and was considered as the "Ivy League" institution in Africa for its scholarship. My "good University citizenship" was evidenced from my conscientious performance of duties and active participation on

several key and strategic committees which included serving as University Proctor and serving on Senate, Research Board, Computer Committee, and College of Science Higher Degrees Committee. While at UZ, I also served as an External Examiner at the University of Dar es Salaam in Tanzania and two other universities in Zimbabwe: National University of Science and Technology (NUST) and Solusi University. Awarded tenure by the UZ in 1995.

OTHER ACADEMIC LEADERSHIP & ADMINISTRATIVE EXPERIENCE

- Visiting Professor, University of Zimbabwe, Harare, Zimbabwe, December 2010
 - Professor, School of Information Technology and Computing, Abilene Christian University, Abilene, TX, 2007-2010
 - Associate Professor, College of Business, Faulkner University, Montgomery, AL, 2002-2004
 - Adjunct Professor, National University of Science and Technology, Bulawayo, Zimbabwe, 1995
 - Assistant Professor, Computer Science Department, University of Zimbabwe, Harare, Zimbabwe, 1993
 - Adjunct Professor, New Jersey Institute of Technology, Newark, NJ, Summer 1993
 - Teaching Assistant, New Jersey Institute of Technology, Newark, NJ, 1988-1993
 - Teaching Assistant, University of Zimbabwe, Harare, Zimbabwe, 1986-1987
 - Adjunct Lecturer, Harare Polytechnic, Harare Zimbabwe, 1985-1987
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ACADEMIC AND RESEARCH FELLOWSHIPS

CARNEGIE AFRICAN DEVELOPMENT FELLOWSHIP PROGRAM

Ebonyi State University, Abakaliki, Nigeria, June 10 – June 24, 2017

CAPACITY BUILDING

Curriculum co-development; Research; Graduate teaching; Training and mentoring
Funded by the Carnegie Foundation

The project focused on:

- Capacity training of 110 graduate (MS and PhD) students and 17 faculty on *Design Analysis of Algorithms* and *Theory of Computation*;
- Review and strengthening of existing undergraduate and graduate computer science curriculum;
- Mentoring computer science graduate students and young faculty;
- Exploring collaborative initiatives between Ebonyi State University and Lipscomb University;
- Training on writing grant proposals in Computer Science; and,
- Discussions on dissertation and thesis reporting.

IOM INTERNATIONAL ORGANIZATION FOR MIGRATION

University of Zimbabwe, Harare, Zimbabwe, December 13 – December 24, 2010

CAPACITY BUILDING THROUGH TEMPORARY RETURN OF LECTURERS TO ZIMBABWE

Curriculum co-development; Graduate teaching; Research; Training and mentoring
Funded by the IOM

The project focused on:

- Capacity training of 7 graduate students on *Theory of Computation*;
- Review and strengthening of existing undergraduate and graduate computer science curriculum;
- Mentoring computer science graduate students; and,
- Exploring collaborative initiatives with the University of Zimbabwe;
- Training on writing grant proposals in Computer Science.

INDUSTRY AND GOVERNMENT RESEARCH & DEVELOPMENT EXPERIENCE

CONSULTING SOFTWARE ENGINEER

Highway Africa, Rhodes University, Grahamstown, South Africa, 2009

Developed commercial software *rDNA: reporting Development Network Africa*

Funded by the Bill & Melinda Gates Foundation

The challenges (poverty, war, disease, dictatorships, drought, collapsed social service, low technology, high levels of unemployment and population displacement, etc.) facing Africa have been well articulated in various literature and forums. While these challenges, and possible solutions, have found space for articulation, the role of the media on reporting Africa's development and democracy agenda remains inadequately explored, examined, and appreciated.

The rDNA (reporting Development Network Africa) project was developed for Highway Africa, a partnership between Rhodes University (School of Journalism and Media Studies) and the SABC (South African Broadcasting Corporation), and funded by the Bill & Melinda Gates Foundation. The rDNA platform brings together multi-functional African media professionals into an online community among themselves and with other stakeholders such as development communication experts, civil society, academia, and government communication specialists. It enables them to showcase and share best practices on reporting development, recording audio and video for use in podcasts or multimedia sound clips, and on using social networks and leveraging them to communicate with and attract new readers. It also enables them to share some personal information about themselves as well as promote their work. Stakeholders are able to subscribe to training tools and materials, and special stories and articles. Consequently, rDNA comprises:

- An integrated database storing all the pertinent data or entities constituting the system. This includes journalist profiles and initiatives, best practices in reporting development and using digital technologies, major conferences/summits, other stakeholders (development communication experts, civil society, academia, government communication specialists, etc.) and any associated subscriptions, and
- A Web interface handling the administration of the database over the Internet, providing a blogging facility for users, and enabling stakeholder access to the online platform.

The rDNA platform was officially launched in Nairobi, Kenya on March 17, 2010.

CONSULTING SOFTWARE ENGINEER

Citizens Bank, Abilene, TX, 2008

Developed a Letters of Credit database application system.

CONSULTING SOFTWARE ENGINEER

Northrop Grumman, Montgomery, AL, 2007

Developed commercial software *JILS: Joint Immersive Learning Simulation*

Funded by the U.S. Department of Defense

JILS (Joint Immersive Learning Simulation) is a proof-of-concept prototype multi-player immersive learning simulation which I developed as a consultant to Northrop Grumman for the Department of Defense (DoD). JILS coordinates with, and supplements, the joint live, virtual and simulated (LVS) training environment in the DoD's Joint National Training Capability (JNTC) to provide on-demand, tactical level, reinforcement training for current and emerging joint force operations. It draws upon film making, gaming theory, psychology and learning theory to create a simulation that will improve individual performance under real-life stresses. It directly enhances JNTC's ability to provide training which will prevent readiness decay between live training exercises and allows wider promulgation and reinforcement of the lessons learned during the live exercises.

The JILS application is a research-based, state-of-the-art, full-screen, full-motion interactive movie "game" with embedded "slice-of-life" video scenarios that help users practice addressing real world challenges so they learn to make better decisions when they face similar situations under pressure in real life. The system users (or players) assume the identity of the lead characters in an interactive movie and make decisions as those characters that modify the storylines and outcomes. Decisions made by each player may dictate the options that are subsequently available to that player later in the simulation. Also, decisions made by one player impact the decisions that the other player can (or should) make. In the interactive movie, players will be bombarded with inputs from which they will have to make decisions and answer questions. Based upon user responses at the decision points, the storyline will branch to different pathways and outcomes. The prototype contains approximately 10 minutes of interactive movie with branching storylines and multiple outcomes. It has been developed in order to provide a proof of concept for its capability to realistically simulate the desired real world operations.

The JILS prototype is a Web-Centric Decision Based Training Simulation. It was built with Adobe Flex and Microsoft ASP.NET 2.0. The Client was created with Adobe Flex Builder 2 using ActionScript 3. This combination was ideal for our situation: ASP.NET 2.0 with C# 2.0 enabling the use a modern, highly object-oriented language to implement the data structures we needed, while Flex, with its support for E4X enabled great reduction on the amount of XML processing code. Also Flex's native support for FLV format video made it an obvious choice for a streaming video solution over the Net.

DIRECTOR, INFORMATICS AND ELECTRONICS INSTITUTE

Scientific & Industrial Research & Development Centre, Harare, Zimbabwe, 1998-2002

The Scientific and Industrial Research and Development Centre (SIRDC) is Zimbabwe's technology center, which was established through an Act of Parliament in 1993 to provide Zimbabwe and the southern Africa region with technological solutions for sustainable development. The Institute of Electronics and Informatics (IEI) served as a center of excellence in the unpacking, adaptation, and transfer of technologies in computing and information technology, electronics, and communications, to their industrial application. I played a key role in the establishment of policy frameworks and research and development direction for the institute as well as the Centre. I led a contingent of research scientists (all with at least an MS degree) in specific areas of Computer Science, Software Engineering, Informatics, Electronics, and Communications, and spearheaded many software development, electronics, and telecommunications projects for the Zimbabwe industry, business, and government. I developed several national, regional, and international strategic alliances for the institute, including the following:

- Spearheaded the Zimbabwe Knowledge Society Initiative which brought Zimbabwe's attention to an important new development challenge: that the role of knowledge and information is critical to sustainable development. Played a key role in the signing of a memorandum of understanding between SIRDC and the UK Science Parks Association (UKSPA), with cooperation aimed at establishing a normal liaison and information exchange system, promoting the progress of small and medium-scale enterprises, and leading to further cooperation in science and technology between Zimbabwe and Great Britain
- Represented Zimbabwe on the Commonwealth Expert Group on IT which was established at the instance of the Commonwealth High Level Review Group by Commonwealth Heads of State to examine the constraints preventing the wider adoption of ICT in developing countries and possible ways of overcoming them
- Represented Zimbabwe on a Foreign and Commonwealth sponsored electronic government (e-government) initiative whose objective was to raise awareness and share experiences on the role that e-government could play in developing countries

- Served as the principal architect to devise regulations for a Bachelor of Technology (Honors) degree, Master of Technology degree by research, and Master of Science in Science Policy Research, for the Harare Institute of Technology which is now a full-fledged university in Zimbabwe focusing on industrialization
- Conducted a situation analysis of the Zimbabwe telecommunications sector for the Zimbabwe Centers for Disease Control and Prevention (Zim-CDC), a non-governmental organization under the arm of the US government
- Posited Zimbabwe's Knowledge Economy (K-economy) initiative whose overall purpose is to promote and encourage Zimbabwe to invest in its national information infrastructures so that it can participate in knowledge-based development and experience the predicted social and economic benefits

CONSULTING SOFTWARE ENGINEER

Zimbabwe National Army, 1998

Developed commercial software *IMPIS: Integrated Military Pay Information System*

Funded by the Zimbabwe Department of Defense

Before 1980, the Zimbabwe National Army (ZNA) payments were processed at the Salary Services Bureau (SSB). As the army establishment increased by 1980, SSB could not cope. (Now the number stood at about 40 000 members.) The ZNA then started to pay its members manually. In light of this, the pay corps complement had to be increased to cope with the new establishment. Army Manning and Records looked after the member's file for record keeping purposes. At that time, the Army Data Processing Unit (ADPU) had a small staff compliment that worked on terminals remotely connected to the SSB computer. In 1983, an Eclipse 350 machine was moved from SSB to the army site at Army Headquarters. A computer company was commissioned to study the pay and records system, and to design a system whose main function was to pay ZNA members. IMPIS (Integrated Military Pay Information System) was then designed and implemented on a, then, new Data General MV2000 which was bought and housed at the new ADPU complex.

Zimbabwe Army Pay and Records (ZAPAR) felt that the computerization effort did not involve the operational level. Only the senior members of the organization were involved in the analysis and design of the system. This led to omission of many operational level requirements. Consequently, ADPU was approached in 1993 to design and implement a new system that catered for all the requirements of ZAPAR. Nothing came to fruition in the next five years. It was then felt in 1998 that a consultant needed to be involved in the exercise. I was contracted as an independent consultant to work on the project.

I spearheaded development of IMPIS, from analysis through design to implementation. IMPIS facilitates the processing of payments to ZNA members keeps a personal record for each member's activities in the Army. The personal record of a member determines the payment for the member at any given time. IMPIS also produces schedules of payments to various banks and creditors for the ZNA members. The schedules reduce a lot of overhead in the granting of payments to members. A schedule of the army earning power (i.e., the indent report) is produced to allow ZAPAR to apply for necessary funds. The system is also used by a number of users to produce statistical reports in their areas of specific need. Progressive reports that detail each item of payment are used by management to show how much each area of deduction and earning consumes per month.

SYSTEMS ANALYST & TRAINING OFFICER, REALTIME COMPUTER SYSTEMS

Harare, Zimbabwe, 1985-1986

Realtime Computer Systems was then the distributor for Digital Equipment Corporation (DEC) computing equipment in southern Africa. Involved in the development of a suite of systems for Air Zimbabwe, Zimbabwe's national airline. Solely responsible for the analysis, design, and implementation of all the Aircraft Maintenance sub-systems and integrating them into the whole suite of Air Zimbabwe systems. (The systems were highly database intensive. We used the Datatrieve database query and report writer tool, which I had learned at Harding University in an introduction to database concepts course. The notion of database systems seemed foreign at the time to most of my colleagues and clients, and I was among the very few who at least had a slight glimpse of it. As a result, I was given another responsibility of Training Officer to train in-house and client software development teams in database systems and development. I believe this was a turning point in my academic and professional career - I found my niche in the area of database systems!)

ACADEMIC CREDENTIALS

EDUCATION

PhD	<i>Computer Science</i>	1993	New Jersey Institute of Technology (NJIT), Newark, NJ
MS	<i>Computer Science</i>	1989	New Jersey Institute of Technology (NJIT), Newark, NJ
BS	<i>Computer Science</i>	1984	Harding University, Searcy, AR

PhD Dissertation: *D Model and D Algebra: A Data Model and Algebra for Office Documents*

TEACHING AREAS

At both Undergraduate and Graduate Levels

Computer science: database systems, design and analysis of algorithms, discrete mathematical structures, seminar, theory of computation

Information Technology: IT innovation and entrepreneurship, seminar

Data science: principles of data science, Big Data management and analytics, seminar

Software engineering: database modeling and design, requirements engineering and modeling, software project planning and management, seminar

PRINCIPAL RESEARCH INTERESTS

Professional goal is to work with students, colleagues and collaborators to enable computer scientists, data scientists, information technologists and software engineers discover new knowledge. Maintained an active and productive research program for more than 20 years. Published in computing journals, and my work has been presented at international conferences, seminars to industry, academia, and various scientific organizations. A recent paper received a Distinguished Paper Award in 2014, while another received a Meritorious Award in 2009. Have been invited to speak at international levels, and sponsored by the United Nations organization. Have also served on editorial boards for international journals and conferences, also a member of computing-related professional organizations.

Research agenda has since focused on three rather broad areas:

- pure (computer science and data science) research focused on database systems, algorithms, query algebras, software engineering, and simulation and modeling;
- IT and computer science education with a specific focus on teaching and learning within the IT and computer science disciplines; and
- applied research and development (R&D) focused on information and communication technology (ICT) capacity and utilization in developing countries, situation analysis in ICT capacity and utilization in developing countries, knowledge economy (and society) strategies for development, ICT in the framework of entrepreneurial and economic development, and ICT policy and regulation for developing countries.

OTHER QUALIFICATIONS, AWARDS, & HONORS

- Tenured full professor
- More than 30 years' classroom teaching experience, both undergraduate and graduate
- Contributions to more than 100 graduate theses/practicums (PhD and MS) in the form of consultation and citation

- 2014 Distinguished Paper Award given by the Association of Information Technology Professionals (AITP) on paper entitled *“On Adapting a War-Gaming Discrete Event Simulator with Big Data and Geospatial Modeling Toward a Predictive Model Ecosystem for Interpersonal Violence”*
 - 2009 Meritorious Award given by the Association of Information Technology Professionals (AITP) on paper entitled *“Towards an Abstract Model for Academia and Information Technology Sector Collaborative Partnerships: Responding to the 'West Texas Coalition for Innovation and Commercialization' Initiative”*
 - Certificate given by the country of Georgia National Science Foundation (GNSF) for acting as an International Evaluator of the Projects of the “State Science Grants Competition 2009” administered by the GNSF and funded through the State Budget
 - Outstanding Young Zimbabwean (Scientific and Technological Development Category), Junior Chamber International
 - Who’s Who in executives and professionals
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PROFESSIONAL ENGAGEMENT

ORGANIZATIONAL AFFILIATIONS AND MEMBERSHIPS

- Association of Information Technology Professionals (AITP), 2009 – Present, National
- International Association of Computing Machinery (ACM), 2003 - Present, International
- Institute for Electrical & Electronic Engineering (IEEE), 2003 - Present, International
- Institute for Operations Research and the Management Sciences (INFORMS), 2013 – Present, International
- Information and Telecommunications Education and Research Association (ITERA), 2014 - Present
- Society for Modeling and Simulation International (SCS), 2013 – Present, International
- Zimbabwe Academy of Sciences, 2006 - Present, National
- Computer Society of Zimbabwe, 1985 - Present, National (Inactive)

ADVISORY COMMITTEES, PANELS, BOARDS AND OTHER PROFESSIONAL ACTIVITIES

- ABET (Accreditation Board for Engineering and Technology) Computer Science Program Evaluator, 2017 – Present
- Senior Advisor, International Federation of Multimedia Associations (FIAM), Senior Advisor on African Digital Media (International), 2009 - Present
- Member, Nashville Technology Council (NTC) Board, 2013 – Present
- Member, Lipscomb Academy Leadership Council, 2014 – Present
- Chair, Zimbabwe Knowledge Economy Task Force, 2001 – 2002
- Chair, Knowledge Society Coordinating Committee, Zimbabwe, 2000 – 2002
- President, Computer Society of Zimbabwe (President), 2000 – 2002
- Chair, Wealth Creation through Science Coordinating Committee, Zimbabwe, 1999 – 2002
- Chair, Standing Committee on Information and Communication Technologies, National Manpower Advisory Council (NAMACO), Zimbabwe, 1998
- Member, International Conference on Systems Integration, Organizing Committee, Brasilia, Brazil (International), 2007.
- Member, Commonwealth Expert Group on Information Technology. January 2001 – July 2002

- Member, Year 2000 Compliance National Task Force, Zimbabwe, 1999
 - Member, National Commission for UNESCO Specialized Standing Committee on Informatics, 1998
 - External Examiner, National University of Science and Technology (NUST), Zimbabwe, 1997
 - External Examiner, Solusi University, Zimbabwe, 1994 – 1997
 - External Examiner, University of Dar es Salaam, Tanzania, 1995 - 1997
 - Invited Lecture, 5th World Summit on Internet and Multimedia, Multimedia Software Development, Shenyang, China (International), 2009. Sponsored by UNCTAD (the United Nations Conference on Trade and Development)
 - Principal Organizer and Chair, Zimbabwe Missions Forum, Abilene, Texas (International), 2009
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CHARITABLE INTEREST AND ACTIVITY

Established an International Student Opportunity Fund to assist Zimbabwe Orphans to come and study Computing and Technology at Lipscomb University. Two students have since graduated with BS in Computer Science degrees.

CHURCH INVOLVEMENT

- **2012 – Present:** Otter Creek Church of Christ, Nashville, TN.
 - Member, Racial Reconciliation Team.
 - **2007 – 2011:** Hillcrest Church of Christ, Abilene, TX.
 - Member, Missions Committee; Bible Class Facilitator.
 - **2002 – 2007:** Landmark Church of Christ, Montgomery, AL.
 - Member, Missions Vision Team; Life Group Leader.
 - **1993 – 2002:** Avondale Church of Christ, Harare, Zimbabwe.
 - Chair, Fellowship Committee.
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INTELLECTUAL CONTRIBUTIONS

REFEREED JOURNAL ARTICLES

1. **Mhlanga, F. S.**, Perry, E. L., and Kirchner, R. (2015). On Adapting a Military Combat Discrete Event Simulation with Big Data and Geospatial Modeling toward a Predictive Model Ecosystem for Interpersonal Violence. *Journal of Information Systems Applied Research (JISAR)*, 8 (1), 42 - 55. (<http://jisar.org/2015-8/> ISSN: 1946-1836).
2. Vardiman, P. D. and **Mhlanga, F. S.** (2013). Conceptual Models of Academic - Industry Partnerships and the Dynamics of Knowledge Worker Infusion within Local Economic Support Systems. *International Journal of Information Technology and Business Management*, 15 (1), 12 - 22.
3. **Mhlanga, F. S.**, Vardiman, P. D., & Reames, S. (2010). Towards a Model for Academia and Information Technology Sector Collaborative Partnerships: Responding to the 'West Texas Coalition for Innovation and Commercialization' Initiative. *Journal of Information Systems Applied Research*, 3(5), <http://jisar.org/3/5/>.

4. **Mhlanga, F. S.** (2006). A Developing Country's Information and Communication Technology Industry in Perspective: A Vision for the 21st Century. *Journal of Integrated Design and Process Science*, 10 (1), 71 - 78.
5. **Mhlanga, F.S.** (1998). Potential uses of Information and Communication Technologies for Sustainable Development. *In Journal of the Zimbabwe Institution of Engineers "The Zimbabwe Engineer"*, vol. 63, no. 10, pp. 19-25, October.
6. **Mhlanga, F.S.** (1996). A Logical Reconstruction of the D_Model Theory. *In IFE Journal of Technology*, vol. 6, no. 1, pp. 15-60, June.
7. **Mhlanga, F.S.** (1996). Towards a Theoretical Reformulation of the D_Model. *In COAN Conference Series of the Thirteenth National Conference on TRENDS IN COMPUTING: Hardware, Software and Networking*, vol. 7, (ER Adagunodo, AD Akinde, LO Kehinde and T Onabanjo, editors), pp. 158-167, Tinuola Commercial Enterprises, Kaduna, May.
8. **Mhlanga, F.S.** (1995). Towards a Systems Integration Model Framework for Developing Countries. *In IFE Journal of Technology*, vol. 5, no. 2, pp. 45-48, November.
9. **Mhlanga, F.S.,** Wang, J.T.L., Zhu, Z. and Ng, P.A. (1995). A New Approach to Modelling Personal Office Documents. *In Journal of Data and Knowledge Engineering*, Elsevier Science Publishers, vol. 17, no. 2, pp. 127-158.
10. **Mhlanga, F.S.,** Wang, J.T.L., and Ng, P.A. (1993). A New Approach to Modeling Office Documents. *Research Contribution in the ACM SIGOIS*, vol. 14, no. 2, pp. 46-52, December.

CHAPTERS IN BOOKS

11. Wang, J. T., **Mhlanga, F. S.**, Liu, Q. H., Shang, W.C., & Ng, P. A. (1994). Database Support for Software Documentation: The TEXPROS Project. In Daniel Cooke (Ed.), *The Impact of CASE Technology on Software Processes* (pp. 103 - 185). Singapore: World Scientific Publishing Co. Pte. Ltd.

REFEREED PAPERS IN CONFERENCES

12. **Mhlanga, F.**, Perry, E. L., Noonan, E., Cantrell, W. A., Killian, K., et. al. (2018). Efforts toward a Feasibility Study to Identify Key Factors in Public Perception of Boko Haram Activities in Nigeria. 2018 Midwest Political Science Association Annual Conference, Chicago, IL, April 5 - 8.
13. **Mhlanga, F.**, Perry, E.L., Noonan, E. K., Cantrell, W. A., Killian, K., Ifeyinwa Ajah, Emeka Agwu, Joseph Igwe, Ebonyi State University, Nigeria Robert Kirchner (2017). Towards a Feasibility Study to Identify Key Factors in Public Perception of Boko Haram Activities in Nigeria. 2017 Alabama Simulation International Conference. October 24 – 26.
14. Perry, E.L., **Mhlanga, F. S.**, and Kirchner, R. (2017). Factors Affecting County Violence in the State of Texas. *SpringSim: 2017 Spring Simulation Multi-Conference*, Virginia Beach, VA, April 23 – 26.
15. **Mhlanga, F.** (2017). Winds of Change: On Systemic Continuous Improvement of a CS Program. ABET Symposium, Baltimore, MD, April 20 – 21.
16. **Mhlanga, F.** (2016). Socially Responsible Big Data and Analytics in a Thin Talent Pool. INFORMS International Conference, Waikoloa, Hawaii, June 12 – 15.
17. Perry, E.L., **Mhlanga, F. S.**, and Kirchner, R. (2015). A Stochastic Model for the Spread of Measles. *2015 Summer Simulation Multi-Conference*, Chicago, IL, July 26 – 29.
18. Perry, E.L., **Mhlanga, F. S.**, and Kirchner, R. (2015). Combined Linear Regression Models. *2015 Spring Simulation Multi-Conference*, Alexandria, VA, April 12 – 15.
19. Perry, E.L., **Mhlanga, F. S.**, and Kirchner, R. (2015). A Study of Interpersonal Violence in the State of Texas Using Linear Regression. *95th Annual Texas Section Meeting of the Mathematical Association of America*, San Antonio, TX, April 9 – 11.

20. **Mhlanga, F. S.**, Perry, E. L., and Kirchner, R. (2014). On Adapting a War-Gaming Discrete Event Simulator with Big Data and Geospatial Modeling toward a Predictive Model Ecosystem for Interpersonal Violence. *Conference on Information Systems Applied Research (CONISAR)*, Baltimore, MD, November 6 – 8.
21. **Mhlanga, F. S.**, Perry, E. L., and Kirchner, R. (2014). Towards a Framework for Predictive Models of Socio-Economic Interactions of Autonomous Population Units: A Case Study on Predictive Model Ecosystem for Interpersonal Violence. *SHARP 2014: Symposium on Healthcare and Analytics in Research and Practice*, Chattanooga, TN, October 16 – 17.
22. **Mhlanga, F. S.**, Perry, E. L., and Kirchner, R. (2014). Toward a Predictive Model Ecosystem for Interpersonal Violence. *2014 Summer Simulation Multi-Conference*, Monterey, CA, July 6 – 10.
23. **Mhlanga, F. S.**, Perry, E. L., Hodza, P., Bassett, G., Nix, R., Randrianasolo, A., Ribeiro, D., Borera, E., Simmons, C., and Kirchner, R. (2014). On a Big Data and Geospatially-Enabled Predictive Model Ecosystem for Interpersonal Violence. *2014 AlaSim International Conference and Exposition*, Huntsville, AL, May 6-7.
24. **Mhlanga, F. S.**, Perry, E. L., Wei, C., & Ng, P. A. (2013). Towards a Predictive Model Architecture for Current or Emergent Pandemic Situations. *2013 Summer Simulation Multi-Conference*, Toronto, Canada, July.
25. Brown, M., Crawford, J., Nordstrom, S., Scholl, F., & **Mhlanga, F.** (2013). Understanding the Presence of Experiential Learning Opportunity Programs in the Information Security Field. *Information Security Curriculum Development Conference*, 53 - 59.
26. Crawford, J., Mayer, K., & **Mhlanga, F.** (2013). Incorporating an Entrepreneurship Concentration into the Undergraduate IT Curriculum. *ACM Special Interest Group on IT Education*.
27. Nordstrom, S. G., Randrianasolo, A. S., Borera, E. C., & **Mhlanga, F. S.** (2013). Winds of Change: Toward Systemic Improvement of a Computer Science Program. *ACM Special Interest Group on IT Education*.
28. **Mhlanga, F.** & Scholl, F. (2013). Strengthening the Local IT Sector through Academic-Industry-Government Collaborative Partnerships. *INFORMS Annual Meeting 2013*.
29. Vardiman, P. D. & **Mhlanga, F. S.** (2013). On Conceptual Models of Collaborative Partnerships and the Economic Impact of Knowledge Worker Infusion into the Local IT Sector. *Joint Conference: Academic Business World International Conference and International Conference on Learning and Administration in Higher Education*.
30. Burton, B. G., **Mhlanga, F. S.**, Martin, B. N., and Robins, J. (2011). What are the Practices and Challenges of Teaching Mobile Computing at the University Level? *The 2011 American Educational Research Association (AERA) Conference*, New Orleans, LA, April 8 – 12.
31. Vardiman, P. D. and **Mhlanga, F. S.** (2010). On Conceptual Models of Collaborative Partnerships and the Infusion of Knowledge Workers in the Local IT Sector. *Conference on Information Systems Applied Research 2010*, Nashville, TN, October 28 – 31.
32. Burton, B. G. and **Mhlanga, F. S.** (2010). Teaching Mobile Computing: Practices and Pitfalls. *ED-MEDIA 2010 World Conference on Educational Multimedia, Hypermedia & Telecommunications*, Toronto, Canada, June 29 – July 2.
33. Burton, B. G. and **Mhlanga, F. S.** (2010). Experiences and Direction in Teaching an Undergraduate Course in Mobile Computing. *EDUCAUSE Southwest Regional Conference*, Austin, Texas, February 17 – 19.
34. **Mhlanga, F. S.**, Vardiman, P. D., and Reames, S. (2009). Towards an Abstract Model for Academia and Information Technology Sector Collaborative Partnerships: Responding to the 'West Texas Coalition for Innovation and Commercialization' Initiative. *Conference on Information Systems Applied Research (CONISAR)*, Washington, District of Columbia, November 5 – 8.
35. **Mhlanga, F. S.** and Vardiman, P. D. (2009). Towards a Sustainable Development of the IT Sector in Abilene: Responding to the 'Re-Invent Abilene' Initiative. *Society for Advancement of Management 2009 International Business Conference on Sustainability*, Las Vegas, Nevada, March 22 - 25.

36. **Mhlanga, F. S.**, Shepherd, I. J., and Vardiman, P. D. (2007). Converting the Research Base into Commercial Success: Contributing to the 'Re-Invent Abilene' Initiative. *4th International Conference on Systems Integration*, Brasilia, Brazil, December 2 - 5.
37. Perry, E. and **Mhlanga, F. S.** (2007). Multi-Player Immersive Learning Simulations. *Huntsville Simulation Conference*, Huntsville, Alabama, October 31 – November 1.
38. **Mhlanga, F. S.** (2006). A Developing Country's Information and Communication Technology Industry in Perspective: A Vision for the 21st Century. *9th World Conference on Integrated Design & Process Technology*, San Diego, California, June 25 - 30.
39. **Mhlanga, F. S.** (2005). Progress Towards Knowledge Societies Strategies in a Developing Nation - The Zimbabwe Experience. *International Conference on Technology and Knowledge in an Open Society*, Berkeley, California, February 18 - 20.
40. **FS Mhlanga** (2004). Fostering an Entrepreneurial Culture in Research Institutions – The Zimbabwe Experience. *Presented at the University of Pretoria*, Republic of South Africa, March 23.
41. **FS Mhlanga** (2003). ICT Policy Regulation and Applications in Africa. *The International Conference on Public Administration for Leadership*, University of Pretoria, Republic of South Africa, October 18 – 22.
42. **Mhlanga, F.S.** (2001). Strengthening the S&T Base through Education and Lifelong Learning: Using ICTs to Create, Acquire and Share New Knowledge. *SADC Policy Forum*, Livingstone, Zambia, November 13 – 16.
43. WT Mbizvo and **FS Mhlanga** (2001). Electronic Education in Zimbabwe. *FCO E-Government Seminar*, Foreign and Commonwealth Office, London, United Kingdom, 04 – 06 April.
44. **Mhlanga, F.S.** (2001). A Wealth Creation Through Science Initiative: The Zimbabwe Experience. *WORK 2001 Conference on Employment Creation*, University of Witswatersrand, Johannesburg, South Africa, April 02 – 05.
45. Gudza, L.D., Mbizvo W.T., **Mhlanga, F.S.** and Taranhike, D. (2000). Training and Development in the System of Technology: The Zimbabwe Scenario. *The Q-World Conference on the Future of Learning and Working*, Berlin, Germany, August 15 – 18.
46. **FS Mhlanga**. On Appropriating Education and Training in Information and Communications Technologies in Africa. *Conference on Health Informatics in Africa at the Millennium and Beyond (HELINA 99)*, University of Zimbabwe Medical School, 01 December 1999.
47. **Mhlanga, F.S.** (1999). On Developing Sustainable Processes and Design Discipline in Informatics and Electronics for the 21st Century. *Sixth Symposium on Science and Technology*, Harare, Zimbabwe, September.
48. **Mhlanga, F.S.** and Sithole, A.S. (1999). The Millennium Bug: Zimbabwe's National Task Force Approach. *Sixth Symposium on Science and Technology*, Harare, Zimbabwe, September.
49. **FS Mhlanga**. The Role of the Informatics and Electronics Institute in the Advancement of Zimbabwe's Telecommunications Sector. *ZIMTEL '99 Telecommunications Exhibition and Conference*, Harare International Conference Centre, 9 – 11 September, 1999.
50. P Hodza and **FS Mhlanga** (1998). Sustainable GIS in Zimbabwe. *The Zimbabwe Institute of Regional and Urban Planners Annual School 1998*, Gee Gees Conference Centre, Borrowdale, Harare, 05 – 07 August.
51. **FS Mhlanga** and P. Matambanadzo (1998). Implications of Information Technology on Local Institutions. *The Zimbabwe Institute of Regional and Urban Planners Annual School 1998*, Gee Gees Conference Centre, Borrowdale, Harare, 05 – 07 August.
52. **Mhlanga, F.S.** and Mandisodza, R.L.K. (1997). Towards a Distributed Database Infrastructure for Zimbabwe. *In the Proceedings of the Second International Exhibition and Conference on Telecommunications*, Harare, Zimbabwe, September.

53. **Mhlanga, F.S.** (1996). On Education and Training Towards Appropriate Information Technology for Developing Societies. *International Conference on Education and Development in Zimbabwe: Strategies for the 21st Century*, Harare, Zimbabwe, September.
54. **Mhlanga, F.S.** (1996). On Research Issues Regarding a Document Processing System. *Fifth Symposium on Science and Technology*, Harare, Zimbabwe, September.
55. **FS Mhlanga** (1996). The Status and Value of Computer Education in Zimbabwe. *The DBS/IBM Information Technology and Education Conference*, Meikles Hotel, Harare, 13 August.
56. **FS Mhlanga** (1995). Computer Applications to Human Resource Planning and Development. *The EMCOZ/Z-C GTF Major Conference on Labour Market Information*, Meikles Hotel, Harare, 18-19 May.
57. Wang, J.T.L., **Mhlanga, F.S.**, Liu, Q.H., Shang, W-C., and Ng, P.A. (1993). An Intelligent Documentation Support Environment. *In Proceedings of the Fifth International Conference on Software Engineering and Knowledge Engineering*, pp. 429-436, San Francisco, CA, June.
58. **Mhlanga, F.S.**, Wang, J.T.L., Shiau, T.H., and Ng, P.A. (1992). A Query Algebra for Office Documents. *In Proceedings of the Second International Conference on Systems Integration*, pp. 458-467, Morristown, NJ, June.

INVITED LECTURE

59. **Mhlanga, F. S.** (2009, September). Multimedia Software Development. *The 5th World Summit on Internet and Multimedia*, Sponsored by UNCTAD (the United Nations Conference on Trade and Development), Shenyang, China.

TECHNICAL REPORTS IN THE PUBLIC DOMAIN

60. **FS Mhlanga** (2002). The Status of the Telecommunications Infrastructure in Zimbabwe. *A Report submitted to the Zimbabwe Centre for Disease Control*, Harare, Zimbabwe, July.
61. T Mohammed and **FS Mhlanga** (2001). Global IT Readiness Report on Zimbabwe. *In Global Information Technology Readiness Report (instanced through collaboration between Harvard University and the World Economic Forum)*, Oxford University Press, December 15.
62. **FS Mhlanga** et al. (2001). A Commonwealth Action Program for the Digital Divide. *Report of the Commonwealth Expert Group on Information Technology for the Commonwealth High Level Review Group*, Commonwealth Secretariat, Marlborough House, Pall Mall, London SW1Y 5HX, UK, August.
63. **FS Mhlanga** (2000). Mining the Research Base. *In Touch Magazine*. British Council, Harare. July.

NON-REFEREED PAPERS IN CONFERENCE PROCEEDINGS

64. **FS Mhlanga** (2001). On Building an Innovative Knowledge Society in Zimbabwe. *The Horizon 2010 Seminar on Building an Innovative Knowledge Society in Zimbabwe*, Monomatapa Hotel, Harare, 26 – 27 September.
65. **FS Mhlanga** (2001). What it takes to be an Institute of Technology. *The Harare Institute of Technology Strategic Planning Workshop*, George Hotel, Harare, 17 May.
66. **FS Mhlanga** (2000). Use of Computers in Fraud Investigations. *Institute of Internal Auditors Workshop*, Holiday Inn, Harare, 30 August.
67. **FS Mhlanga** (2000). On Fostering an Entrepreneurial Culture in Research Institutions. *A Wealth Creation Through Science Initiative*. Monomatapa Hotel, Harare, 08 August.
68. **FS Mhlanga** (1999). Use of Modern Technology in Research and Information Management. *Workshop on Research and Information Management at Institutional Level*, Management Training Bureau, Harare, 1 – 2 September.

69. **FS Mhlanga** (1999). Intellectual Property in the Digital Environment. *The Intellectual Property Expo '99*, National Gallery Gardens of Zimbabwe, Harare, 20 – 21 August.
70. **FS Mhlanga** (1999). SIRDC: Experiences and Expectations on Creating Wealth through Science. *Creating Wealth through Science: Industry and Academic Links Seminar*, British Council, Harare, 22 – 23 February.

FACULTY DEVELOPMENT

1. 2016: Advanced Hadoop: Solutions for Enterprise Applications, TDWI, Chicago, May 9 – 11.
2. 2015: Introduction to Big Data, Learning Tree International, Rockville, MD, May 27 – 29.
3. 2015: Data Analytics for Action and Impact, The Modeling Agency, Washington DC, May 18 – 19.
4. 2015: Strategies for Big Data Success: Privacy, Compliance, and Best Practices, TDWI, Chicago, May 6.
5. 2015: Information Strategy and Architecture for Big Data, TDWI, Chicago, May 6.
6. 2015: Big Data Fundamentals: Creating Value from Non-Traditional Data Sets, TDWI, Chicago, May 5.
7. 2015: Social Analytics: Driving Real Business Value with Big Data, TDWI, Chicago, May 4.
8. 2014: Project Management for Software Development, Learning Tree International, Rockville, MD, Dec. 2 – 5.
9. 2013: Data Collection Techniques, Management Concepts, Washington DC, Dec. 2 – 5.
10. 2013: Data Analysis Boot Camp, Phoenix TS, Columbia MD, Nov. 25 – 27.
11. 2013: Big Data Management and Analytics Workshop, UT Dallas, Jun. 18 – 19.
12. 2009: 5th World Summit on Internet and Multimedia. Attended all sessions of the Summit. Shenyang, China.
13. 2008: ACU Grant Writing Workshop. Conducted by ACU's ORSP, Feb 15. Abilene, Texas.
14. 2007: Silicon Valley Bank (SVB) Venture Capital Seminar. Represented ACU, Sep 5. Dallas, Texas.

PROFESSIONAL PEER REVIEWS

1. 2015: Information Systems Educators Journal, Teaching “Big Data” in a Business School: Insights from an Undergraduate Course in Big Data Analytics (International).
2. 2015: Information Systems Educators Journal, Cybersecurity Curriculum Development: Introducing Specialties in a Graduate Program (International).
3. 2015: Information Systems Educators Journal, Teaching Business Intelligence through Case Studies (International).
4. 2010: CONISAR Best Paper Review Committee Member (International).
5. 2010: Journal of Information Systems Applied Research, Building Undergraduate IT Programs in Developing Countries (International).
6. 2010: Information Systems Educators Journal, Factors that Persuade and Deter Membership in Professional Computing Associations (International).
7. 2010: Information Systems Educators Journal, Measuring the Value Added to Student Knowledge with the ISA Exam (International).
8. 2010: Information Systems Educators Journal, Using Blackboard’s Learning Suite in ABET-CAC Outcomes Assessment and Accreditation (International).
9. 2009: Journal of Information Systems Applied Research, Exploratory Analysis of the Readability of Information Privacy Statement of the Primary Social Networks (International).
10. 2009: Journal of Information Systems Applied Research, An Empirical Study of Text Messaging Behavioral Intention and Usage (International).

11. 2009: Journal of Information Systems Applied Research, A New Look at Security Education: YouTube as YouTool (International).
12. 1993 – 1995: Journal of Systems Integration (International).
13. 2009: 5th International Conference on Networked Digital Technologies, Ostrava, The Czech Republic, Paper No. 397 (XESS - eXtended E-Learning Support System) (International).
14. 2009: Georgia National Science Foundation (Georgian NSF) - State Science Grants Competition, Methods and Rating Criteria for the Assessment of Scientific Organizations, Scientists and Scientific Publications of Georgia in the field of technologies (International).
15. 2008: Georgia National Science Foundation (Georgian NSF) - State Science Grants Competition, Rule-Based Programming with Second-Order and Sequence Variables (International).
16. 2008: Georgia National Science Foundation (Georgian NSF) - State Science Grants Competition, Algorithms for Linear Programming Based on the Synthesis of the Gradient and von Neumann Methods (International).
17. 2008: Georgia National Science Foundation (Georgian NSF) - State Science Grants Competition, Elaboration of Information System 'Who is Who in Georgian Diaspora' (International).
18. 2008: Georgia National Science Foundation (Georgian NSF) - State Science Grants Competition, Development of Technology of the Automated Designing for Management Information Systems of the Incorporation on the Basis of Multimedia Data Warehouse and Visual Component-Programming (International).

INTRAMURAL AND EXTRAMURAL FUNDING

- *Equipping Lipscomb University College of Computing and Technology with international student opportunity funding, US Embassy, Zimbabwe, (2014 – Present);*
- *Equipping Lipscomb University School of Computing and Informatics with collaborative laboratory resources, Jackson National Life, Nashville, TN, (2013);*
- *Equipping Lipscomb University School of Computing and Informatics with data center resources, HealthSpring, Nashville, TN, (2012);*
- *Development of an on-line platform for Pan-Africa journalists to showcase best practices in telling Africa's development story, Highway Africa (Rhodes University, South Africa) and funded by the Bill & Melinda Gates Foundation, (2010);*
- *Multimedia software development, Creative Economic Programme, United Nations Conference on Trade and Development (UNCTAD); (2009);*
- *Survey of the Abilene Information Technology Industry: Responding to the Re-Invent Abilene Initiative, Abilene Christian University, (2008);*
- *Development of a proof-of-concept prototype multi-player immersive learning simulation, Northrop Grumman, (2007);*
- *Situation analysis of the Zimbabwe telecommunications sector, Centers for Disease Control, (2002);*
- *Building of an innovative knowledge society in Zimbabwe; British Council, (2001);*
- *Constraints preventing the wider adoption of ICT in developing countries and possible ways of overcoming them, Commonwealth High Level Review Group, (2000 – 2002);*
- *Transforming the Harare Institute of Technology into a technology institute of excellence, Zimbabwe Ministry of Higher Education and Technology; (1999);*
- *Development of an integrated military pay information system, Zimbabwe Ministry of Defense; (1998);*
- *A situation analysis of the Zimbabwe electronics industry, Industrial Development Corporation of Zimbabwe, (1998).*