

CURRICULUM VITAE

BACKGROUND

NAME: ENG. PROF. JULIUS MUSYOKA NDAMBUKI

MARITAL STATUS: MARRIED

NATIONALITY: KENYAN

CURRENT EMPLOYER: DEPARTMENT OF CIVIL ENGINEERING
TSHWANE UNIVERSITY OF TECHNOLOGY
PRIVATE BAG X680,
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(a) QUALIFICATIONS

Secondary School (1978 - 1981) - Machakos Technical School

High School (1982 - 1983) - Njiri's High School

University (1985 - 1988) - University of Nairobi, Kenya
Qualification: B.Sc. (Hons.) Civil Engineering

University (1988-1991) - University of Nairobi, Kenya
Qualification: M.Sc. (Civil Engineering: Water Resources Engineering Option)

University (1996 – 2000) – Delft University of Technology, The Netherlands
Qualification: Ph.D. (Civil Engineering: Water Resources Management)

2006 Awarded Associate Professorship at Vaal University of Technology

2009 Awarded Full Professorship at Vaal University of Technology

2010 Joined Tshwane University of Technology as Professor and Head of Department

PROFESSION Registered Civil Engineer (Engineers Registration Board, Kenya), Registered Professional Engineer (Engineering Council of South Africa)

PRESENT POST Professor and Head of Department

(b) TEACHING AT UNIVERSITY LEVEL

2010 – Present Professor and Head of Department performing all duties related to the position as articulated below.

2005 – 2009 Head of Department, Civil Engineering and Building, Vaal University of Technology, South Africa. At present, I am performing the following duties:

- ❖ Controlling the quality of the programme through feedback from advisory committee as well as adapting emerging world technological advancements. This is mainly done through appropriate curriculum review, discontinuing subjects which are obsolete and introduction of new subjects in line with industrial needs and world trends.
- ❖ Preparing to introduce a specialised course in Water Resources Engineering at B.Tech level from 2007 in line with the departmental strategic plan held in March, 2006. This course is strategic as water is central to sustaining man and his environment and the graduates will impact positively towards helping the country and the world at large in meeting the millennium development goals.
- ❖ The position of a head of department also implies that I have to ensure that the programme is successfully implemented through hiring of highly qualified staff in consultation with the University authorities.
- ❖ I also represent the department in both Faculty meetings, Senate and any other meeting where issues relating to the functioning and smooth running of the department are discussed. Information from these meetings are then passed over to the departmental members of staff mainly during departmental meetings which are held once every month (unless circumstances demand a different frequency).
- ❖ I as well chair departmental meetings where departmental matters are discussed and decisions made in which direction the department is to take in order to align itself with the mission and vision of the Faculty and the University as a whole. Moreover, it is at such meetings that academic as well as staff development matters are discussed.
- ❖ As a head of department, I am the chief internal examiner for the department. This implies that I ensure that the examinations are moderated internally and externally to ensure that the standards compare with those of other similar departments of other universities. Moreover, this exercise also ensures that marking of examination scripts is consistent, thus practicing fairness to all the students. Furthermore, this also ensures that the whole curriculum is not only taught but also examined.
- ❖ Financial stability of the department is key to smooth functioning of the department. I am therefore involved in project proposal writing (already two proposals have been submitted for funding). Such research proposals would bring in funds in terms of study bursary for students, equipment, research output as well as training of high calibre researchers. Moreover, it is also my duty to do budgeting and financial control in the department.
- ❖ In addition to the above duties, I am also involved in lecturing Diploma students.

2002 – 2005 Head of Department of Civil and Structural Engineering, Moi University.
Performing the following duties among others (elaboration of these functions have already been done above):

- Controlling the quality of academic programmes
- Preparation of graduate curriculum
- Reviewing of curriculum
- Hiring of departmental staff in consultation with University Authorities
- Representing the department in senate meetings
- Chairing departmental meetings
- Performing the duties of the chief internal examiner
- Preparation of research proposals
- Guiding and leading research teams
- Lecturing both B.Tech and M.Phil students
- Supervised a total of 4 Masters students
- External examiner for Masters students of Makerere University, Uganda (since 2003 to date)
- Examined 5 masters thesis at Moi University, Kenya

2001 - 2002 Working as a Senior Lecturer in the department of Civil and Structural Engineering
Moi University, Kenya. Subjects taught:

- (1) Water Resources Engineering
- (2) Fluid Mechanics
- (3) Hydrology
- (4) Systems analysis and Operations Research
- (5) Water Resources Management

1996 – 2000 Was undertaking Ph.D. studies, Delft University of Technology, The Netherlands.

1992 – 1995 Worked as a lecturer in the department of Civil and Structural Engineering of Moi
University, Kenya. Subjects taught:

- (1) Civil Engineering Materials
- (2) Fluid Mechanics
- (3) Hydrology
- (4) Water Resources Engineering

1991 - 1992: Worked with the National Water Conservation and Pipeline Corporation
(N.W.C & P.C.) as an Assistant Resident Engineer for Kajiado Water Supply Project.
Supervised to completion the following works which were being undertaken by Nyakio
General Contractors and Warren Engineers:

- (i) Excavation and pipelaying of 6 km 200mm G.S. water pipes
- (ii) Construction of 300m³ Reinforced Concrete (R.C) water tank
- (iii) Construction of 150m³ Masonry water tank
- (iv) Erection of 100m³ Elevated steel water tank
- (v) Reversing of a 16 km rising main so as to supply water to Isinya Shopping Centre and surrounding areas

1990 - 1991: Worked with the Ministry of Transport and Communications as an Assistant Engineer (Roads). Designed and supervised the construction of Njoro Bridge situated in Nakuru, Kenya.

POST-GRADUATE STUDENT SUPERVISION

- ❖ Already supervised a total of 8 Masters students
- ❖ Currently supervising 16 Masters and 2 PhD students.

AWARDS

- (1) Awarded a scholarship by University of Nairobi to study for Masters degree (1988)
- (2) Awarded a scholarship by the Dutch Government to study for a Doctorate degree (1996)
- (3) Awarded a Diploma in Education by the International Biographical Centre, England in recognition of role played in Education and Engineering (2005)

(c) RESEARCH ACTIVITIES

I am very active in research as evidenced by the following outputs.

TECHNICAL REPORTS/THESIS WRITTEN

1. Documentation on solving Stochastic Multi-Objective Groundwater Quantity Management problems, Delft University of Technology, The Netherlands (2001).
2. Second Order Cone Optimization Approach to Groundwater Quantity Management. (Joint work with T. Terlaky, C.B.M. Stroet and E.J.M. Veling) Technical Report August 2000, Faculty of Civil Engineering, TU Delft, NL-2628 BL Delft, The Netherlands, 2000. 11 pages.
3. Robust Optimization: A Real Case Application. (Joint work with T. Terlaky, C.B.M. Stroet and E.J.M. Veling) Technical Report September 2000, Faculty of Civil Engineering, TU Delft, NL-2628 BL Delft, The Netherlands, 2000. 14 pages.
4. Research report entitled "Behaviour of Timber Concrete Composite Beams in Bending". A report written as a requirement for the award of a B.Sc. degree in Civil Engineering, University of Nairobi (1988), Kenya.
5. M.Sc. research thesis entitled "Reservoir Sedimentation and Related Implications: A case study of Masinga Dam", department of. Civil Engineering, University of Nairobi (1991), Kenya.
6. Proceedings of the Annual Workshop of Researchers (Eastern and Southern Africa Technology Policy Studies Network - EATPS) held in Nairobi, Kenya - June 03-07, 1991.
7. Robust optimization: A real case application. (Joint work with T. Terlaky, C.B.M. Stroet and E.L.M. Veling). Technical Report AdvOI-Report No. 2000/10. Advanced Optimization Laboratory (AdvOI), McMaster University, September 2000, Hamilton, Ontario, Canada.
8. Second Order Cone Optimization Approach to Groundwater Quantity Management. (Joint work with T. Terlaky, C.B.M. Stroet and E.L.M. Veling). Technical Report AdvOI-Report No. 2000/11. Advanced Optimization Laboratory (AdvOI), McMaster University, March 2000, Hamilton, Ontario, Canada.
9. Environmental Impact Assessment Study at the DAADAB refugee camps, North Eastern Kenya. A project of United Nations High Commission for Refugees (UNHCR) through CARE Kenya (2001).

10. The Vision and Strategy Framework for Management and Development of Lake Victoria Basin (Main Report) September 2003.

CONFERENCES, WORKSHOP AND SEMINAR PAPERS

- (1) "Reservoir Sedimentation and Related Implications: A case Study of Masinga Dam". A seminar paper presented in the Department of Civil Engineering, Nairobi University, Kenya (1989).
- (2) "Hazardous Waste Management: the situation in Developing Countries". A seminar paper presented in the Faculty of Technology, Moi University, Kenya (February, 1995).
- (3) "Industrial Waste Management" a paper presented at a workshop organised by Meaceom Consultants of Eldoret, Kenya (June, 1995).
- (4) "Solid Waste Management" a paper presented at a workshop organised by Meaceon Consultants of Eldoret, Kenya (June, 1995).
- (5) "Stochastic Groundwater Modelling". A seminar paper presented at the Faculty of Technical Mathematics and Infomatics, Delft University of Technology, The Netherlands (1999).
- (6) "Stochastic Groundwater Modelling: A multi-objective Approach". A seminar paper presented at the Faculty of Civil Engineering and Geosciences, section for Hydrology and Ecology, Delft University of Technology, The Netherlands (1999).
- (7) "Robust Optimization: A real world case application". A conference paper presented at EURO-XVII, Budapest, Hungary (2000).
- (8) "Robust groundwater management through second-order cone programs". A conference paper presented at XXXth IAH Congress, Cape Town, (2000).
- (9) "Towards insensitive groundwater management policies". A seminar paper presented at the Faculty of Technical Mathematics and Informatics, Delft University of Technology, The Netherlands (2000).
- (10) "Management of groundwater resources through optimization". A conference paper presented at the IAH Conference "Balancing the groundwater Budget", Darwin, Australia (12th -17th May, 2002).
- (11) "Environmental Impact Assessment of Groundwater Abstraction Activities". A seminar paper presented at the School of Environmental Studies, Moi University, Kenya, (10th - 28th June, 2002).

- (12) “A shift towards Integrated Water Resources Management within Ewaso Ngiro River Catchment; North Eastern Kenya”, A paper presented at an International Conference on Integrated Water Resources Management, held at Stellenbosch, South Africa (February, 2003).
- (13) “Environmental Impact Assessment of Groundwater Projects”. A seminar paper presented during the Environmental Impact Assessment Seminar held at the School of Environmental Studies, Moi University, Kenya (9th-28th June, 2003).
- (14) “Resolving Uncertainty in Groundwater Resources Management: The Ewaso Ngiro case, Kenya”. A paper presented at an International Civil Engineering Conference on Sustainable Development in the 21st Century Nairobi, Kenya (12th – 16th Aug., 2003).
- (15) “Sustainability of Groundwater Management During Emergency Times: Daadab Refugee Camps Experience, North Eastern Kenya”. A paper presented at an International Civil Engineering Conference on Sustainable Development in the 21st Century Nairobi, Kenya (12th – 16th Aug., 2003).
- (16) “1st Regional Workshop on Flood Management”. A workshop held in Nairobi, Kenya (22nd -24th Sept. 2003).
- (17) “Poverty reduction through Sustainable Exploitation of Groundwater Resources”: A paper presented at the International Conference on the Engineer and the Millennium Development Goals Nairobi, Kenya (27th – 29th , 2005).
- (18) “Optimal Allocation of Water: A Tool for Resolution and Prevention of Conflicts”. A paper presented at the 17th Regional Water and Sanitation Seminar held in Mombasa, Kenya (5th – 9th, Sept., 2005).
- (19) “Optimization and Engineering: Recent Advances”. A public seminar paper presented at Vaal University of Technology, South Africa (6th Sept., 2006).
- (20) “Water Quality Variation within a Distribution System: A case Study of Eldoret Municipality, Kenya”. A conference paper presented at an International Conference on Environmentally Sound Technology in Water Resources Management held in Gaborone, Botswana (11th - 13th Sept., 2006).
- (21) “Use of Decision Aid Techniques in a complex environment of water resources management”. A public seminar paper presented at Vaal University of Technology, South Africa (7th Nov., 2007).
- (22) “Groundwater pollution control through multi-objective optimization: A stochastic approach”. A paper presented during the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, “*Modernising our infrastructure*” Mombasa, Kenya (23rd – 25th Sept., 2008).

- (23) “Well water contamination by pit latrines: A case study of Langas; a peri-urban settlement of Eldoret town, Kenya”. A paper presented during the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, “*Modernising our infrastructure*” Mombasa, Kenya (23rd – 25th Sept., 2008).
- (24) “Data-Based Mechanistic Modelling of Flow-Concentration Dynamics of Non-Point Source Pollution: A case of Upper Vaal Water Management Area” (Joint work with Ochieng and Otieno). A paper presented during the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, “*Modernising our infrastructure*” Mombasa, Kenya (23rd – 25th Sept., 2008).
- (25) “Integrated Solid Waste Management as a Preferred Solution to Environmental Challenges- Case Study of the City of Johannesburg, South Africa” (Joint work with Otieno, Taiwo and Ochieng). A paper presented during the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, “*Modernising our infrastructure*” Mombasa, Kenya (23rd – 25th Sept., 2008).
- (26) “Use of Vector Optimization in Groundwater Pollution Control”. A public seminar paper presented at Vaal University of Technology, South Africa (19th Nov., 2008).
- (27) “The Role of Decision Support Systems in Sustainable Development”. A paper presented during the Moi University 5th Annual International Conference: “*Research and Knowledge Dissemination Towards the Building of a Healthy and Socio-Economically Stable Nations*” Eldoret, Kenya (4th – 8th August, 2009).
- (28) “Technological advances in the conservation of the environment: Application of GIS as an early warning system” (Joint work with S Rwanga). A paper presented during the Moi University 5th Annual International Conference: “*Research and Knowledge Dissemination Towards the Building of a Healthy and Socio-Economically Stable Nations*” Eldoret, Kenya (4th – 8th August, 2009).
- (29) “Sustainable and Efficient Management of Groundwater: Dealing with uncertain Scarce Data”. A paper presented during the 10th WaterNet/WARFSA/GWP-SA Symposium: “*IWRM: Environmental Sustainability, Climate Change and Livelihoods*” Entebbe, Uganda (28th – 30th October, 2009).
- (30) “Monitoring of water quality in a water distribution system”. A paper presented during the New Generation University Conference: “*Education Towards a Technologically Innovative Society*” Vanderbijlpark, South Africa (17th – 19th November, 2009).
- (31) “Analysis of Transient Partially Full Flow in Pressurised Water Supply Networks (Joint work with S Nyende-Byakika and G Ngirane-Katashaya)”. A paper presented during the New Generation University Conference: “*Education Towards a Technologically Innovative Society*” Vanderbijlpark, South Africa (17th – 19th November, 2009).
- (32) “Investigation of the performance of fibre reinforced polymers (FRP) in structural

foundations (joint work with B Labana, LM Masu and RW Salim)”. A paper presented during the New Generation University Conference:”*Education Towards a Technologically Innovative Society*” Vanderbijlpark, South Africa (17th – 19th November, 2009).

- (33) “Development of a pavement management system for road network maintenance (Joint work with D Mapikitla)”. A paper presented during the New Generation University Conference:”*Education Towards a Technologically Innovative Society*” Vanderbijlpark, South Africa (17th – 19th November, 2009).
- (34) The performance of Fibre Reinforced Polymers (FRP) in Structural Foundations: Case Study for South African Construction Industry. Moi University 6th Annual International Conference “*Knowledge Management and Applied Technological Innovations for Sustainable Development*” (2010). Joint work with Labana B., Masu L., and Salim RW.
- (35) The Role of Decision Support Systems in Sustainable Development. Moi University 6th Annual International Conference “*Knowledge Management and Applied Technological Innovations for Sustainable Development*” (2010).
- (36) Application of IWRM through Computer Simulation of a River Basin – Case Study of River Rwizi. Moi University 6th Annual International Conference “*Knowledge Management and Applied Technological Innovations for Sustainable Development*” (2010). Joint work with Gaddi-Ngirane Katashaya and Atim J.
- (37) The Engineer and Engineering in Socio-Economic Development: A paradigm Shift in Engineering Education. Moi University 6th Annual International Conference “*Knowledge Management and Applied Technological Innovations for Sustainable Development*” (2010).

PUBLICATIONS

(A) BOOKS

- (1) Multi-Objective Groundwater Quantity Management: A stochastic approach. Published by Delft University Press (2001) ISBN: 90-407-2174-2.

(B) PAPERS

- (1) Modelling Flow Regime Transition in Intermittent Water Supply Networks using the Interface Tracking Method. Submitted to Journal of Computational and Applied Mathematics.
- (2) Well Water Contamination by Pit Latrines: A Case study of Langas; a Peri-Urban settlement of Eldoret Town, Kenya. Submitted to Journal of New Generation Sciences.
- (3) Application of Geographical Information Systems in fire spread modelling: A Case study of Wallowa Whiteman National Forest, USA. Submitted to International Journal of Sustainable Development
- (4) One-Dimensional Finite Difference Approach for Sedimentation process in sand filled reservoirs. International Journal of Physical Sciences, Vol. 6 No. 7 (2011) pp 1635-1642.
- (5) A novel approach to solving Multi-Objective Groundwater problems with uncertain parameters. The Open Hydrology Journal Vol. 5 (2011) pp 19-25.
- (6) Behaviour of stretched water supply networks. Nile Basin Water Science and Engineering Journal, Vol. 3, Issue 1, (2010) pp 51-60
- (7) The Hydraulic Impact of Water Supply Network Expansion. In proceedings of the WISA 2010 Conference, “*A time to reflect*” (2010).
- (8) Groundwater Management through Second-order Cone Optimization approach. International Journal of Modelling and Simulation Vol. 29 No. 3 (2009) pp 365-378.
- (9) Assessment of air pollution in residential areas: a case study of Kinondoni Municipality, Tanzania. Journal for New Generation Sciences Vol. 6 No.1 (2008) pp 32-40.
- (10) Turning motor vehicle waste to income. International Journal of Pure and Applied Science Vol. 1, No. 3 (2008) pp 71-79.
- (11) Groundwater pollution control through multi-objective optimization: A stochastic approach. In proceedings of the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, “*Modernising our infrastructure*” (2008) pp 427-436.

- (12) Well water contamination by pit latrines: A case study of Langas; a peri-urban settlement of Eldoret town, Kenya". In proceedings of the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, "Modernising our infrastructure" (2008) pp 437-448
- (13) Data-Based Mechanistic Modelling of Flow-Concentration Dynamics of Non-Point Source Pollution: A case of Upper Vaal Water Management Area". In proceedings of the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, "Modernising our infrastructure" (2008) pp 449-460.
- (14) Integrated Solid Waste Management as a Preferred Solution to Environmental Challenges: Case Study of the City of Johannesburg, South Africa". In proceedings of the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, "Modernising our infrastructure" (2008) pp 623-638.
- (15) Sustainable groundwater resources use through efficient allocation. Journal for New Generation Sciences: Vol. 4 No. 2 (2006) pp 34-45.
- (16) Water Quality Variation within a Distribution System: A case Study of Eldoret Municipality, Kenya. In Proceedings of the IASTED International Conference on Environmentally Sound Technology in Water Resources Management, (2006) pp 1-4.
- (17) Decision Support Tool for Water Resources Managers in an Environment of Uncertainty. Journal of Civil Engineering Research and Practice Vol. 2, No. 2 (2005) pp 77-87.
- (18) An efficient Optimization Method in Groundwater Resources Management. Water SA Vol. 29 No.4 (2003) pp 359-363.
- (19) Resolving Uncertainty in Groundwater Resources Management: The Ewaso Ngiro case, Kenya. In Sustainable Development in the 21st Century "The Civil Engineer in Development" (2003) pp 286-293.
- (20) Sustainability in Groundwater Management During Emergency Times: Daadab Refugee Camps Experience, North Eastern Kenya. In Sustainable Development in the 21st Century "The Civil Engineer in Development" (2003) pp 294-301.
- (21) Sand Dams: Source of Water in Arid and Semi Arid lands of Kenya. In Sustainable Development in the 21st Century "The Civil Engineer in Development" (2003) pp 272-279.
- (22) Some Hydrological Investigations for the Design of Sand Dams in Kenya. In Sustainable Development in the 21st Century "The Civil Engineer in Development" (2003) pp 205-218.
- (23) Groundwater management under uncertainty: A multi-objective approach. Water SA vol.26 No.1, (2000) pp 35-42.

- (24) Robust groundwater management through second-order cone programming. In Groundwater: Past Achievements and Future Challenges (2000) pp 413-417.

SPECIAL ASSIGNMENTS

- (1) A member of the Regional Task Force on the Lake Victoria Vision/Strategy Development: A Project of the three (3) East African Community Countries (2000-todate)
- (2) A co-ordinator of a research team on “Flood Management”: A research project of the ten (10) Nile Basin Countries under the Nile Basin Capacity Building Network (2003-continuing)
- (3) An external examiner for the school of post-graduate studies, University of Witwatersrand, South Africa (2007-todate)
- (4) An external examiner for the School of post-graduate studies, Makerere University, Uganda (2002-todate)

ONGOING RESEARCH

- (1) Optimization of Iron removal from Groundwater through effective Flocculation
- (2) Investigation of the performance of Fibre Reinforced Polymers in Structural Foundations
- (3) Multi-Objective water supply management: Design and Control of Low Flow
- (4) Development and Testing of a Pavement Management System
- (5) Integrated Water Resources Management
- (6) Use of Trenchless technology as an alternative method in the construction of buried pipes
- (7) Modelling of water quality characteristics along a reticulation system
- (8) Modelling of pressurised water supply networks with transient low-pressure open channel flow conditions
- (9) Quantification of groundwater recharge using GIS tools
- (10) Use of inter-locking low cost bricks in the construction of affordable houses (A project of AfriSam)

PROFESSIONAL ACHIEVEMENTS AND ENGAGEMENTS

Since my qualification, the following have been achieved:

- ❖ A Registered Engineer with Engineers Registration Board, Kenya (A2105)
- ❖ A Registered Professional Engineer with Engineering Council of South Africa (20110144)
- ❖ A member of the Institution of Engineers of Kenya (M-2989)
- ❖ A member of the International Association of Hydrological Sciences (6523)
- ❖ A member of Water Institute of Southern Africa (23383)
- ❖ A member of the International Association of Science and Technology for Development (4349)

- ❖ I was recognised and my name entered in the “Marquis Who is Who in Engineering and Technology” for my contribution in Engineering and Technology (2005)
- ❖ I was recognised and my name entered in the “Marquis Who is Who in the World” for my contribution in Engineering (2006)
- ❖ Applied for registration as a Professional Engineer with ECSA
- ❖ An editor of the Journal of Civil Engineering and Construction Technology
- ❖ A reviewer of manuscripts for the Journal of Civil Engineering Research and Practice
- ❖ A reviewer of Manuscripts for the African Journal of Science and Technology
- ❖ A reviewer of Manuscripts for the Journal of New Generation Sciences
- ❖ A reviewer of Manuscripts for the Journal of Environmental modelling and Software
- ❖ A reviewer of Manuscripts for the Journal of Water SA
- ❖ A reviewer of Manuscripts for the Journal of Environmental Management and Development (JEMD)
- ❖ Class C National Research Foundation rated researcher

SERVICE TO THE COMMUNITY

I have served the community in the following ways:

- ❖ A member of Gauteng Department of Housing Forum. This is a forum meant to assist the department in fast tracking the delivery of housing within the province.
- ❖ Conducts community service in the form of solid waste management within Vanderbijlpark area. This exercise involves collection of solid waste in collaboration with Emfuleni Municipality.
- ❖ Established collaboration with an NGO known as LIFT AFRICA with a view to starting an income generating activities to poor communities around Vaal so as to alleviate poverty levels.
- ❖ A member of an organisation called Forum for Education, Environment and Development as well as its treasurer (since 2003 to date). This is a forum of professionals whose aim is to promote science education among girls (through organised talks as well as award of bursaries), conserve the environment (through planting of trees and providing communities with tree seedlings as well as getting involved in cleaning exercises, especially in slums). This undertaking has resulted in more girls joining science related university programmes.
- ❖ Organised a course on water resources management in Arid and Semi-Arid Lands (2003) in Eldoret, Kenya. During this course, participants were taught how to harvest rain water using sand dams (an innovative water harvesting techniques suited to such areas). This was meant to make such communities conserve water during times of rainfall for use during times of dry season.
- ❖ Organised a course on concrete applications, maintenance and repair (2005) in Eldoret, Kenya. This course exposed participants to easy ways of concrete applications, maintenance as well as repair. The course targeted communities using concrete water tanks as a means of water collection and storage to empower them with concrete skills.

COMPUTER LITERACY

Very computer literate. Able to use the following computer languages among many others:

- (1) UNIX language
- (2) Scientific Workplace 2.5 and 3.0
- (3) Windows 95, 98, 2000 and Windows NT
- (4) Programming using Fortran77, Fortran90
- (5) Programming using MATLAB
- (6) Microsoft excel
- (7) Microsoft word

REFEREES

1. Prof. Henk de Jager,
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3. Dr. E. J. M. Veling,
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4. Prof. L.M. Masu,
Executive Dean,
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