

CURRICULUM VITAE

ENG. PROF. DR (MR) STANLEY MUSE SHITOTE

A. PERSONAL DETAILS

Date and Place of Birth: 27th April 1958, Kakamega - KENYA.

Marital status: Married

Current Address: Rongo University College

P. O. Box 103 - 40404

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Present Post: Deputy Principal (Administration, Finance and Planning), Rongo
University College

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B. ACADEMIC QUALIFICATIONS

1964 - 1970: CPE, Mahiakalo Primary School, Kakamega, Kenya

1971 - 1974: EACE (Div. I), Mukumu Boys Secondary School, Kakamega, Kenya

1975 - 1976: EAACE (3P 1S), Strathmore College, Nairobi, Kenya

1977 - 1980: BSc (1st Class Hons, Civil Eng.), University of Nairobi, Kenya

1981 - 1984: MSc (Civil Eng.), University of Nairobi, Kenya

1986 - 1990: PhD (Civil Eng.), Free University Brussels, Belgium

C. PROFESSIONAL QUALIFICATIONS

Member of the Institution of Engineers of Kenya (MIEK)

Registered Engineer (R.Eng)

Member of the Kenya Institute of Management (MKIM)

D. WORK EXPERIENCE

1980 - 1981: **Graduate Engineer**, East African Engineering Consultants, Nairobi,
Kenya

1984 - 1985: **Resident Engineer/Design Engineer**, Sapamo Consultants, Nairobi,
Kenya

1985 - 1986: **Assistant Senior Laboratory Analyst**, Kenya Bureau of Standards,
Nairobi, Kenya

1986 - 1988: **Tutorial Fellow**, Moi University, Eldoret, Kenya.
1988 - 1991: **Lecturer**, Department of Production Technology
Sept. 1991 - Dec. 1991: **Lecturer**, Department of Civil and Structural Engineering
Dec. 1991 - Dec 1999: **Senior Lecturer**, Department of Civil and Structural Engineering
Dec 1999 - Nov. 2011: **Associate Professor**, Department of Civil and Structural Engineering
Nov. 2011 - date: **Professor**, Department of Civil and Structural Engineering
June 2012 - to date: **Deputy Principal (Administration, Finance and Planning)**, Rongo University College

E. ADMINISTRATIVE POSITIONS AT MOI UNIVERSITY

1990 - 1991: **Head**, Department of Production Engineering
1991 - 2000: **Head**, Department of Civil and Structural Engineering
1991 - 2001: **Chairman**, Moi University Bursary Committee
1994 - 2001: **Coordinator**, MHO Project (Dutch funded donor project)
2000 - 2005: **Dean**, Faculty of Technology
January, 2004: **Acting Deputy Vice Chancellor** (Planning and Development)
March, 2005 (3 weeks) **Acting Deputy Vice Chancellor** (Research and Extension)
January 2005 - August, 2005 **Member**, 2250 Hostels Committee
March 2005 - June 2012: **Coordinator**, VLIR-UOS Programme

F. ACADEMIC DUTIES AT MOI UNIVERSITY

1990 - 1991: Teaching mechanics courses and supervision of final year projects to undergraduate students, Department of Production Engineering.
1991 - date: Teaching structural engineering courses and supervision of final year projects to undergraduate students, Department of Civil and Structural Engineering.
1997 - date: Teaching structural engineering courses and supervision of thesis work, Master of Philosophy programmes, Department of Civil and Structural Engineering.
1990 - date: Supervision: Field programmes for undergraduate students; Industrial Attachment

H. EXTERNAL EXAMINER POSITIONS

1994 - 1998: Dept. of Civil Eng., Makerere University, Kampala, Uganda
1994 - 2000: Dept. of Civil Eng., Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

1996: Dept. of Civil Eng., University of Zambia, Lusaka, Zambia

2000: Dept. of Civil Eng., University of Dar-es-Salaam, Dar-es-Salaam,
Tanzania

2010 to date: Dept. of Civil Engineering, Kimathi University College of Technology

I. OTHER POSITIONS

2001 - 2002: **Visiting Scholar**, Northwestern University, USA

May, 2004 - October 2009: **Chairman**, National Water Conservation and Pipeline Corporation (a national appointment by His Excellency the President of Kenya, Hon Mwai Kibaki)

J. CURRENT RESEARCH TOPICS

1. Production of Self Compacting Concrete in Kenya
2. Evaluation of Concrete Mix Design Methods for Traditionally Vibrated Concrete in Kenya
3. Affordable Housing
4. Multi-Stage Filtration for treatment of drinking water

K. PUBLICATIONS

1. Shitote, S. M. and Onsongo, W. M., "Compression Field Theory for Reinforced Concrete Beams in Flexure and Shear", Kenya Journal of Science and Technology, series A. (1985).
2. Shitote, S. M. and De Wilde, W. P., "Finite Element Nonlinear Incremental Formulation for Spatial Analysis of Frames", (Discovery and Innovation Journal,- Letter of acceptance B5/MSS/673 dated September 18, 1995).
3. Shitote, S. M. and De Wilde, W. P., "A Case Application of Finite Elements to Ground Water Flow", Proceedings, The 13th Symposium on Finite Element Methods in South Africa (FEMSA 95), University of Stellenbosch, South Africa, 17-20 January, 1995.
4. Shitote, S. M., "Characterisation of the Shear Strength of Steel Fibre Reinforced Concrete", Journal of the Industrial Mathematics Society, Vol. 46, Part 2, 1996.
5. Shitote, S. M., "Prediction of the Ground Water Levels in the Ewaso Nyiro Basin Using the Finite Element Method", Uhandisi Journal, Vol. 21, No. 1, March 1997.
6. Shitote S. M., "Environmental and Water Resources Management Courses in the Teaching Programmes at Moi University", Africa Water Resources Policy Conference, UN Complex, Nairobi, Kenya, 25 - 28 May, 1999.
7. Nyomboi, T., Shitote, S. M. and Sitters, C. W. M., "Stress-Strain Relations for Steel Fibre Reinforced Concrete Beams in Shear", Proc., Int. Conf. on Applied Mechanics - SECAM 2000, ISBN 1-86840-352-1., Edited by S. Adali, E. V. Morozov and V. E. Verijenko, Durban, South Africa, 11-13 January, 2000.
8. Shitote, S. M., "Prediction of the Response of Fibre Reinforced Concrete Beams in Combined Shear and Flexure using the Compression Field Theory", submitted to Discovery and Innovation Journal (ref. B1/MSS/1816).
9. L. M. Situma, L. Etiegni, S. M. Shitote and B. O. Orori, "Biochemical Modeling of Pan African Paper Mills Aerated Lagoons, Webuye, Western Kenya. African Pulp and paper Week, International Convention Centre, Durban, 8 October - 11 October, 2002.

10. Shitote, S. M. and Shah, S. P., "A Fracture Mechanics Formulation for the Shear Analysis of Short Steel Fibre Reinforced Concrete Beams", Proceedings of the 3rd Asia-Pacific Speciality Conference on Fibre Reinforced Materials, 17-18 November, 2003, Changsha, Hunan, China. ISBN: 981-04-8564-6
11. G. M. M. Ochieng, F. A. O. Otieno, T. P. M. Ogada, S. M. Shitote and D. M. Menzwa, "Performance of Multistage Filtration using Different Filter Media against Conventional Water Treatment Systems", Water SA, Vol. 30 No. 3, July, 2004.
12. S. M. Shitote, "Enhancing the Technological Training and Research Capacities in African Institutions of Higher Learning", paper in the book "Internationalisation of Higher Education: the African Experience and Perspective", ISBN 9966854371 9789966854377, OCLC Number 67384497, Moi University Press, 2004.
13. Ochieng', G. M., Ogada, T. P. M., Shitote S. M., Menzwa, D. M., "Performance of Improved Agricultural Waste and Broken Burnt Bricks as Alternative Pretreatment Material in Rural Drinking Water Technology", Water Institute of South Africa Biannual Conference, 1 - 6 May, 2004
14. Shitote, S. M., "Challenges and Prospects of Engineering Education and Training in Kenya", Proceedings, Workshop on Engineering Education and Training in East Africa, Jinja Nile Resort, Uganda, 18-19 July, 2005. ISBN: 9970-812-04-6.
15. Shitote, S. M., Nyomboi, T., Muumbo, A., Wanjala, R. S., Khadambi, E. L., Orowe, J., Sakwa, F., Apollo, A., "A Pre-Cast Concrete Technology for Affordable Housing in Kenya", International Conference on Advances in Engineering and Technology, 16 - 19 July 2006, Entebbe, Uganda.
16. Shitote, S. M., Nyomboi, T., Muumbo, A., Wanjala, R. S., Khadambi, E. L., Orowe, J., Sakwa, F., Apollo, A., "A Pre-Cast Concrete Technology for Affordable Housing in Kenya", Kenya Engineer, Journal of the Institution of Engineers of Kenya, September/October 2008.
17. Shitote S. M., Waweru, R., Njeru, P., "Mix Design of Self Compacting Concrete: Pilot Tests with Crushed Stone as Coarse Aggregates", 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development, 23 - 25 September, 2008, Mombasa, Kenya. ISBN 9966-923-43-X.
18. S. M. Shitote, "Innovative Clusters as a Driver for Sustainable Urban Growth", Keynote Address, Proceedings of 2008 JKUAT Scientific, Technological and Industrialisation Conference, 4 - 5 December, 2008, Nairobi, Kenya. ISBN 9966-923-28-4.

19. Nyakioire, A., Shitote, S. M., Kipkorir, E. C., Kibiiy, J. K., "Water Quality Modelling Using QUAL2E-UNCAS: The Case for Sosiani River", *International Journal of Pure and Applied Science*, Volume 1, Number 3, 2008.
20. Nyakioire, A., Shitote, S. M., Kipkorir, E. C., Kibiiy, J. K., "Uncertainty Analysis of Model Parameters for Sosiani River Using QUAL2E-UNCAS Programme", *International Journal of Pure and Applied Science*, Volume 1, Number 2, 2008.
21. V. A. Okumu, S. M. Shitote, "Energy Considerations in Sustainable Construction", *Proceedings of International Symposium on: Modernising Local Sustainable Technologies as the Engine for Sustainable Development*, 25 - 26 February, 2010, Nairobi, Kenya.
22. V. A. Okumu, S. M. Shitote, "A Modular Design Alternative for Affordable Housing in Kenya", *IEK International Conference, Mombasa, Kenya*, 21 - 23 April, 2010
23. Akivaga, E. M., Otieno, F. A. O., Kipkorir, E. C., Kibiiy, J. and Shitote, S., "Impact of Introducing Reserve Flows on Abstractive Uses in Water Stressed Catchment in Kenya: Application of WEAP21 Model", *Int. Journal of the Physical Sciences*, Vol. 5(16), pp 2441 - 2449, Dec. 2010.
24. Nyandwaro, G. N., Kibiiy J. K., Kipkorir, E. C., Shitote, S. M., "Water Balance Modelling for Kesses Reservoir: Implications for Reservoir Management", *The African Journal of Technology*, Vol. 1 Issue 1 (2011).
25. M'Ndegwa, J. K., Shitote, S. M., "Influence of Cane Molasses on Plasticity of Expansive Clay Soil", *International Journal of Current Research*, Vol 4, Issue 01, pp136 - 141, January 2012.
26. Toromo, A. K., Kipkorir, E. C., Shitote, S. M., Kibiiy, J. K., "Can Shelterbelts Improve Sprinkler Irrigation Performance under Windy Semi Arid Conditions?", ISSN 0168-6291, *Irrigation and Drainage Systems* 2012, DOI: 10.1007/s10795-012-9128-3, 23 March 2012.

L. SEMINARS/WORKSHOPS/COURSES/CONFERENCES ATTENDED

1. International Course on Composite Materials Technology, 1 October - 16 November, 1987, Free University Brussels, Brussels, Belgium
2. Curriculum Development Workshop: Undergraduate Curriculum for the Department of Chemical and Process Engineering, Moi University, 1 - 6 March, 1993, Golf Hotel, Kakamega, Kenya
3. Workshop on MHO Project Proposal for Moi University Central Services, 13 - 19 March, 1995, Mid West Hotel, Kericho, Kenya
4. Workshop on MHO Project Proposal for the Department of Tourism, Moi University, 10 - 22 April, 1995, Chepkoilel Campus, Eldoret, Kenya

5. 5th Int. Conf.on Wetland Systems for Water Pollution Control, 16 - 19 September, 1996, Vienna, Austria
6. Regional Workshop on Research in Environmental and Water Resources Engineering in Eastern and Southern Africa, 24 - 26 November, 1997, Lusaka, Zambia
7. Africa Water Resources Policy Conference, UN Complex, Nairobi, Kenya, 25 - 28 May, 1999
8. Joint Water Resources Review Workshop, Hotel Intercontinental, Nairobi, Kenya, 6 - 8 May, 2003
9. Quality Assurance through Curriculum Design - A Case Study of Higher Education Management in East Africa: Organised by the Inter University Council of East Africa, sponsored by DAAD, 9 - 11 October, 2003, Safari Park Hotel, Nairobi, Kenya
10. 3rd Asia-Pacific Speciality Conference on Fibre Reinforced Materials, 17 - 18 November, 2003, Changsha, Hunan, China
11. Workshop on Responsibility Based Management, 7 - 8 April, 2004, Moi University, Eldoret
12. Strategic Planning Workshop, a Workshop on strategic planning methods organised to facilitate the preparation of a strategic plan for Moi University, 5 - 6 May, 2004, Kenmosa Village, Eldoret
13. New Roles for National Water Conservation and Pipeline Corporation, a Workshop on definition and interpretation of the new roles for National Water Conservation and Pipeline Corporation in accordance with reforms in the Water Sector, 6 - 7 January, 2005, Limuru Conference Centre, Nairobi
14. Strategic Planning Workshop, a Workshop on development of the 3-Year Strategic Plan for National Water Conservation and Pipeline Corporation, 31 March - 1 April, 2005, Wida Hotel, Nairobi.
15. World Water Week in Stockholm, Sweden, organised by the Stockholm International Water Institute (SIWI) 21 - 27 August, 2005.
16. An Induction Course on Corporate Governance for Directors and Senior Management of National Water Conservation and Pipeline Corporation, 22 - 27 October, 2007, Mombasa, Kenya.
17. Annual Water Sector Conference, "Improving Governance and Sustainability", 1 - 2 November, 2007.
18. Geographic Information System (GIS) Training by Regional Centre for Mapping of Resources for Development (RCMRD), 16 - 20 June, 2008.

19. African Higher Education Harmonisation and Tuning Project (Tuning Africa), 21 - 24 January 2012, Yaunde, Cameroon. First workshop on harmonization of curricula in African Universities.
20. African Higher Education Harmonisation and Tuning Project (Tuning Africa), 15 - 18 May 2012, Cape Town, South Africa. Second workshop on harmonization of curricula in African Universities.
21. VLIR-UOS_MU-K AGBIO Project Workshop on Preparation for Phase II, 21 - 23 March 2012, Busia Agricultural Training Centre, Busia.

M. SEMINARS/WORKSHOPS/CONFERENCES ORGANISED

1. Finite Elements: Mathematical Theory and Applications, 30 July - 9 Aug., 1990, Moi Univ., Eldoret, Kenya
2. Curriculum Development Workshop: Undergraduate Curriculum for the Dept. of Civil and Structural Eng., Moi University, 1 - 6 Mar., 1992, Kabarnet Hotel, Kabarnet, Kenya (*sponsored by NETWAS-AMREF*).
3. Finite Elements: Mathematical Theory and Applications, 3 - 14 Aug., 1992, Moi University, Eldoret, Kenya (*sponsored by UNESCO - ROSTA*).
4. First Africa Regional Conference and Seminar on Finite Elements: State-of-the-art in Africa, 10 - 22 Aug., 1994, Hotel Sirikwa, Eldoret, Kenya (*sponsored by UNESCO - ROSTA*).
5. Short Course on Physical Planning Techniques, 25 Mar. - 4 Apr., 1996, Hotel Sirikwa, Eldoret, Kenya (*sponsored by MHO*).
6. Curriculum Review Workshop: Undergraduate Curriculum for the Dept. of Civil and Structural Eng., Moi University, 23 - 31 Oct., 1996, Kabarnet Hotel, Kabarnet, Kenya (*sponsored by MHO*).
7. Curriculum Development Workshop: Master of Philosophy Programmes in Water Engineering and Structural Engineering, Moi University, 23 - 31 Oct., 1996, Kabarnet Hotel, Kabarnet, Kenya (*sponsored by MHO*).
8. Short Course on Public Health Eng., 26 - 30 Jan., 1998, Hotel Sirikwa, Eldoret, Kenya (*sponsored by MHO*).
9. 2nd Regional Conference on Finite Elements, 22 - 23 Feb., 1999, Hotel Sirikwa, Eldoret, Kenya (*sponsored by UNESCO - ROSTA*).
10. Short Course on Structural Eng., 24 Feb. - 2 Mar., 1999, Hotel Sirikwa, Eldoret, Kenya (*sponsored by MHO*).
11. Workshop on Diverse Uses of Concrete I, 23 - 24 February, 2004, Hotel Sirikwa, Eldoret
12. Workshop on Diverse Uses of Concrete II, 4 - 7 April, 2005, Moi University, Eldoret

- 13 Workshop on Diverse Uses of Concrete III, September, 2006, Moi University, Eldoret
- 14 Workshop on Diverse Uses of Concrete IV, February, 2009, Lenana Mount Hotel, Nairobi
- 15 Workshop on Diverse Uses of Concrete V, 30 August - 2 September, 2010, CICADA Hotel, Eldoret
- 16 Workshop on Introduction of Structural Eurocodes in Kenya, 13 - 14 February, 2012, Hotel Sirikwa, Eldoret, Kenya.

N. SELECTED REPORTS PREPARED

1. Progress Reports for the Water Resources Engineering Project dated: Jan., 1996; Sept., 1996; Jan., 1997; Apr., 1998; Mar., 1999; Oct., 1999.
2. MHO Project at Moi University - Status Report, Jan., 1997
3. Progress Report: Constructed Wetlands for Waste Water Treatment, July, 1997
4. Baseline Survey on Housing in Kenya
5. Baseline Survey Quality of Concrete
6. Baseline Survey on Asphaltic Concrete Roads