CURRICULUM VITAE.

Eng. Prof. RICHARD OCHARO ONCHIRI Ph.D.

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EDUCATION:

Colleges/school Attended	Year	Certificate	
St. Petersburg University of Architecture and Civil Engineering(Russia)	2005-2007	Ph.D. (Tech. Sc)	
St. Petersburg University of Architecture and Civil Engineering(Russia)	1992-1997	Msc. (civil Eng.)	
St. Petersburg Polytechnic University (Russia)	1991-1992	pre- university course	
Nyanturago high school	1987- 1990	K.C.S.E.	
Nyanturago Primary school	1979- 1986	K.C.P.E.	

AREA OF SPECIALIZATION:

• Civil &Structural Engineering.

TEACHING EXPERIENCE:

1999-2003	: Tutor , Nairobi Institute of Technology;
2003 to 2007	: Assistant lecturer Civil and Structural Engineering (CSE)
	Masinde Muliro University of Science & Technology (MMUST)
2007 to 2012	: Lecturer and Chairman CSE Department, MMUST.
2012 to 2015	: Senior Lecturer CSE Department, MMUST.
2016 to April 2019	: Associate Professor, Department of Building and Civil
	Engineering,
	Technical University of Mombasa (TUM).
2019 to date	: Professor , Department of Building and Civil Engineering,
	Technical University of Mombasa (TUM

WORK EXPERIENCE:

1998-1999: Assistant Engineer, China Road and Bridge Corporation in the Rehabilitation of Mombassa–Nairobi highway (Voi–Bachuma Gate Section).

MANAGEMENT RESPONSIBILITIES HELD:

- Departmental exam coordinator (2003/2004)
- Academic advisor for second year students, civil and structural engineering (2007/2008 academic year).
- Academic advisor for fifth year students, civil and structural engineering (2010-2013) academic year).
- Faculty of engineering representative to the school of graduate studies board.
- Member of evaluation team for tender for roads for Kakamega County-2015
- Chairman Institution of Engineers of Kenya (IEK) Western Branch since 2013 to 2015.
- Member of Tendering Committee of MMUST 2013 to 2016.
- Member of Library advisory Committee of (TUM) 2016 to date.
- Pre-qualified Peer reviewer for Commission of University Education
- Chairman Department of civil and structural engineering (MMUST) August 2008 to August 2014.
- Acting Dean Faculty of Engineering (MMUST) August 2014 to December 2015
- Deputy Project Manager, Technical University of Mombasa (TUM). February 2016 to April 2016.
- Dean Faculty of Engineering & Technology, (TUM) April 2016 to date

SUPERVISION

Successfully Supervised Eight Masters Students:

- 1. **Mr. J. M. Panyako**, Title: Effects of Controlled Loading on Accident Prevalence among Transit Petroleum Road Tankers` in Kenya.
- 2. **Mr. G. Mwasame**, Title: Contribution of local construction material to buildings collapse risk in kenya: case of materials used in Nairobi and Kakamega town
- 3. **Christopher Bwire**: Title: Simulation of pressure and water quality within Kimilili water supply system using EPANET.
- 4. **Nathalie Suliy Mawo** Title:. Structural Response of Self-Compacting Concrete Beams and Traditional Vibrated Concrete Beams.
- 5. **Iga Dan**. Title: Structural Characterisation and Performance Evaluation of the Failed Manafwa Historic Bridge in Uganda.
- 6. **Benjamin Asin Mugada** Title:. Structural Response of Strap Beams and Space Frame Strap Footing Systems Using LISA.
- 7. **Fredrick Onyancha Arasa** Title: Structural Performance Of Dry stack Sandcrete Blocks Produced Using Non-Conventional Blended Sand With Partial Replacement Of Cement
- 8. **Ndayambaje Jean Claude** Title: Experimental investigation on effect of recycled tyre stell fibres on physical and mechanical properties of rubberized concrete

Successfully Supervised Four Ph.D Students

- 1. **Dr.(Eng). B.W. Sabuni** Title:. Effect of Geopolymer Cement Made From Sugarcane Bagasse Ash on the Engineering Properties of Black Cotton Soils.
- 2. **Dr. Jason Makhumi Wapukha** Title: Investigation of Physical, Environmental and Human Factors on Road Accidents in Uasin Gishu and Bungoma Counties Kenya
- 3. **Dr. S.M. Waweru** Title:. Evaluation of the Factors Leading to Structural Failure in Flexible Pavements of class 'A' Roads in Kenya.
- 4. **Dr.(Eng) Kennedy Aburili** Title:. The Suitability of Bagasse Ash, as a Partial Replacement of Cement in Concrete

EXAMINATION

- Examined three PhD thesis and Seventeen Masters Thesis
- External examiner at
 - ✓ Moi university 2012-2019
 - ✓ University of Eldoret 2012-2019
 - ✓ Jomo Kenyatta University of Agriculture and Technology 2015-2019.

MEMBER TO PROFESSIONAL ASSOCIATIONS:

- Registered professional Engineer EBK(A2730)
- Corporate Member Institution of Engineers of Kenya (M3503).
- Member of Association of Disaster Management and Conflict Resolution of Kenya (ADMCRK)

RESEARCH GRANTS ATTRACTED

- 1. Multidisciplinary research grant of nine million (ksh. 9,000,000) by National Research Fund of Kenya (NRF)
- 2. consultancy grant of seventy six million (ksh. 76,000,00) to carry out tracer studies of technical and vocational education and training (TVET) graduates in Kenya by African Development Bank through State Department of Vocational and Technical Training, Ministry of Education

PUBLICATIONS:

- 1. **R.O. Onchiri** and Maslennikov A. M. *Dynamic analysis of reinforced concrete structures under harmonic influence*. International Journal of Disaster Management and Risk Reduction Vol.3.No.2, 2011. p.90-103. ISSN No.1992-2744.
- 2. G. M. Thumbi, S.G. Waweru and **R.O. Onchiri**, *Horizontal subsurface flow constructed wetland performance evaluation using first-order kinetics*. International Journal of Disaster Management and Risk Reduction Vol.3.No.3, 2011. p.109-120. ISSN No.1992-2744.
- 3. **R.O. Onchiri**, E. Kanda and S.G. Waweru, Water quality assessment in Kakamega municipality. International Journal of Disaster Management and Risk Reduction Vol.3.No.3, 2010. p.51-58. ISSN No.1992-2744.
- 4. **R.O. Onchiri**, F. Sanewu and S. Waweru, *Solid waste disposal system in Kenya: case study Kakamega municipality*. International Journal of Disaster Management and Risk Reduction Vol.2.No.2, 2010. p.1-7. ISSN No.1992-2744.

- 5. Maritim N.k, Oyawa W.O, Mutuku R.N, **Onchiri R.O**, *Physical and mechanical properties of laterized concrete: A case study of Juja laterites*. J-STEM, Vol 3 Nos 1 & 2, 2010.p.1-7. ISSN No.1991-2889
- 6. **R.O. Onchiri** and N.K. Maritim, *Determination of stiffness of reinforced concrete structures using energy method*: J-STEM, Vol 1 and 2, 2008.p.56-68. ISSN No.1991-2889
- 7. **R. Onchiri*** and A.M Maslennikov, *Variational Modelling of Reinforced Concrete*: Asian Journal of Civil Engineering Vol.8 No.2 April, 2007. P.175-181. ISSN No.1563-0854
- 8. Caroline K. Onyancha and **Richard O. Onchiri***, *Geotechnical site Investigation of Sigiri lower Nzoia Floodplain Western Kenya*: Asian Journal of Civil Engineering Vol.7 No.5 October, 2006.p. 139-146. ISSN No.1563-0854
- 9. C.K. Onyancha and **R.O. Onchiri***, *Case Study of Subsurface Conditions of Floodplain in Western Kenya*: Asian Journal of Civil Engineering Vol.7 No.2 April, 2006, P. 453-459.ISSN No.1563-0854
- 10. Mwasame, S.K. Makhanu, **R.O. Onchiri.** Safety and structural reliabilty of reinforced concrete buildings in Kenya. International Journal of Disaster Management and Risk Reduction Vol.4.No.1, 2013.
- 11. Maritim N.K, Oyawa W.O, Mutuku RN and **Onchiri R.O**. Comparison of Serviceability Design Requirement and Experimental Results of Timber Trussed System. East Africa Journal of Engineering, Science and Technology. Vol.1.No.2, 2013 ISSN No.2219-8598.
- 12. F. S. Isaac, R.O. Onchiri, N. K. Maritim, S.G. Waweru. *Investigation of pozzolanic characteristics of municipal solid waste ash in soil stabilization*. International Journal of Civil Mechanical Engineering (IJCME) Volume 3, Number 1 (2013)
- 13. F. S. Isaac, **R.O. Onchiri**, T.Y. Sado. *Effect of municipal solid waste ash on comprehensive strength characteristics of an interlocking block masonry wall*. Nigerian journal of technological research volume 8 no. 2of 2013, ISSN: No. 0795-5111
- 14. Bernadette Sabuni, T. N. Mauti **and Richard Onchiri.** *Use of Ground Nut Shell Ash as a Partial Replacement for Lime to Stabilize Black Cotton Soil.* International Journal of Civil Engineering Research. ISSN 2278-3652 Volume 5, Number 1 (2014), pp. 65-75
- 15. **R.O.Onchiri**, J. Kiprotich, B. Sabuni and C. Busieney. *Use of sugar cane bagasse ash as a partial replacement for cement in stabilization of self-interlocking earth blocks*. International Journal of Civil Engineering & Technology (IJCIET).
- 16. Jason M. Wapukha, Jacob Wakhungu, **Richard Onchiri.** Role of road geometry on road accidents in Uasin Gishu and Bungoma Counties in Kenya. International Journal of Engineering Sciences & Management Research, December 2014, ISSN: 2349-6193.
- 17. Jason M. Wapukha, Jacob Wakhungu, **Richard Onchiri.** *investigation of physical laws of motion and human factors on road accidents in Uasin-Gishu and Bungoma Counties Kenya*. International Journal of Engineering Sciences & Management Research December 2014, ISSN: 2349-6193.
- 18. E. Kanda, G. Waweru, J. Taragon and R. Onchiri. Assessment of pollution status of river Nzoia using physio-chemical characteristics. J-STEM, Vol 6 Nos 1 & 2, 2014.p.22-33. ISSN No.1991-2889

- 19. Christopher Bwire' **Richard Onchiri** and Njenga Mburu. *Simulation of pressure variations within kimilili water supply system using epanet*. International Journal of Civil Engineering & Technology (IJCIET) Volume 6, Issue 4, April (2015), pp. 28-38.
- 20. Jason M. Wapukha, Jacob Wakhungu, **Richard Onchiri.** The correlation of Road Geometry and Environmental Features with Road Accidents in Bungoma and Uasin-Gishu Counties. Africa Journal of Education, Science and Teechnology, February, 2015 Vol. 2, No. 3
- 21. Kennedy Aburili, **R. O. Onchiri**, G.W. Waswa. *Characterization of Compressive Strength of Concrete Blended with Sugarcane Bagasse Ash.* International Journal of Recent Research in Civil and Mechanical Engineering (IJRRCME) Vol. 1, Issue 2, pp: (22-30), Month: October 2014 March 2015, Available at: www.paperpublications.org
- 22. Kennedy Aburili, **R. O. Onchiri**, G.W. Waswa. *Pozzolanic Activity of Sugarcane Bagasse Ash Concrete* International Journal of Recent Research in Physics and Chemical Sciences (IJRRPCS) Vol. 1, Issue 2, pp: (29-35), Month: October 2014 March 2015, Available at: www.paperpublications.org.
 - 23. Waweru S.G, **Onchiri R.O**, Masibayi E.N. *Factors Causing Structural Failure of The Flexible Pavement Along Timboroa To Malaba Road In Kenya*. International Journal of Civil Engineering and Technology (IJCIET) ISSN Online: 0976-6316 vol. 7 issue 4, 2016, pp.533–538.
 - 24. **Onchiri R.O**, Sabuni B.W, Tsado, T.Y.3, Mwangi D. K. *Use of molten plastics as an alternative building construction material*. Bayero Journal of Engineering and Technology (BJET) Vol.12 No.1, February, 2017 pp 67-78. ISSN: 2449 0539.
 - 25. Maritim N.K, Oyawa W.O, Mutuku RN and **Onchiri R.O**. *Deformation behaviour of simply suppoted one-way reinforced LATCON Slabs*. J-STEM, Vol 7 Nos 1 & 2, September 2016.p.25-33. ISSN No.1991-2889
 - 26. Kennedy Aburili, B. W. Sabuni, **R. O .Onchiri**. *Compressive strengths prediction model for bagasse ash concrete*. International Journal of Novel Research in Civil Structural and Earth Sciences Vol. 3, Issue 3, pp: (6-14), Month: September December 2016, Available at: www.noveltyjournals.com.
 - 27. Kennedy Aburili, B.W.Sabuni, **R.O.Onchiri**, Evans Oteki. Effects of Water- Cement Ratio on Workability of Bagasse Ash Concrete. International Journal of Recent Research in Civil and Mechanical Engineering ISSN 2393-8471(IJRRCME) Vol. 3, Issue 1, pp: (64-68), Month: April 2016 September 2016, www.paperpublications.org.
 - 28. Waweru S.G, **Onchiri R.O**, Masibayi E.N. Rutting Failure on Pavement Layers along Timboroa to Eldoret road section in Kenya. International journal of Civil Engineering Research (IJCER), ISSN 2278-3652 Volume 7, Number 1 2006 pg 79-89.
 - 29. Mugada B.A, **Onchiri R.O**, Waweru S.G.Bending Stress Response of Strap Beams International Journal of Science and Research (IJSR) vol. 6 issue 11. ISSN (Online) page793-797
 - 30. Dan Iga, Timothy Nyomboi, **Richard Ocharo Onchiri**. *Structural Characterisation of the Failed Manafwa Historic Bridge in Uganda*. International Journal of Science and Research (IJSR) ISSN vol. 5 issue 11 (Online): 2319-7064 page 367-375.
 - 31. Nathalie S. Mawo1*, **Richard O. Onchiri** and Stanley M. Shitote. *Performance of self-compacting concrete made with hydraulic lime as filler*. Journal of Civil Engineering and Construction Technology Vol. 8(3), pp. 20-25, March 2017 pp.20-25.

- 32. Ndayambaje J. Claude, **Richard Onchiri**, Walter O. Oyawa. *Combined Effect of Recycled Tyre Steel Fibre and Crumb Rubber on Flexural Toughness of Concrete*. International Journal of Innovative Science and Modern Engineering (IJISME) ISSN: 2319-6386, Volume-5 Issue-1, November 2017. Page 10-16.
- 33. Fredrick Onyacha Arasa, **Richard Onchiri**, Zachary C. Abiero-Gariy. *Effect of Sugarcane Bagasse Ash on the Engineering Properties of Blended Sandcrete Blocks.* International Journal of Engineering Research and Technology (IJCIET) ISSN Online: 0976-6316 Volume. 6 Issue. 12, December 2017 page 327-337.
- 34. Ndayambaje J. Claude, **Richard Onchiri**, Walter O. Oyawa. Cumulative effect of Recycled Tyre Steel Fibre and crumb rubber on impact resistance of concrete *European International Journal of Science and Technology ISSN: 2304-9693 Volume-6 No 9, November 2017 page 80-90.*
- 35. **Richard Ocharo Onchiri.** Evaluation of Performance of Conventional Water Treatment System: A Case Study. International Journal of Science and Research ISSN 2319-7064 (2018).
- 36. **R. O. Onchiri**. Structural performance of Limestone as an Aggregate for Lightweight Concrete. International Journal of Engineering Research and Technology ISSN 2278-0181(2018)

PUBLICATIONS IN CONFERENCE PROCEEDINGS

- 1. **R.O Onchiri**, E. K. Kanda and M.D Mosiria. *Impacts of wastewater effluent on lukonyi stream: analysis of the performance of busia treatment plant*. Proceedings of the International Conference on Disaster Risk Reduction and Conflict Resolution for Sustainable Development. Held at Masinde Muliro University of Science & Technology, Kakamega, Kenya 18th 20th July, 2012(pg.417-423)
- 2. J.M. Panyako, **R.O. Onchiri** and E. Neyore. *Load level effects on accident prevalence among*
 - transit petroleum road tankers' in Kenya. Proceedings of the International Conference on Disaster Risk Reduction and Conflict Resolution for Sustainable Development. Held at Masinde Muliro University of Science & Technology, Kakamega, Kenya 18th 20th July, 2012.(pg 257-265)
- 3. **R.O. Onchiri** and Maslennikov A. M *Analysis of reinforced concrete structures* under seismic loading in view of direct account of reinforcing steel, with and without constraints. Proceeding of the IEK International Conference on the engineer and vision 2030, May 14th-16th 2008. p. 26-26.(Held at Hotel Inter-Continental, Nairobi, Kenya)
- 4. S.G. Waweru and **R.O. Onchiri**, Evaluation of Structural Failure of Flexible Pavements. Proceedings of the 1st engineering, science and Technology conference on science and technology for engineering innovation and industrialization. 9th to 11th June 2010.P.192-196. (Held at MMUST)
- 5. **R.O. Onchiri** and N.K. Maritim, *The structure and overview models of PPP*.

 Proceedings of IEK international conference on the role of public private partnership for development of sustainable infrastructure, April 21st-23rd,2010.p.140-145(Held at Sarova Whitesands Beach Resort and SPA, Mombasa, Kenya).

- 6. **R.O. Onchiri,** Capacity Building and Training in Engineering Profession: Kenyan Perspective.
 - Proceedings of the 19th Engineers international conference held at Kenyatta international conference centre 9th to 12th May 2002. Nairobi, Kenya.
- 7. S.I. Fundi, **R.O. Onchiri**, N.K. Maritim, K. Shepherd and S.Waweru. Investigation of pozzolanic characteristics of municipal solid waste ash in soil stabilization. Proceedings of the 19th Engineers international conference held at Kenyatta international conference centre 9th to 12th May 2002. Nairobi, Kenya
- 8. **R.O. Onchiri**, S.G. Waweru and O.H. Otwori. Sustainable solid waste management system for counties in Kenya (a case of Kisii municipality) Engineers International Conference 2011 on theme "Engineering Better Counties and Cities for Better Living" 11th 13th May 2011.

CONFERENCES ATTENDED:

- 1. International counter-terrorism & disaster management course -14th to 18th, June 2004
- 2. Workshop on diverse Uses of concrete— 23rd to 25th, February 2004.(organized by Moi University Eldoret)
- 3. Actual problems in civil Engineering. 59th International conference of young scientists, 2005.(organized by St. Petersburg State University of Architecture & Civil Engineering, Russia)
- 4. Actual problems in civil Engineering. 60th International conference of young scientists, 2007. (Organized by St. Petersburg State University of Architecture & Civil Engineering, Russia).
- 5. The IEK International Conference on the engineer and vision 2030. 25th -28th April 2008 (Held at Hotel Inter-Continental, Nairobi- Kenya).
- 6. 1st engineering, science and Technology conference on science and technology for engineering innovation and industrialization, 9th to 11th June 2010. (held at MMUST)
- 7. IEK international conference on the role of public private partnership for development of sustainable infrastructure, April 21st-23rd,2010.p.140-145(Held at Sarova Whitesands Beach Resort and SPA, Mombasa, Kenya)
- 8. The19th Engineers international conference held at Kenyatta international conference centre 9th to 12th May 2012. Nairobi, Kenya.
- 9. Masinde Muliro University of Science and Technology (MMUST) Annual Conference for 2012 was hosted by the Faculty of Education and Social Sciences (FESS) on the theme 'Action Research in Higher Education and Development in Africa.
- 10. Engineers International Conference held at Intercontinental Hotel, from 13th -15th May 2015
- 11. Expanding Theoretical and applied roles of GIS in Dynamic Global Environment held at Masinde Muliro University of Science and Technology, Kakamega, Kenya on 13th -14th August 2015
- 12. Enriching Engineering Education through University-Industry Collaboration and experiences held on 3rd and 4th May 2018 at Kenya Institute of Curriculum Development, Nairobi
- 13. 3rd Africa Engineering Conference and 25th IEK International conference held on 17th to 21st September 2018 at Pride Inn Paradise Beach Resort, Mombasa, Kenya

TRAINING WORKSHOPS ATTENDED.

- 1. Training workshop on maintenance of infrastructure held on 9th to 13th September, 2013 at Engineering Staff College of India, Hyderabad India.
- 2. University multiplication training workshop on curriculum development and review for public universities in Kenya. Implementation and Accreditation, held at MMUST in Kakamega, Kenya on 23rd to 24th January, 2014.
- 3. Training workshop on External peer review held at Kenya Institute of Curriculum, Nairobi, Kenya on 6th and 7th May 2014.
- 4. Training workshop on overcoming project performance obstacles and Management of donor funded projects and PPP projects held at Bishop Nicholas Stam Pastoral Centre, Kakamega Kenya on 16 October, 2014

Schedule of Recent Consultancy Projects

School	are of Recent Consultancy 1 roject	
No.	Name of Project	Cost of
		Project
		(Ksh
		Millions)
1	Proposed extension to existing	4M
	development on plot no	
	881/XI/MI	
	Mombasa county	
2	Proposed addition and	5M
	alterations on plot no 187/IX/ MI	
	Mombasa county	
3	Proposed apartments on plot no.	35M
	Group V/1416	
	Mnarani- Kilifi County	
4	Proposed development on LR	17M
	No. 5054/212	
	Kilifi county	
5	Proposed development on plot	8.6M
	no. MN/I/6781	
6	Proposed Development on plot	65M
	no(s).	
	MN/I/17420,17421&17421	
	Utange-Mombasa county	
7	Proposed development on Plot	32.5M
	No. MN/I/6380	
	Kisauni-Mombasa county	
8	Proposed Classroom block	14M
	on plot no. 82/II/MS	
	Mtongwe- Mombasa county	
9	Proposed Church development	15M
	on plot no. MN/I/10127,10128&	
	10128	
	Kongowea Maweni-Mombasa	

	county	
10	Proposed Developments on plot	22.5
	No. MN/III/322/6	
	Kilifi county	
11	Proposed development (Villa) on	20 M
	LR.No	
	S.THARAKA/TUNYAI'A'3366	
	TUNYAI.	
	Tharaka-Nithi county	
12	Proposed development on plot	29M
	No. Mbololo/Mraru 3357 Voi	
	Taita-Taveta county	
13	Proposed development on Plot	20M
	No. MN/II/10581	
	Utange Mombasa county	
14	Proposed Ware house and	
	boundary Wall on plot	150M
	Kilif/Kadzonzo/Madzimbani/624	
	Kilifi County	

CONFERENCES / WORKSHOPS ORGANIZED.

- 1. First engineering, science and Technology conference on science and technology for engineering innovation and industrialization, 9th to 11th June 2010. (held at MMUST)
- 2. Workshop on overcoming project performance obstacles and Management of donor funded projects and PPP projects held at Bishop Nicholas Stam Pastoral Centre, Kakamega Kenya on 16 October, 2014.

REFEREES:

1. Prof. Zachary M. Getenga Professor of Chemistry

Machakos University. P.O.Box 136-90100

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2. Prof George Muturi Thumbi Professor of Civil Engineering

Technical University of Kenya

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Nairobi- Kenya. Tel. 0724814436.

3. Prof. Eng Walter Oyawa Professor of Civil Engineering

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