

CONFERENCE PROGRAM CE 2008

2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development

"Modernizing our infrastructure"



23 - 25 September 2008
SUN N' SAND HOTEL, MOMBASA, KENYA



Organized by:

Department of Civil, Construction & Environmental Engineering, JKUAT, KENYA
and
School of Civil Engineering, Kyoto University, JAPAN

Also supported by:

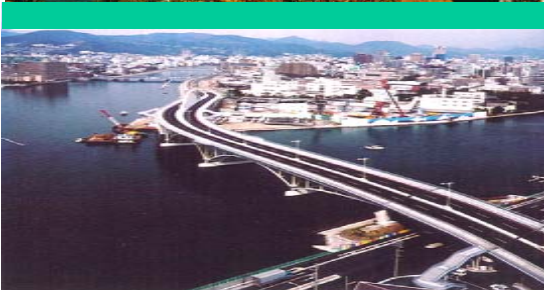
Japan Society for the Promotion of Science (JSPS), Japan
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INTRODUCTION

Civil engineers have always faced the challenges of the present and future viz, building our quality of life and advancing civilization right from the beginning, to the pyramids of Egypt and the exploration of space. There is now renewed interest in re-orienting civil engineering to swing in-tune with global concerns for our environment, rapid urbanization, deteriorated/inadequate infrastructure and disaster preparedness. For developing countries, the civil engineer is at the epicenter in seeking means to enhance human life through modernization of infrastructure as evidenced by provision of shelter, water, and transport, amongst others. The International Civil Engineering Conference in Kenya in 2008 (CE-2008) will avail a forum for international exchange of modern civil engineering technologies, scientific views and cultural trends as part of one global family. The conference will offer an opportunity for delegates to discuss the role of Civil Engineering in modernizing our infrastructure.



Modernizing our Infrastructure
Modernizing our Infrastructure

MESSAGE FROM THE HOST VICE CHANCELLOR

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On behalf of Jomo Kenyatta University of Agriculture and Technology, I would like to welcome all delegates to the 2nd International Civil Engineering Conference on Civil Engineering and Sustainable Development. I note that this is indeed an auspicious occasion for the Civil Engineering fraternity, and therefore looks forward to fruitful deliberations.

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photo

KEYNOTE SPEAKERS AND ADVISORY BOARD

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Prof. W. O. Oyawa, Associate Professor of Civil Engineering, JKUAT, and Chairman of Department of Civil, Construction and Environmental Engineering.

SUMMARY CONFERENCE PROGRAM

CE 2008

	9.00 – 10.30 am	Break 10.30-11.00am	11.00-1.00 pm	Lunch 1.00-2.00pm	2.00-3.30pm	Break 3.30-4.00pr	4.00-5.30pm	Evening	
Day 1 23-08-2008	PLENARY CE 2008 Opening and Keynote Papers	Break	Parallel session I	Lunch	Parallel session I	Break	Parallel session I	Free	
			Parallel session II		Parallel session II		Parallel session II		
			Parallel session III		Parallel session III		Parallel session III		
Day 2 24-08-2008	PLENARY Keynote Papers	Break	Parallel session I <i>Special session of JSPS AA Platform</i>	Lunch	TOUR			Conference dinner	
			Parallel session II						
			Parallel session III						
Day 3 25-08-2008	Parallel session I	PLENARY Keynote Papers & CE 2008 Closing	Break	Symposium Opening and Paper	Lunch	Symposium Papers	Break	Symposium Papers	Free
	Parallel session II								
	Parallel session III								
Day 4 26-08-2008	Symposium Papers	Break	Symposium Papers	Lunch	Symposium Paper and Closing	Break		Free	

CONFERENCE PROGRAM IN DETAIL

CE 2008

Day 1: Tuesday, 23rd September, 2008 8.00am – 1.00pm

TIME	ACTIVITY		
	REGISTRATION		
	OPENING CEREMONY Kikambala Conference Room Opening Remarks by Chair, Org. Committee –Prof. W. O. Oyawa Remarks by Chair, Steering Committee – Prof. M. Kimura Remarks by Co-Chair – Prof. E. Kahangi Welcome by VC-JKUAT-Prof. Mabel Imbuga Speech and Opening by Chief Guest		
	KEYNOTE PAPERS Chair/Co-Chair – Prof. M. Kimura/Prof. R.N. Mutuku Kikambala Conference Room		
9.00-9.30	Incorporating labour based techniques in roads development; “a kenyan experience Eng. MSM Kamau, Kenya		
9.30-10.00	Climate change – an opportunity? Prof. S. Riley, Australia		
10.00-10.30	History And Developments of Floating Structures Prof. E. Watanabe, Japan		
10.30-11.00	TEA BREAK		
	TECHNICAL SESSION SC Chair/Co-Chair – Prof. K. Sugiura/Eng. F. Sakwa Kikambala Conference Room	TECHNICAL SESSION WE Chair/Co-Chair – Prof. Ndambuki/ Prof. P. Kioni Jambo Conference Room	TECHNICAL SESSION TH Chair/Co-Chair – Prof. E. Asano/Dr. Z.A. Gariy Baraza Conference Room
11.00-11.15	Investigation of concrete-filled stainless steel tubular X-joints <i>Ran Feng and Ben Young</i>	The Impact of Decentralised Management Models in Water and Sanitation Projects in Kenya <i>Simeon Otieno Dulo</i>	Reducing the Influence of Clay Minerals in Construction Materials for Unpaved Roads in Kenya <i>Job M. Karimi</i>
	Effect of Concrete Strength on the Strength and Ductility of Composite Concrete - Filled Plastic Tubes W. O. Oyawa and T. M. Musiomi	New Trends in Remote Sensing for Water Resources Management: Hyperspectral Remote Sensing of Water Quality <i>Kollongeji, J. K., Batelaan, O., Triest, L., and Kipkorir, E. C.</i>	Laboratory Pullout Test On Steel Chain <i>Kepha Abong`o, Makoto Kimura and Akihiro Kitamura</i>

Day 1: Tuesday, 23rd September, 2008 (contd) 8.00am – 1.00pm

	Slip Behavior of Perforated Rib Shear Connectors in a Connection between Circular Steel Tube and Reinforced Concrete Column Tatsuya Sasaki, Yuichi Dokan, Katashi Fujii,	Challenges For Sustainable Water Use In Kenya H. M.Mutua, K.O.Matoke	Petroleum Prospectivity of Lamu Basin, South-eastern Kenya Daniel N. Mogaka and Bernard K. Rop
	Performance Of Timber And Its Mechanical Connections In Exterior Environment <i>Raphael N. Mutuku</i>	Application of GIS-based spatially distributed hydrologic model in Integrated Watershed Management: A case study of Nzoia basin, Kenya <i>Nyadawa, M.O., Karanja, F. and Njoroge, T.</i>	The Effects Of Vegetation Roots On Stability Of Slopes Simpson Osano
	Durability of Steel Bridge Metallic Coating Systems based on Combined Cyclic Corrosion Tests <i>Y. Itoh, Y. Shimizu, and Y. Kitan</i>	Estimation Of Water Demand Using Gis And Weap Model: A Case Of Kisumu City, Kenya M.O. Oloko, J.O. Onyando and W. W. Saenyi	Behavior of Laterally Loaded Steel Pipe Sheet Pile Foundation by Frame Analysis Too J. Kiptanui and Makoto Kimura, and Yoshikazu Nishiyama
	Stiffness Tensor Transformation In Orthotropic Materials <i>Raphael N. Mutuku</i>	Open source Web mapping technologies as an alternative GIS David N. Kuria and Douglas E. Musiega	Use of Recovered Asphalt Pavement Material in Stabilizing Road Base and Sub-base Construction Materials Jonah Kiptanui Too, Jacob Kisuya Mechumo and ¹ Robert K. Kirerah
	Temperature Measurement of a Bridge Rubber Bearing Exposed to Solar Radiation for Long-Term Performance Evaluation <i>Y. Kitane, Paramashanti, and Y. Itoh</i>	Development of Stage – Discharge Curves for Ungauged Natural Channels: The Case of River Sosiani, Kenya J. K. Kibiiy	Behavior and Modeling of Sheet Pile Retaining Walls at Open Excavation Tunneling <i>Shun-ichi Kobayashi, Makoto Kimura, Atsushi Shimura, Masatsugu Shinohara</i>
	LUNCH		

Day 1: Tuesday, 23rd September, 2008 (Contd') 2.00pm – 3.30pm

TIME	ACTIVITY		
	TECHNICAL SESSION SC Chair/Co-Chair – Prof. M. Mannan/Mrs. R. Mbogua Kikambala Conference Room	TECHNICAL SESSION WE Chair/Co-Chair – Dr. M Nyadawa/ Prof .Makhanu Jambo Conference Room	TECHNICAL SESSION TH Chair/Co-Chair – Prof. S.Kobayashi/Prof. J.Mwatelah Baraza Conference Room
	Mechanical properties of fiber reinforced concrete <i>Seung Bum Park, Jun Lee, Young Il Jang, and Byung Jae Lee</i>	Some Applications of Computational Hydraulics to Water Environmental Problems in Kansai Area, Japan <i>Takashi Hosoda and Shinichiro Onda</i>	Kenya's Comparative Road Safety Status: Policy Issues and Challenges <i>*Eric M. Aligula and **Zachary Abierogariy</i>
	Analysis of Cracks in Low-Rise Structures Wangai Ndirangu	Velocity Structure in the Immediate Neighbourhood of a Valve in a Pipe Flow following its Rapid Closure <i>P. N. Kioni</i>	Urban Transport Market Determinants in Kenya: Modal Choice Analysis <i>George A. Makajuma and Marius de Langen</i>
	Mix Design Of Self Compacting Concrete: Pilot Tests With Crushed Stone As Course Aggregates Shitote, S. M., Waweru, R., Njeru, P.	Groundwater Pollution Control through Multi-Objective Optimization: A Stochastic Approach Julius M. Ndambuki, Fred A. O. Otieno and George M. Ochieng	Effect of vehicle utility pattern on environmental pollution in Kenya Hiram M. Ndiritu and Karanja Kibicho
	Application of Sulfur Concrete to expansion structures <i>Yoshinobu Oshima, Yuichi Nakano, Masahiro Satou and Taiichi Kagayama</i>	Well Water Contamination By Pit Latrines: A Case Study Of Langas; A Peri-Urban Settlement Of Eldoret Town, Kenya <i>Clement Kiprotich Kiptum and Julius Musyoka Ndambuki</i>	A Study of Vehicular Parking Characteristics <i>Jerome Apkoge Egwurube and Moabi Robert Kgari</i>
	Effect of Modified Natural Zeolite Additive on Properties of Cement Mortars Mrs Bolanle Deborah Ikotun and Dr Stephen Ekolu	Data-Based Mechanistic Modelling of Flow-Concentration Dynamics of Non-Point Source Pollution: a case of Upper Vaal Water Management Area George, M. Ochieng ¹ . Frederick, A.O. Otieno Julius, M. Ndambuki	Modernising Our Infrastructure: The Case Study of Nyalenda Informal Settlement in Kisumu City, Kenya. Joseph Mbiti Kitheka
	Basic Characteristics Of Pumice From Makueni District As A Light Weight Coarse Aggregate For Concrete Paul Uvuya Mulu, Bernadette Waswa Sabuni, Nathan Mweu Muli	Depletion Of Groundwater Resources And Its Remedial Measures; A Case Study Of The South Coast Aquifer, Kenya James W. Thubu	
	TEA BREAK		

Day 1: Tuesday, 23rd September, 2008 (Contd') 3.30pm – 5.30pm

TIME	ACTIVITY		
	TECHNICAL SESSION SC Chair/Co-Chair –Prof.Ben Young/Prof. Y. Kitane Kikambala Conference Room	TECHNICAL SESSION WE Chair/Co-Chair – Prof. S. Riley/ Mr. S. Dulo Jambo Conference Room	TECHNICAL SESSION TH Chair/Co-Chair – Dr. SK. Mwea/Mr. G. Makajuma Baraza Conference Room
	Comparison Of Serviceability Design Requirement And Experimental Results Of Timber Trussed System <i>Nelson K. Maritim, Walter O. Oyawa And Raphael N. Mutuku</i>	Evaluation Of Pesticide Removal From Waste Water Using Activated Sawdust Carbon B.K.Daudi G .Thumbi A. Gachanja	Effects Of Procurement Methods Of Donor Funded Projects On The Construction Industry In Uganda <i>Vitus Kyeyune And Michael Kyakula</i>
	Development Of A Database System For Rational Bridge Management In Yamaguchi Prefecture, Japan <i>Kei Kawamura, Atsushi Hara, And Ayaho Miyamoto</i>	A Study Of The Effectiveness Of Aquatic Plants In Removing Nutrients From Wastewater: <i>Christine A. Odinga, Y.O. Ouma,P. Raburu</i>	Housing Industry Professionals Interaction With Individual Housing Developers On Material Selection For Sustainable Housing <i>Doris Karambu Kirimi, Jonah Kiptanui Too And Paul U. Mulu</i>
	Ultimate Strength Of Steel Cable-Stayed Bridges With Tower Height Of 1/10 And 1/5 Of Center Span Length <i>Naoki Yoshida Kuniei Nogami Hidetaka Iwasaki And Yasuyuki Morimoto</i>	Secondary And Tertiary Treatment Of Sewage In Kenya Using Constructed Wetlands And Gravel Beds <i>Kibetu, P. M.</i>	Specifying Construction Materials And Emerging Trends Of New Products <i>S. M. Masu</i>
	Evaluation Of The Structural Integrity Of A Fire Damaged Building In Dar Es Salaam <i>Joseph J. Msambichaka</i>	Removal Of Heavy Metals From Industrial Wastewater Using Washed Quarry Dust (Wqd) <i>G.M. Thumbi, J.W. Njenga, J.K. Mungathia</i>	Applicability Of Telotechnology In Civil Engineering Projects Management Talam, Michael K.; Ng'ang'a, Stephen I.; Kitaiinge, Kisilu M.
	Strength Performance Of Concrete Utilizing Laterized Quarry Dust As Fine Aggregates Timothy M. Musiomi , Walter O. Oyawa ² And Paul Mulu	Removal Of Algae In Stabilization Ponds Effluent Using Moringa Oleifera Coagulant George Mwaura	Awareness And Application Of Total Quality Management (Tqm) In The Tanzanian Construction Industry: The Case Of Contractors <i>Yazidi H.B. Mwishwa, Ninatubu M. Lema</i>
	An Assessment Of The Applicability Of Crushed Stone Dust In Concrete Production As A Waste Management Strategy Likavo, Patrick L.; Ng'ang'a, Stephen I.; Kitaiinge, Kisilu M	The Dynamic Adsorption Behaviour Of Fluoride Onto Surface-Tailored Zeolite Taile Yvonne Leswif ¹ , Maurice S. Onyango, Ochieng Aoyi, Fred Otieno	Problems Causing Delays In Major Government Construction Projects In Kenya Ms.Rose Mbugua
	The Yielded Block Method of Pushover Analysis for RC Structures <i>Michael Kyakula and Sean Wilkinson</i>		

Day 2 : Wednesday, 24th September, 2008 8.00am – 1.00pm

TIME	ACTIVITY		
	Registration		
	KEYNOTE PAPERS Chair/Co-Chair – Prof. Koenig/Prof. J. Msambichaka Kikambala Conference Room		
9.00-9.30	Environmentally Friendly Sustainable Housing Construction <i>Indubhushan Patnaikuni*</i>		
9.30-10.00	Road sector reforms in sub-Saharan Africa F. Nyangaga		
10.00-10.30	Light-weight building floors using Precast Reinforced Concrete Panels <i>M.A. Mannan</i>		
10.30-11.00	TEA BREAK		
	TECHNICAL SESSION SC Special session of JSPS AA platform <u>Chair/Co-Chair</u> : Prof. Y Itoh/Prof. Y. Mikata/Prof. Y. Kitane Kikambala Conference Room	TECHNICAL SESSION WE Chair/Co-Chair – Prof. A. Koenig/Dr. J. Kibiiy Jambo Conference Room	TECHNICAL SESSION TH Chair/Co-Chair – Prof. C. Cherubini/Dr. S. Masu Baraza Conference Room
11.00 – 11.15	<u>OPENING OF JSPS SEMINAR</u> Opening remarks- Prof. M. Kimura General remarks – Prof. Y. Oshima	The sustainable village in a changing world <i>S.J.Riley and S.Shrestha</i>	Insitu Performance Of Modified Bitumen With Rubber Crumbs <i>Mulei, S. M., Mwatelah, J.K.Z. and Mutuku, R. N.</i>
11.15 – 11.30	Civil Engineering in Tackling Poverty in Rural East Africa <i>Makoto. Kimura, Yoshinori Fukubayashi, and Kiptanui J. A. Too</i>	Sustainable Communities: A Dream or a Reality? <i>Surendra P. Shrestha & Steven J. Riley</i>	Use of Red Coffee Soil as soilbag fill Material for Construction and Maintenance of Rural Access Roads in Kenya Kipngetich Tonui Linus
11.30 – 11.45	Roads transportation infrastructure development in Tanzania A.L. Kyulule	Evaluation Of Natural Materials Of Plant Origin As Coagulants In Water Treatment Joane Nyaguthie	Experimental Investigation on High Performance Concrete using Metakaolin and Fly ash as a Partial Replacement for Cement <i>Muthupriya, B.G.Vishnuram, .K. Subramanian</i>
11.45 – 12.00	Re-engineering earth and local plants as sustainable building materials Walter O. Oyawa, Mathew Winja and L.M. Njuki	Impact of Tannery Waste on Surface Water <i>Menzwa D.M., Kiprono K., Sarmat S.C.</i>	Design of A Road Pavement With An Otta Seal Surfacing For A Rural Access Road Charles Kipkoech Cheruiyot


Day 2 : Wednesday, 24th September, 2008 (Contd) 8.00am – 1.00pm

12.00 – 12.15	Interlocking Block As An Alternative Construction Material For Buildings <i>Joseph J. Msambichaka, Allen B. J. Bonamali and Gislar E. Kifanyi</i>	Efficiency of Wastewater Stabilization Ponds <i>Ng'etich J.K., Sarmat S.C.</i>	Interpretations Of Mysteries Of An Ancient Civil Engineering Structure – The Great Pyramid Of Giza – Egypt Robert Kinoti Kirerah
12.15 – 12.30	Strength Performance of stabilized laterized quarry dust masonry blocks Timothy M. Musiomi , Walter O. Oyawa and Paul Mulu	Waste Management in a Rural Setting: <i>A Review of the Design Methodology of Kipkeino School Wastewater Treatment System</i> <i>Ng'etich J.K., Sarmat S.C.</i>	Mathematical Interpretation Of Certain Sections Of The Bible And Other Spiritual Doctrines In De-Mystifying The Most Famous Civil Engineering Structure, The Pyramid Of Giza- Egypt <i>Robert Kinoti Kirerah</i>
12.30 – 12.45	Human resource development of Kenyan civil engineers <i>Eiichi Asano</i>		
12.45–1.00pm	Discussions		
1.00 – 1.45pm	Posters - Sustainable structures in Japan Yukihiro Nishida, NEXCO West Maintenance Co. Ltd. - Maintenance technology in Highway Minoru Kishiro, Hanshin Express Highway Management Center - Natural power generation Hiroshi Onishi, Osaka University - Obstacle and Strategy of international code Kunitomo Sugiura, Kyoto University		
1.00–2.00pm	LUNCH		

Afternoon - Day 2

	TECHNICAL SESSION I	TECHNICAL SESSION II	TECHNICAL SESSION II
2.00pm – 6.00 pm	2.00 pm - 6.00 pm Tour		

Day 3: Thursday, 25th September, 2008 8.00am – 11.30am

TIME	ACTIVITY		
	Registration		
	TECHNICAL SESSION SC Chair/Co-Chair – Dr. I. Patnaikuni/Prof. Y. Itoh Kikambala Conference Room	TECHNICAL SESSION WE Chair/Co-Chair – Dr. O. Aoyi /Mrs. P. Kibetu Jambo Conference Room	TECHNICAL SESSION TH Chair/Co-Chair – Dr. JK Too/Prof. A. Kyulule Baraza Conference Room
8.30 – 8.45	Load Actions for Performance-Based Design <i>Hitoshi Furuta, Naotsugu Sato and Mitsuo Kawatani</i>	Implementing Sewerage Systems for Lake Conservation in Developing Countries: Lessons from Lake Nakuru, Kenya and the Bhoj Wetland, India <i>V. S. Muhandiki, T.Ballatore and M. Nakamura</i>	Maintenance for ASR Damaged Road Viaduct <i>Yasuhiro Mikata, Kaoru Seto, Shingo Maeda and Toyoaki Miyagawa</i>
8.45-9.00	Frp Bridges -The State Of The Art- <i>Kunitomo Sugiura, Yasuo Kitane, Takeshi Kishima, Itaru Nishizaki And Seishi Yamada</i>	Integrated Water and Wastewater Management in Large Tourism Facilities of Hong Kong <i>Albert Koenig</i>	Development of Road Maintenance/Improvement Management System For Unpaved Roads C. Chepkuto, Mwatelah, J.K.Z and Too JK
9.00-9.15	Recent Advances in the use of Wood Residues and Non-Wood Forest Product for Producing Low Cost Building Materials in Nigeria <i>O. Olorunnisola</i>	Integrated Solid Waste Management as a Preferred Solution to Environmental Challenges- Case Study of the City of Johannesburg, South Africa. <i>F.A.O. Otieno. Oluwatoyin Taiwo. G., M. Ochieng'. J. M. Ndambuki</i>	An Audit Of Labour-Based Technology Applications In The Construction Industry In Kenya Paul Uvuya Mulu, Doris Karambu Kirimi ² , Nathan Mweu Muli
9.15 - 9.30	Prediction and classification of moment-rotation curves for bolted angle connections J. Mativo, T. Yamasawa And K. Nogami	Disaster Risk in Dam Projects Prioritization Makhanu S. K., Oteng'i S. B. B., Masinde G. W. and Waswa George	Shallow Foundation Reliability Design C. Cherubini, G. Vessia & M. Veronico
	KEYNOTE PAPERS Chair/Co-Chair–Prof. FAO Otieno/ Prof. E. Watanabe Kikambala Conference Room		
9.30-10.00	Sustainable Technology of a Japanese Historical Timber Bridge Teruhiko Yoda		
10.00 – 10.30	Challenges of Engineering Education in e-Learning on the Far Side of the Digital Divide K.S. Makhanu		
10.30-11.00	CLOSING CEREMONY		
11.00-11.30	TEA BREAK		
11.30 –	<p style="color: magenta; font-weight: bold; font-size: 1.2em;">ALL DELEGATES ARE INVITED TO ATTEND POST-CONFERENCE SYMPOSIUM ON “ RE-ORIENTING CIVIL ENGINEERING EDUCATION AND TRAINING”</p> <p style="color: orange; font-weight: bold; font-size: 1.1em;">Kikambala Conference Room</p> <h1 style="margin: 0;">Post-Conference Symposium</h1> 		

Day 3: Thursday, 25th September, 2008 11.30pm – 5.00pm

TIME	ACTIVITY	
11.30 – 12.00PM	OPENING CEREMONY Kikambala Conference Room Opening Remarks by Convenor –Prof. W. O. Oyawa Remarks by Sponosr(JSPS) – Dr. Maesawa Speech and Opening by Chief Guest – Prof. Mabel Imbuga (Vice Chancellor-JKUAT)	
	PAPERS Chairs-Prof. W.O. Oyawa and Dr. Hazama Kikambala Conference Room	
12.00–1.00PM	1. Career-long Learning and Re-training in Engineering R.N. Mutuku (Kenya) 2. Prof. Itoh of Nagoya University, Japan (<i>Title to be given soon</i>) 3. The Application Of E-Leaning In Civil Engineering Jerome Apkoge Egwurube (Botswana)	
1.00 – 2.00PM	LUNCH	
	PAPERS Chairs-Prof. J.J. Msambichaka and Prof. S. Riley Kikambala Conference Room	
2.00 – 3.00	4. The Way Forward in The Training of Civil Engineers Sixtus K. Mwea (Kenya) 5. Outcome Based Education -An Accreditational Condition For Quality Education In Civil Engineering Abdul Mannan (Malaysia) 6. Emerging realms and frontiers in civil engineering education and training W. O. Oyawa and J. Kiibiy (Kenya)	
3.00-3.30	TEA BREAK	
3.30 – 4.30	7. Paradigm Shift, Response and Challenges: A Case of Project Management Education and Training in Botswana Joseph K. Ssegawa and Dean Kashiwagi (Botswana) 8. Current Drivers for Change in the Built Environment and Their Implications in Construction Management Curricula at African Universities S. M. Masu and Prof. R. N. Mutuku (Kenya) 9. Experience of Technical Education and Training at Mbeya Institute of Science and Technology Evarist R. Mahallah and Allen Bonomali (Tanzania)	

Post-Conference Symposium

Day 4: Friday, 26th September, 2008 9.00am – 3.30pm

TIME	ACTIVITY	
	PAPERS Chairs-Prof. R.N. Mutuku and Dr. Maesawa Kikambala Conference Room	
9.00-10.00	10. Knowledge Management and Capacity Building in IWRM in Kenya Simeon Otieno Dulo (Kenya) 11. Integrating Social Issues In Design And Management of Civil Engineering Projects Michael Kyakula (Uganda) 12. Civil Engineering Education Indubhushan Patnaikuni & Tom Molyneaux (Australia)	
10.00-10.30	TEA BREAK	
10.30-11.30	13. Experience Of Early Specialisation In Civil Engineering Training In Tanzania Joseph J. Msambichaka (<i>Tanzania</i>) 14. Enjoining the academia and the industry; case of civil engineering practice W. O. Oyawa, W. Ndirangu and J. Kiibiy (Kenya) 15. Civil engineering education and training Prof. S. Riley (Australia)	
11.30-12.00	CLOSING	
12.00 - 2.00	LUNCH	

Sun n' Sand Beach Resort Site Plan

For Interactive Virtual Tour Map browse at http://www.sunnsand.info/location_map.html



BEACH AREA/INDIAN OCEAN

- 1) Main Gate
- 2) Baraza Conference room
- 3) Afya Sports Complex
- 4) Flood-lit tennis court
- 5) Football pitch (7 aside)
- 6) Senior staff apartments
- 7) House keeping and laundry
- 8) Community project area
- 9) Car Park Area
- 10) Open air amphitheatre & main Arena
- 11) Reception, Secretariat, Lobby

- 12) Kikambala conference hall
- 13) South wing - standard rooms
- 14) Deluxe rooms
- 15) Water sports center
- 16) Safari ranch restaurant
- 17) Fahari restaurant
- 18) Lamu Deck bar
- 19) Safina snack restaurant
- 20) Safina grill
- 21) Salt water pool
- 22) Slide pool (bottom end point)

- 23) Bahari bar
- 24) Slide pool (top start point)
- 25) Main Wing - standard rooms
- 26) Executive suites
- 27) North Wing - standard rooms
- 28) Maridadi hairdressing and massage salon
- 29) Jambo Meeting room
- 30) Elevators
- 31) Jambo Business Centre
- 32) Bahari conference rooms
- 33) RS Royal Suite

PROFILES OF CE-2008 KEYNOTE SPEAKERS

Professor Steven Riley (PhD, MEngSci, CPEng, FRGS, FIEAust, MASCE) University of Western Sydney, Australia

Keynote paper:
Climate change – an opportunity?

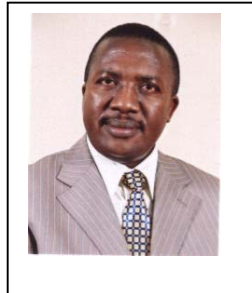
Professor Steven Riley is a research professor in the School of Engineering at the University of Western Sydney, Australia, and works in the area of the Sustainable Engineering and Technology. He is a certified engineer with specialty in Environmental Engineering. He has published over 100 papers in journals and refereed conferences in a wide range of areas, including computer modeling, natural hazards, urban hydrology, agriculture, water management, forestry, and engineering education. He has several decades of experience in hydrologic and erosion monitoring and modelling. Professor was formerly head of engineering at the University of Western Sydney and has held positions in the Commonwealth Government and several universities in Australia. He is a visiting professor at Uganda Christian University and a member of the board of the Technology Development Centre, based in Hyderabad, India. Professor Riley has won a number of awards, including Department of Land and water Conservation Rivercare Gold Award and also the Tertiary Education Award of Excellence, Royal Society of London Travel Award, Ollie Prize for the best paper in the Journal and Proceedings of the Royal Society of NSW, and most recently an award at the 9th International Conference on Engineering and Product Design Education for "Outstanding contribution to Engineering and Design Education".



Dr. (Eng.) F. Nyangaga (PhD, R. Eng.) Executive Director, Kenya Roads Board, Kenya

Keynote paper:
Road sector reforms in sub-Saharan Africa

Dr. F. Nyangaga is the Executive Director of Kenya Roads Board. He is a Registered Civil Engineer whose area of specialization is Highway Engineering and Management. He has over 27 years of experience in a broad range of activities within the road sub-sector with practical experience in all aspects of road design, construction, project preparations and resource development. On graduating from the University of Nairobi in 1980, Dr. Nyangaga worked for the Ministry of Roads and Public Works, Kenya till 2000. He obtained his Masters and Doctorate from Texas A&M University, USA, in 1996. After receiving his Doctorate, Dr. Nyangaga came back to the Ministry of Roads and Public Works where he became involved in the roads sub-sector reforms which had started in 1992. He took up the position of General Manager, Planning and Programming in Kenya Roads Board in November 2001. Dr. Nyangaga has been involved in the World Bank Sub-Sahara Africa Transport Programme (in particular the Road Management Initiative-RMI) and has contributed greatly to the road sub-sector reform programme in Kenya, and was instrumental in the formation of Kenya Roads Board (KRB). Dr. Nyangaga has written many papers which he has presented in many road sub-sector fora, especially in the areas of road sub-sector reforms in Sub-Sahara Africa. Dr. Nyangaga became the Chief Executive Officer of Kenya Roads Board in 2005, a position he is currently holding.



Eng. M.S.M Kamau, HSC (R.Cons. Eng., FIEK, MEng.) Permanent Secretary, Ministry of Roads, Kenya

Keynote paper:
Incorporating labour based techniques in roads development; "a Kenyan experience"

Eng. Michael S. M. Kamau HSC, Permanent Secretary in the Ministry of Roads holds a Bachelor of Science degree in Civil Engineering from the University of Nairobi and a Master of Science degree in Engineering from University of New Castle Upon Tyne (UK). Eng. Kamau is a Registered Consulting Engineer with the Engineers Registration Board, Fellow of Institution of Engineers of Kenya (IEK), Associate Member of the Chartered Institute of Arbitrators of UK, Council Member of the Kenya Institute of Management (KIM) and a Council Member of IEK. He also served as the Treasurer of the Institution of Engineers of Kenya for four years. Owing to his significant contribution to the engineering field, Eng. Kamau has been conferred with several awards that include the Head of State commendation (HSC) by the President of Kenya. He was appointed Chief Engineer (Roads) in April 2006 where he was instrumental in the reforms in the Roads Sub-Sector. He was promoted to be the first Roads Secretary on 1st August, 2007 and subsequently appointed to act as Permanent Secretary effectively from 15th October 2007, finally culminating in his current appointment as the Permanent Secretary, Ministry of Roads.



Professor E. Watanabe (PhD, Dr.Eng, MJSCE) Emeritus Professor of Kyoto University and former Chairman of Civil Engineering Department, Kyoto University, Japan

Keynote paper:
History and development of floating structures

Prof. Eiichi Watanabe is a Professor Emeritus of Kyoto University and a world renowned Professor of Structural Engineering. He is currently the Chairperson of Board of Directors of Regional Planning Institute in Osaka. He graduated from Kyoto University in 1964, received his 1st M. Sc. in 1966, from Kyoto University, 2nd M. Sc. in 1968 and Ph. D in 1969 from Iowa State University as a Fulbright grantee and Dr. Eng. from Kyoto University, thus according him a rare status of having two MSc degrees as well as two PhDs. Professor Watanabe has served as a vice President of JSCE from 2004 to 2005 and is serving as a Vice President of IABMAS, member of board of directors of JSSC and Chairman of Bridge Asset Management for Aomori Prefecture and City of Osaka and a member of European Academy of Sciences. He is also a former Chair of the Department of Civil Engineering at Kyoto University, and former Chair of Structural Engineering laboratory at the same university. Prof. Watanabe has written over 450 scientific publications besides with about 30 books including Structural Mechanics I and II, Maruzen, 1999 and 2000, respectively (in Japanese), Encyclopedia of Bridges, Blue Backs, Kohdansha, 1991 (in Japanese), co-editor of Theoretical and Applied Mechanics 1996, Northholland, 1997, Theoretical and Applied Mechanics, Vol. 50, Science Council of Japan, 2001 and Very Large Floating Structures Taylor and Francis, 2007. Professor Watanabe has received numerous awards in recognition of his great contribution in the Civil Engineering field.



Prof. S. K. Makhanu (PhD, R.Eng., MIEK)
Deputy Vice-Chancellor (Administration & Finance)
Masinde Muliro University of Science & Technology (MMUST), Kenya

Keynote paper:

Challenges of Engineering Education in e-Learning on the Far Side of the Digital Divide

Prof.(Eng.) S.K. Makhanu is the Deputy Vice Chancellor (Administration and Finance) at Masinde Muliro University of Science and Technology (MMUST) since 2007. Prof. (Eng.) Sibiliki K. Makhanu took his undergraduate studies in Civil Engineering at the University of Nairobi where he graduated with a First Class Honours in 1985. He subsequently enrolled at the same University for a Masters in Civil Engineering where he qualified for the award in 1990. Prof. Makhanu worked with Howard Humphreys Consulting Engineers from 1985-1988 before joining the academic career from 1988. He obtained his Ph.D in Civil Engineering from Kyoto University (Japan) in 1996. Prof. Makhanu has worked at Jomo Kenyatta University of Agriculture and Technology (JKUAT) where he rose to become the Chairman of the Department of Civil Engineering, after which he moved to MMUST to start up a centre for Disaster Management. Prof. Makhanu has undergone training by the US Central Command in Disaster Preparedness. Prof. Makhanu's area of research specialization is the modelling of transient system. He has coordinated research in hydropower for the Nile Basin Capacity Building Network (NBCBN) and has consulted widely for the United Nations office for Project Services (UNOPS) among others. He has published extensively on engineering matters.



Prof. Abdul MANNAN (Associate Professor, PhD)
Civil Engineering Program, School of Engineering and Information Technology, SKTM, Universiti Malaysia Sabah, Malaysia

Keynote paper:

Light-Weight building floors using precast reinforced Concrete Panels

Prof. Mannan graduated in Civil Engineering in 1986 from Rajshahi University, Bangladesh, MSc in Civil Engineering in 1994 from Universiti Kebangsaan Malaysia (UKM) and PhD in Civil Engineering in 2001 from Universiti Malaysia Sabah (UMS), Malaysia. Since joining as an academic staff at UMS, Prof. Mannan is involved in research using agricultural and industrial solid wastes and by-products, available in Malaysia, as construction materials for low-cost housing and has gained international reputation through his publications in referred international journals under Elsevier, Pergamon Press and elsewhere. Prof. Mannan has obtained several awards from international, national and UMS as an achievement in research and teaching. He has obtained one Gold medal in 2004 at Geneva, Switzerland exhibition as a remark of first gold medal for UMS after 10 years of existence in research. Again, he and his student have also obtained one Bronze medal in 2005 at Geneva exhibition, and also obtained one Silver medal at ITEX-07 (18th International Invention, Innovation & Technology Exhibition 2007, Malaysia). Prof. Mannan has also obtained Excellent Scientist award twice in 2005 and 2004 at Higher Education Ministry, Malaysia.



Prof. T. Yoda (PhD, MJSCE, MIABSE)
Department of Civil Eng., Waseda University, Japan

Keynote paper:

Sustainable Technology of the Japanese Historical Timber Bridge

Prof. T. Yoda Graduated from the Department of Civil Engineering, Waseda University, Tokyo in 1970 and undertook his Master course in the same university from 1970 to 1972. Between 1972-1977 he undertook his Doctor course in the Department of Civil Engineering, Waseda University, Tokyo, and subsequently progressed through the ranks of academia to become a Professor in 1987, and Chairman of Department of Civil Engineering, Waseda University, in 2000.

Prof. Yoda has published widely in reputable journals, attended many conferences and won several prizes in recognition of his contribution to civil engineering. In 2005 he won the prestigious Tanaka award for the most outstanding paper of the Japan Society of Civil Engineers, and 2006 he won the "Outstanding Design Award" presented by Japan Industrial Design Promotion Organization.



Dr. Indubhushan Patnaikuni (PhD., FIEAust)
School of Civil, Environmental & Chemical Engineering, Australia
President of IDEAS

Keynote paper:

Environmentally Friendly Sustainable Housing Construction

Dr. Indubhushan Patnaikuni is an academic staff member of the School of Civil, Environmental and Chemical Engineering at RMIT University (officially The Royal Melbourne Institute of Technology), He is a Fellow of Engineers Australia. He has published 91 high quality papers in various journals and international conferences including two papers which received best paper awards. He chaired several technical sessions of international conferences and delivered 12 keynote addresses in international conferences. He is the team leader and co-inventor of a 'Concrete Testing System' for testing high-strength concrete. He received two prestigious ARC research grants. Dr. Patnaikuni has received prestigious awards such as Vishal Bharati Gaurav Satkar (2006), Samaikya Bharat Gaurav Satkar (2005), Rashtriya Vikas Shiromani (2003), Eminent Engineer (1997), two Best Paper Awards and Sir Arthur Cotton Memorial Gold Medal (1975-76). He is one of the Editors of Asian Concrete Model Code, a Co-editor of three publications and a member of the International Committee on Concrete Model Code (ICCMC) and. He was appointed as a member of the International Advisory Committee to advise the National Working Group of India on University Industry Science Partnership (within the framework of UNESCO-UNISPAR Program). He is an Executive Committee Member of International Structural Engineering and Construction Conferences. He is a Foundation Executive Committee Member and currently the President of IDEAS. He was Vice-President of The Association for Advancement of Sustainable Materials in construction. During 1999 Dr. Patnaikuni was judged as the best research supervisor for the entire RMIT University.



ABOUT MOMBASA

Mombasa is the second largest city in Kenya, lying on the Indian Ocean and is the centre of the coastal tourism industry. It has a major port and an international [airport](#) called [Moi International Airport](#), also known as **Mombasa Airport**, which is the second most important airport in Kenya after [Jomo Kenyatta International Airport \(JKIA\)](#) in [Nairobi](#). Moi International Airport in Mombasa offers flights to many cities around the world.

The original Arabic name of Mombasa is **Manbasa**; in [Kiswahili](#) it is called *Kisiwa Cha Mvita* (or Mvita for short), which means "Island of War", due to the many changes in its ownership. There are several places to visit in Mombasa, including [Fort Jesus](#), built by the Portuguese, and the Old Town, which shows plenty of examples of the old [Islamic architecture](#). Biashara Street in Mombasa which in Swahili means "Trade Street" is also an old part of the city where the Indian and Arab merchants set up shop and one can now find kangas and kikoys (pl. vikoi) being sold in these small authentic shops. The famous "Light House" is a must to enjoy the native cassava crisps and coconut water during sunset.

Mombasa has a warm, [tropical](#) climate. The rainiest months are April and May, while in January to February the rainfall is minimal. In the month of september, temperatures are expected to be ranging from 20.8 °C minimum and 28.8 °C maximum.



Common Swahili words

Jambo - how are you Karibu - welcome Asante sana - Thank you very much Habari - how are you
Hakuna matata - there is no problem Kwaheri - Goodbye



ABOUT THE HOST DEPARTMENT



Jomo Kenyatta University of
Agriculture and Technology

DEPARTMENT OF CIVIL, CONSTRUCTION & ENVIRONMENTAL ENGINEERING (CCEE)



Road construction in JKUAT



Full-scale truss testing in Structures lab.

Some of the activities of the Department

Preview

The Department of Civil, Construction & Environmental Engineering constitutes one of the five departments of the Faculty of Engineering. The department offers postgraduate and undergraduate degrees. Currently, the department offers a Bachelor of Science degree in Civil Engineering at undergraduate level. The Bachelors degree course aims to prepare adequately trained engineers to take on the respective roles in Civil Engineering fields of Water and Wastewater Engineering, Transportation and Highways Engineering, Geotechnical Engineering, Structural and Construction Engineering, Harbour and Coastal Engineering, among others. JKUAT Civil Engineering graduates are highly sought after by Government ministries (e.g. Roads and Public Works, Water Development, Local Government), industry (e.g. Cement companies, consulting and construction firms), and Parastatals (e.g. NEMA, Roads Board), amongst others.

Graduates are encouraged to proceed to post-graduate level to acquire cutting edge technology. At post-graduate level, the Department offers Master of Science programmes that are aimed at producing specialized manpower of high caliber capable of conducting research and innovations in the fields of Environmental Pollution Control, Arid and Semi-arid Lands (ASAL), Water Engineering, Transportation Engineering and Structural Engineering. The doctorate degree programme is also offered.

Vision

In line with JKUAT vision, the vision of the Department is to be a world-class fully fledged School of Civil, Construction and Environmental Engineering, playing a pivotal role in human resource and infrastructure development.

Mission

In line with JKUAT mission, our mission is to train highly specialized manpower in Civil, Environmental and Construction Engineering through teaching, research, innovations, consultancy and partnerships.

Research, Training, Innovation and Consultancy

Department of Civil, Construction & Environmental Engineering has taken upon itself to be at the core of national development and global sustainable development agenda. As such, the Department excels in teaching, research, seminars and publications as well as in organizing short-term courses and workshops of international standards. From 1997, the department had been privileged by the Japan International Co-operation Agency (JICA), to run a Regional Training course in "Water Pollution and its Analysis" for (5) five years. In 2002, the Department took part in the organization of the first training course on "Irrigation and Water Resources Management" under AICAD/JICA. In August 2003, the Department hosted a very successful International Civil Engineering Conference on Sustainable Development.

The Department has a memorandum of understanding with Kyoto University in Japan, University of Western Sydney in Australia, International Labour Organization (ILO) and Athi River Mining Cement Company, where both staff and students have benefited in exchange programs as well as joint research activities.

Most recently, the University Senate approved the establishment of a multi-disciplinary centre in the Department, named SMARTEC (Sustainable Materials Research and Technology Centre). SMARTEC is the Research, Training, Innovation and Consultancy wing of the Department. The aim of the Centre is to compliment government efforts in the provision of housing and infrastructure in all the civil engineering fields, including material testing in the Structural Engineering laboratory and NEMA accredited Environmental Engineering laboratory.

FOR FURTHER DETAILS CONTACT

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Projects & Innovations



Road construction



Classroom construction



Housing construction



Water quality analysis



Household water filter