



# THE TECHNICAL UNIVERSITY OF KENYA

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NAME: PROF LUKE OMONDI OLANG

|                      |   |
|----------------------|---|
| Faculty:             | ENGINEERING AND THE BUILT ENVIRONMENT   |
| School:              | CHEMICAL AND BIOLOGICAL SYSTEMS ENGINEERING                                       |
| Department:          | BIOSYSTEMS AND ENVIRONMENTAL ENGINEERING  |
| Current Designation: | Associate Professor, SCHOOL OF CHEMICAL AND BIOLOGICAL SYSTEMS ENGINEERING (SCBE) |
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## EDUCATION

| LEVEL                      | QUALIFICATION NAME                 | INSTITUTION  | YEAR |
|----------------------------|------------------------------------|--|------|
| Doctor of Philosophy (PhD) | Hydrology & Water Resources        | University of Natural Resources and Life Sciences, Vienna(Austria) | 2009 |
| Masters of Science (M.Sc.) | Water & Environmental Engineering  | Egerton University(Kenya)  | 2004 |
| Postgraduate Diploma       | Groundwater Resources & Management | The Hebrew University of Jerusalem (Israel)                        | 2003 |
| Bachelor of Science (BSc)  | Agricultural Engineering           | Egerton University(Kenya)  | 2001 |

## WORK EXPERIENCE

| PERIOD         | INSTITUTION                   | POSITION                             |
|----------------|-------------------------------|--------------------------------------|
| 2021 - To date | Technical University of Kenya | Associate Professor                  |
| 2015 - 2021    | Technical University of Kenya | Senior Lecturer and Researcher       |
| 2010 - 2015    | Kenyatta University           | Lecturer and Researcher              |
| 2009 - 2015    | IGAD-ICPAC                    | Associate Research Scientist         |
| 2005 - 2010    | Egerton University            | Assistant Lecturer                   |
| 2004 - 2005    | Amiran Kenya Limited          | Associate Irrigation Design Engineer |

## SELECTED PUBLICATIONS

| TITLE   | LINK TO PULICATION  |
|---|---|
| Luke Omondi Olang, Peter Kundu, Thomas Bauer, Josef Fürst (2011). Analysis of spatio-temporal land cover changes for hydrological impact assessment within the Nyando River Basin of Kenya. Journal of Environmental Monitoring and Assessment (Springerlink), 179 (1-4): 389 - 401.  | <a href="https://link.springer.com/article/10.1007/s10661-010-1743-6">https://link.springer.com/article/10.1007/s10661-010-1743-6</a>                       |
| Oloo F. O., Olang L., and Strobl J. (2015). Spatial modelling of solar energy potential in Kenya. International Journal of Sustainable Energy Planning, 06: 17-30. <a href="http://dx.doi.org/10.5278/ijsepm.2015.6.3">http://dx.doi.org/10.5278/ijsepm.2015.6.3</a>  | <a href="https://journals.aau.dk/index.php/sepm/article/view/1042">https://journals.aau.dk/index.php/sepm/article/view/1042</a>                             |
| Justin Sheffield, Eric F. Wood, Nathaniel Chaney, Kaiyu Guan, Sara Sadri, Xing Yuan, Luke Olang, Abou Amani, Abdou Ali, and Siegfried Demuth (2014). A Drought Monitoring and Forecasting System for Sub-Sahara African Water Resources and Food Security. Bulletin of the American Meteorological Society. 95 (6), 862-882.  | <a href="http://dx.doi.org/10.1175/BAMS-D-12-00124.1">http://dx.doi.org/10.1175/BAMS-D-12-00124.1</a>   |
| Muriithi Z., Ako E., Kiplagat J., Olang L. (2014). Assessment of land cover changes in Lake Olbolosat region of the central Kenyan highlands using Landsat satellite imagery aided by indigenous knowledge. Journal of Biodiversity Management and Forestry, 2:2.   | <a href="http://dx.doi.org/10.4172/2327-4417.1000107">http://dx.doi.org/10.4172/2327-4417.1000107</a>   |
| L. O. Olang, P. M. Kundu, G. Ouma, J. Fürst (2014). Impacts of Land Cover Change Scenarios on Storm Runoff Generation: A Basis for Management of the Nyando Basin, Kenya. Land Degradation and Development, 25(3), 267-277.   | <a href="http://10.1002/ldr.20">http://10.1002/ldr.20</a>   |
| Luke Omondi Olang, Peter Kundu, Thomas Bauer, Josef Fürst (2011). Analysis of spatio-temporal land cover changes for hydrological impact assessment within the Nyando River Basin of Kenya. Journal of Environmental Monitoring and Assessment (Springerlink), 179 (1-4): 389 - 401.  | <a href="http://10.1007/s10661-010-1743-6">http://10.1007/s10661-010-1743-6</a>   |
| L. O. Olang and J. Fürst. (2011). Effects of land cover change on runoff peak discharges and volumes - model estimates for the Nyando basin, Kenya. Hydrological Processes, 25: 80-89.  | <a href="http://10.1002/hyp.7821">http://10.1002/hyp.7821</a>   |
| Luke Omondi Olang and Peter Musula Kundu (2011). Deforestation and land degradation of the Mau Forest Complex in Eastern Africa: a review for conservation and restoration purposes. Environmental Monitoring (pp 245 - 262). Edited by Ema O. Ekundayo. ISBN 978-953-307-724-6 . InTech Publishers, Croatia.   | <a href="http://10.5772/28532">http://10.5772/28532</a>   |
| Luke O. Olang, Peter Kundu, Thomas Bauer, Josef Fürst (2010). "Assessing Spatio-temporal Land Cover Changes within the Nyando River Basin of Kenya using Landsat Satellite Data Aided by Community Based Mapping: A case Study". Proceeding of the Geoinformatics Forum Salzburg (6th - 9th July, 2010, Salzburg Austria). In: Geospatial Crossroads: GI_Forum '10. Eds Car A., Griesebner G. and Strobl J.   | <a href="http://www.agit.at/php_files/myagit/papers/2010/8155.pdf">http://www.agit.at/php_files/myagit/papers/2010/8155.pdf</a>                             |
| Olang, Luke Omondi; Kundu, Peter; Bauer, Thomas; Fürst, Josef (2009). Impact of Land cover change on flood runoff characteristics of the headwater sub catchments of the Nyando River basin, Kenya. Proceedings of the 12th Biennial Conference of Euro-Mediterranean Network of Experimental and Representative Basins (ERB). In: Hydrological extremes in small basins - International Hydrological Programme (IHP) of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Eds: Chelmicki W. and Sixel J. No 84: pp 165-170. | <a href="http://www.geo.uj.edu.pl/konferencja/erb2008/img/Book_of_abstracts.pdf">http://www.geo.uj.edu.pl/konferencja/erb2008/img/Book_of_abstracts.pdf</a> |
| Benard Juma, Luke O. Olang, Mohammed Hassan, Stanley Chasia, Vera Bukachi, Paul Shiundu, Joe Mulligan (2020). Analysis of rainfall extremes in the Ngong River Basin of Kenya: Towards integrated urban flood risk management. Physics and Chemistry of the Earth. Doi: <a href="https://doi.org/10.1016/j.pce.2020.102929">https://doi.org/10.1016/j.pce.2020.102929</a>   | <a href="https://www.sciencedirect.com/science/article/pii/S1474706520303752">https://www.sciencedirect.com/science/article/pii/S1474706520303752</a>       |
| Omonge, Paul & Herrnegger, Mathew & Gathuru, Gladys & Fürst, Josef & Olang, Luke. (2020). Impact of development and management options on water resources of the upper Mara River Basin of Kenya. Water and Environment Journal. Doi: 10.1111/wej.12554.  | <a href="https://onlinelibrary.wiley.com/doi/full/10.1111/wej.12554">https://onlinelibrary.wiley.com/doi/full/10.1111/wej.12554</a>                         |
| Wekesa, Sospeter & Stigter, Tibor & Olang, Luke & Oloo, Francis & Fouchy, Kelly & McClain, Michael. (2020). Water Flow Behavior and Storage Potential of the Semi-Arid Ephemeral River System in the Mara Basin of Kenya. Frontiers in Environmental Science. 8. 95. <a href="https://doi.org/10.3389/fenvs.2020.00095">https://doi.org/10.3389/fenvs.2020.00095</a> .  | <a href="https://www.frontiersin.org/articles/10.3389/fenvs.2020.00095/full">https://www.frontiersin.org/articles/10.3389/fenvs.2020.00095/full</a>         |
| Joe Mulligan, Vera Bukachi, Rodoula Gregoriou, Nilani Venn, Duncan Ker-Reid, Alan Travers, Bernard Juma, Luke O. Olang (2019). Participatory Flood Modelling for Negotiation and Planning in Urban Informal Settlements. Proceedings of the Institution of Civil Engineers - Engineering Sustainability. Doi:10.1680/jensu.17.00020   | <a href="https://www.icevirtuallibrary.com/doi/full/10.1680/jensu.17.00020">https://www.icevirtuallibrary.com/doi/full/10.1680/jensu.17.00020</a>           |
| Jully O. Ouma, Luke O. Olang, Gilbert O. Ouma, Christopher Oludhe, Laban Ogallo, Guleid Artan (2018). Magnitudes of Climate Variability and Changes over the Arid and Semi-Arid Lands of Kenya between 1961 and 2013 Period. American Journal of Climate Change, 7, 27-39. <a href="https://doi.org/10.4236/ajcc.2018.71004">https://doi.org/10.4236/ajcc.2018.71004</a>  | <a href="https://www.scirp.org/journal/paperinformation.aspx?paperid=82547">https://www.scirp.org/journal/paperinformation.aspx?paperid=82547</a>           |
| Gilbert O. Ouma, Amadou M. Dieye, Laban O. Ogallo & Luke O. Olang (2017). Institutional challenges in scaling-up climate change adaptation actions: experiences from rural communities in Senegal and Kenya. Climate and Development, 1-10. <a href="https://doi.org/10.1080/17565529.2017.1372261">https://doi.org/10.1080/17565529.2017.1372261</a>   | <a href="https://www.tandfonline.com/doi/full/10.1080/17565529.2017.1372261">https://www.tandfonline.com/doi/full/10.1080/17565529.2017.1372261</a>         |
| Luke O Olang, Mathew Herrnegger, Doris Wimmer, Josef Fürst (2017). A Spatial Database of Hydrological and Water Resources Information for the Nyangores Watershed of Kenya. In: Hydrology and Best Practices for Managing Water Resources in Arid and Semi-Arid Lands. IGI Global, USA  | <a href="https://www.igi-global.com/viewtitle.aspx?TitleId=186055">https://www.igi-global.com/viewtitle.aspx?TitleId=186055</a>                             |

## PROFESSIONAL AFFILIATIONS AND SOCIETIES

### TITLE INSTITUTION

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