

R E S U M E

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BASIC INFORMATION

Year of Birth: 1984
Nationality: Kenyan
Gender: Male
Languages: English, Swahili and Chinese

EDUCATION BACKGROUND

TERTIARY EDUCATION;

1. PhD. Renewable Energy – KENYATTA UNIVERSITY (**September, 2014 to Date**)
2. Masters in Power Engineering and Engineering Thermal Physics - SHANGHAI JIAO TONG UNIVERSITY (**2011-2014**).
3. Diploma in Chinese Language and Culture - BEIJING LANGUAGE AND CULTURE UNIVERSITY (**2010-2011**).
4. Bachelor in Energy Engineering - KENYATTA UNIVERSITY (**2004-2009**).

SECONDARY EDUCATION;

Kenya Certificate of Secondary Education (KCSE) - Eshikulu Secondary School (**1999-2002**)

PRIMARY EDUCATION;

Kenya Certificate of Primary Education (KCPE) - Ndabarnach Primary School (**1990-1998**).

PROFESSIONAL COURSES

1. Interdisciplinary PhD Training Week, held at TEC Kurasini Training and Conference Centre, Dar es Salaam - TANZANIA, (**March, 2015**).
2. Shiota Method Solar Photovoltaic Training Course for Trainers – JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (**August, 2014**)
3. Solar Photovoltaic Workshop for Educators – STRATHMORE UNIVERSITY, ENERGY RESEARCH CENTRE (**July, 2014**)
4. Achieving Excellence in Research Papers, Proposals and Dissertation - SHANGHAI JIAO TONG UNIVERSITY, SCHOOL OF MECHANICAL ENGINEERING (**2012**)
5. Introduction to Computing - TECHLAB COMPUTER AND ELECTRONIC COLLEGE (**2007**)
6. User Support Professional (A+) - TECHLAB COMPUTER AND ELECTRONIC COLLEGE (**2007**)

CONTESTS

1. **2011- 2013:**
Solar Decathlon-China
Project name: *River Sunvelop*
University: Shanghai Jiao Tong University

Organizers: SD China will be hosted by National Energy Administration of China (NEA) and U.S. Department of Energy (DOE), co-hosted by the Ministry of Finance (MOF) and Ministry of Housing and Urban-Rural Development (MOHURD), supported by All-China Students Federation Secretariat (ACSF), organized by Peking University (PKU).

Contest place: Datong City-China

2. **2012:**

“Triumph Kaineng” 5th National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction.

Project name: *A Survey on Renewable Energy Cooperation between China and Africa*

Project type: Social Practice

University: Shanghai Jiao Tong University

Organizers: Committee of Energy and Power Teaching in Universities-Xi'an Jiao Tong University

Contest place: Xi'an Jiao Tong University- China

WORK EXPERIENCE

1. Tutorial Fellow - Energy Engineering Department - KENYATTA UNIVERSITY (**April 2014 to Date**).
2. Technical Consultant-Biogas Energy - UMANDE TRUST (**2010**).
3. Technical and Sales Manager - SOLARMART EAST AFRICA (**2009-2010**).
4. Assistant Project Manager: Community Based Alternative Energy Project WITH TERRA NUOVA EAST AFRICA (IN COLLABORATION WITH AMREF AND EUROPEAN UNION) (**2008**)
5. Student Trainee/Intern - Community Based Alternative Energy Project WITH TERRA NUOVA EAST AFRICA (IN COLLABORATION WITH AMREF AND EUROPEAN UNION) (**2007**)
6. Mathematics/Physics teacher - ST. BASILS ACADEMY (**2003-2005**)
7. Industrial attachment - VOLVO CONSTRUCTION EQUIPMENT (**2008**)
8. Industrial attachment - KENYATTA UNIVERSITY (**2007**)
9. Industrial attachment - KENYA PORTS AUTHORITY-MOMBASA (**2006**)

AWARDS

1. Certificate of Participation in an Interdisciplinary PhD Training Week, held at TEC Kurasini Training and Conference Centre, Dar es Salaam - TANZANIA, (March, 2015).
2. Certificate of Participation through the Bright Project on Shiota Method Solar Photovoltaic Training Course for Trainers – Jomo Kenyatta University of Agriculture and Technology (**August, 2014**)
3. Certificate of Completion through the Vocational Training and Education for Clean Energy on Solar Photovoltaic Workshop for Educators –Strathmore University, Energy Research Centre (**July, 2014**)
4. Certificate of Appreciation by School of International Students-Shanghai Jiao Tong University as the first president of the Africans students Association. (**2013**)
5. Achieving Excellence in Research Papers, Proposals and Dissertation - Shanghai Jiao Tong University, School of Mechanical Engineering (**2012**)
6. Second most outstanding student “*A Survey on Renewable Energy Cooperation between China and Africa,*” The 5th National University Student Social Practice and Science Contest on Energy Saving & Emission Reduction. (**2012**)
7. Chinese Government Scholarship to pursue post graduate studies (**2010-2014**)
8. Certificate of participation by Young Christians Association (YCS) for a charity work in Machakos. (**2009**)

9. Certificate of service as a Secretary General in Engineering Students association Kenyatta University “ESA-KU.” (2009)
10. Certificate of appreciation as the “Most Outstanding Design Student” by the Community Based Alternative Energy Project with Terra Nuova East Africa (In Collaboration with AMREF and European Union) (2007)
11. Certificate of appreciation as an Organizing Secretary Wareng University Students Association (WUSA) in the year 2006 to 2007. (2007)
12. Certificate of participation in a voluntary clean up activity initiated by Young Christian Students at Gatundu District Hospital and Gatundu Children Home. (2007)
13. Certificate of participation in the Young Christian Students charity work clean up at Kenyatta National Hospital. (2006)
14. Certificate of participation by Kenyatta University AIDS Control Unit in a one day workshop on 1st December, 2005 to mark the world AIDS Day. (2006)

RESEARCH PUBLICATIONS

REFEREED SCIENTIFIC JOURNAL PAPERS;

1. **T.F. Ishugah**, R.Z. Wang, L.W. Wang, Z.S. Lu, *Performance improvement of an adsorption chiller using composite adsorbent, silica gel impregnated with lithium chloride, paired with methanol as the adsorbate*. International Journal of Air Conditioning and Refrigeration **22**(2014)1-14.
2. **T.F. Ishugah**, Y. Li, R.Z. Wang, J.K. Kiplagat, *Advances in wind energy resource exploitation in urban environment: A review*. Renewable and Sustainable Energy Reviews, **37** (2014) 613–626.
3. Y.L. Yin, R.Z. Wang, X.Q. Zhai, **T.F. Ishugah**, *Experimental investigation on the heat transfer performance and water condensation phenomenon of radiant cooling panels*. Building and Environment, **71**(2014)15-23.
4. X. Zheng, L.W. Wang, R.Z. Wang, T.S. Ge, **T.F. Ishugah**, *Thermal conductivity, pore structure and adsorption performance of compact composite silica gel*. International Journal of Heat and Mass Transfer, **68**(2014)435-443.
5. N. Yu, R.Z. Wang, Z.S. Lu, L.W. Wang, **T.F. Ishugah**, *Evaluation of a three-phase sorption cycle for thermal energy storage*, Journal of Energy, **1**(2014)1-11.
6. T.X. Li, H. Li, T. Yan, R.Z. Wang, **T.F. Ishugah**, *Integrated energy storage and energy upgrade, combined cooling and heating supply, and recovering waste heat with thermochemical sorption heat transformer*, International Journal of Heat and Mass Transfer, **76**(2014)237-246.
7. T. Yan, R.Z. Wang, T.X. Li, L.W. Wang, and **T. F. Ishugah**, *A review of promising candidate reactions for chemical heat storage*, Renewable and Sustainable Energy Reviews, **43**(2015)13-31.
8. T.X. Li, R.Z. Wang, T. Yan, **T. F. Ishugah**, *Sorption thermal battery for low-grade waste heat recovery and combined cold and heat energy storage*, International Journal of Heat and Mass Transfer, (In press).

REFEREED CONFERENCE PROCEEDINGS;

1. **T.F. Ishugah**, R.Z. Wang, L.W. Wang, Z.S. Lu, *Performance improvement of an adsorption chiller using composite adsorbent, silica gel impregnated with lithium chloride, paired with methanol as the adsorbate*. The 5th International Conference of Cryogenics and Refrigeration 2013 (ICCR2013), held in Hangzhou – CHINA, on 6th - 9th April, 2013.
2. **T.F. Ishugah**, Y. Li, R.Z. Wang, J.K. Kiplagat, *Wind energy sources, technologies and applications in urban environment*, The 26th International Conference on Efficiency, Cost,

- Optimization, Simulation and Environmental impact of Energy Systems (ECOS 2013), held in Guilin – CHINA, on 15th- 19th July, 2013.
3. Y.L. Yin, R.Z. Wang, X.Q. Zhai, **T.F. Ishugah**, *Experimental investigation on the heat transfer performance and water condensation phenomenon of radiant cooling panels*. The 5th International Conference of Cryogenics and Refrigeration 2013 (ICCR2013), held in Hangzhou – CHINA, on 6th - 9th April, 2013.
 4. L. JIANG, P. GAO, L.W. WANG, R.Z.WANG, **T.F. Ishugah**, *Cascading cogeneration cycle with ORC and adsorption technology for electricity and refrigeration*, Chinese Society of Engineering Thermophysics: 2013 Annual Conference, held in Inner-Mongolia – CHINA, on 26th-29th September, 2013,. (Note: This article is written in Chinese language).
 5. **T.F. Ishugah**, R.Z. Wang, L.W. Wang, J.K. Kiplagat, *Experimental approach in performance optimization of a silica-gel/LiCl-water adsorption chiller using heat recovery mechanism*, The 6th International Conference on Appropriate Technology 2014 (ICAT2014), held at Kenyatta University, Nairobi – KENYA, on 25th -29th November, 2014.
 6. **T.F. Ishugah**, J.K. Kiplagat, I.K. Kiunga, *Issues and challenges facing sustainable energy future for developing nations*, The 6th International Conference on Appropriate Technology 2014 (ICAT2014), held at Kenyatta University, Nairobi – KENYA, on 25th -29th November, 2014.
 7. I.K. Kiunga, J.K. Kiplagat **T.F. Ishugah**, *The Progress of Energy Efficiency and Conservation in Kenya: A Review*, The 6th International Conference on Appropriate Technology 2014 (ICAT2014), held at Kenyatta University, Nairobi – Kenya, on 25th -29th November, 2014.
 8. H.H. Muigai, G. Kavulavu and **T. F Ishugah**, *Selective Absorber Surface Coatings for Solar Flat Plate Collectors*, The 6th International Conference on Appropriate Technology 2014 (ICAT2014), held at Kenyatta University, Nairobi - KENYA, on 25th -29th November, 2014.
 9. **T.F. Ishugah**, *The Study of Solar Powered Evaporative Cooling and its Impact on Pupils Performance in Hot and Dry Regions of Kenya*, PhD Training Week, held at TEC Kurasini Training and Conference Centre, Dar es Salaam - TANZANIA, on 9-14th March, 2015.

HOBBIES AND INTERESTS

1. Adventuring in technology.
2. Promoting of community oriented activities for human benefit.
3. Discovering new ideas and inventions.
4. Sharing skills, knowledge, experience, discoveries and inventions.