

**Name: Prof. Thomas F. N. Thoruwa, PhD (Mech Eng)**

**Address:**

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**Areas of specialization:**

Sustainable/renewable energy, mechanical engineering, appropriate technology, Product design and development, applied physics, food processing technology, farm structures/greenhouse farming, vocational technology, techno-entrepreneurship and rural development.

**a. Professional Preparation**

Institution	Major areas	Qualification
University of Strathclyde, Glasgow, (United Kingdom)	Mechanical Engineering	PhD (Mech Engng), 1997
Technical University of Nova Scotia, Halifax (Canada) now renamed University of Dalhousie (Canada)	Agricultural Engineering	Master of Applied Science (1989)
University of Nairobi (Kenya)	Physics, Maths, Education	B. Ed (Science), Hons. 1984
North Carolina State University at (NC Solar Centre & Mechanical Engineering Dept), USA	Solar Energy and Thermal-fluids	Visiting Fulbright Scholar 2001/2

**b) Scholarships/Fellowships/awards**

Year	Awards
2001-2002	Awarded a prestigious Fulbright Fellowship (USA) to conduct research in renewable energy with emphasis on solar concentrators for domestic and industrial applications
1993-1996	Awarded a prestigious scholarship by the British Council to pursue a PhD. programme in Mechanical Engineering, University of Strathclyde, Halifax, UK
1996	Awarded a prestigious Appropriate technology prize for 1995/96 by the Mechanical Engineering Dept, University of Strathclyde for being the most outstanding PhD research project in Mechanical Engineering & Applied Microbiology contributing positively towards promotion of Appropriate Technology in agriculture and air conditioning industry
1986-1989	Awarded a prestigious scholarship by the Canadian International Agency (CIDA-GTF) to pursue M. App. Sc. (Agricultural Engineering) in Technical University of Nova Scotia, Halifax, Canada
1980-1984	Government of Kenya Scholarship to undertake undergraduate training in the University of Nairobi

**c) Professional Affiliations:**

Member of Fulbright Association (Kenya Chapter) since 2003

Member of North Carolina Solar Energy Society (USA) since 2003

Member of the International Solar Energy Society (ISES) since 1993  
 Member of Kenya Agricultural Engineering Society (KSAE) since 1989  
 Member of Eastern Africa Environmental Network (AEN) since 1998.

#### d) Appointments

Dates	Position and Place
Jan. 2013 to Date	Associate Professor, School of Pure and Applied Sciences, Pwani University
Sep 2011 to Dec. 2012	Associate Professor, Department of Energy Engineering, Kenyatta Univ.
Jan. 2008 to Aug.2011	Senior lecturer, Department of Energy Engineering , Kenyatta University
Sept 2004 to Dec. 2008	Appointed Chairman, Department of Engineering and Technology, position: Senior lecturer (Kenyatta University)
July 2002 to Sept 2004	Appointed Chairman in the Department of Appropriate Technology, Position: Senior lecturer
Oct. 2001 to June 2002	Visiting Full-bright scholar and Assistant Professor, Department of Mechanical and Aerospace Engineering & North Carolina Solar Centre (US
1999-2001	Appointed Director, Appropriate Technology Centre, position Senior Lecturer, Kenyatta University (Kenya)
1991-1999	Lecturer, Appropriate Technology Centre, Kenyatta University (Kenya)
1989-1991	Tutorial Fellow, Appropriate Technology centre, Kenyatta University
1985-1989	Graduate Assistant, Appropriate Technology Centre, Kenyatta University
1984-1985	Graduate Teacher, Kapsoit Secondary School, Kericho, Kenya

#### Selected Publications

1. Nickson Langat, **Thomas Thoruwa**, John Wanyoko, Jeremiah Kiplagat, Brian Plourde and John Abraham. 2015. Models and experiments for energy consumption and quality of green tea drying, *Energy Science and Engineering*, Vol 3(1): 43–50;
2. Akoth, O. G., **Thoruwa, T.F.N.** Kinyua, R. Atuya, R.G., 2014. Assessment of existing improved cook stoves in Kenya. *International Journal of Current Trends in Research* Vol. 3 (2):59-69
3. *Wanderi, M. Mulati, D. M., i and Thoruwa, T.F.N.* 2014. Wireless Transmission of Metering Data from a Photovoltaic Solar Home System via Global Systems for Mobile Communication (GSM) Short Message Service (SMS), *Journal of Agriculture, Science and Technology*, Volume 16(1) 2014 (Accepted for publication and now in press).
4. John K. Mathanga, **Thomas F.N. Thoruwa** &Gerald K. Muthakia. 2013. Activation of Spent Bleaching Earth for Dehumidification Application. *International Journal of Chemistry*, Vol. 1:8:312-319
5. Ondiaka, M. N. Lwande, Wilber, Omulokoli, E., Ochola, J. B., Ndenga, E. A., Kilwake, M. L., Nyamamba, I. N., Watai, K. M., Salehe, J., Kimaru, E. and **Thoruwa, T. F. N.** 2011. Evaluation of Solar Energy for Processing *Aloe Secundiflora* Sap into Paste Using Parabolic Solar Concentrating Technology. *The Open Renewable Energy Journal*, 2011, 4, 93-103
6. Wagutu A. W., **Thoruwa T.F.N.**, Chhabra S. C., Thoruwa C. L. & Mahunnah R.A., (2010). Performance of wick stoves using fatty acid methyl esters derived from oil plants in Kenya *Biomass and Bioenergy*, 34: 1250-1256.
7. Wagutu A.W., Chhabra S. C., Thoruwa C. L., **Thoruwa, T.F.N.** & Mahunnah R.A. (2009). Indigenous oil crops as sources for production of biodiesel in Kenya.*Bulletin of the Chemical Society of Ethiopia*, 23(3): 359-370.

### Synergistic Activities /Professional Recognition

Date	Position
Dec. 2014 -present	Appointed to as a peer reviewer for Commission for University Education Education (CUE).
Jan. 2012-present	External Examiner, Institute of Energy and Environment, Jomo Kenyatta University of Agriculture and Technology
Jan 2012-present	Reviewer of International Renewable Energy Journal
2007-2008:	Member of editorial board for the East African Journal for Pure and Applied Science Journal, Kenyatta University
2001-2002	Fulbright visiting scholar, Solar Centre,NC State University
1999-2004	Member of editorial board for the East African Journal for Pure and Applied Science Journal, Kenyatta University

### e) Collaborators and Other Affiliations

Name	Institution
Prof. Sumesh Chabbra	Kenyatta University, Department of Chemistry (Kenya)
Prof. Rober Kinyua	Jomo Kenyatta University, Institute of Energy and Environment,
Prof. Richard R. Johnson	North Carolina State University, Mechanical and Aerospace Engineering, US
Dr. Jeremiah Kiplagat	Kenyatta Univesity, Department of Energy Engineering
Dr. Wilber Lwande	ICIPE, Senior Scientist and Programme Leader, Applied Bioprospecting Programme, E-mail: wlwande@icipe.org (Kenya)

### f) Graduate Supervision:

Successful Supervision: A total of 19 postgraduate students have graduated (4 PhDs and 15 MSc graduates)

### g) Research grants awards/research fundraising activities:

Won several local and internal grants from NACOSTI, Vicress\_SIDA, Rockfella foundation, Vice Chancellor grants (KU). Successfully fundraised for ten University postgraduate student's research projects viz. 7 MSc and 3 PhD (Renewable Energy)