



Dr. Zakariya K.M.

Permanent address

27 A, Mahalakshmi Nagar
Wireless Road, KK Nagar
Tiruchirappalli
Tamil Nadu, India

AGE: 49

MARRIED

Current Position:

Assistant Professor
Mechanical Engineering
King Saud University
Riyadh, KSA

Area: Thermo-fluids, Energy

Education

Ph.D. (Energy Engineering)

Thesis Title: Performance Comparison of Solar Air heaters for Drying Applications

Master Degree (Energy Engineering)

Thesis Title: Design and Development of Spouted Bed Combustion System

Bachelor Degree (Mechanical Engineering)

Experience

Teaching-23 years

Industrial-2year

Journal Publication in last 5 years	-6	Conference Publication in last 5 years	-5	Submitted Research Publication	-3
Completed Research Projects	-7	Completed Consultancy work	-12	Software Skill	ANSYS FLUENT, GAMBIT, MATLAB

DETAIL OF EDUCATION

<i>Degree</i>	<i>Name of the Institution/University</i>	<i>Year of Completion</i>	<i>Class</i>	<i>Specialization</i>
PhD	<i>National Institute of Technology/ Bharathidasan University, India</i>	2008	<u>Highly Commended</u>	<i>Energy Engineering</i>
Master of Engineering	<i>Mechanical Engineering Department, Anna University Tiruchirappalli, Tamilnadu, India</i>	1992	<u>First class</u>	<i>Energy Engineering</i>
Bachelor of Engineering	<i>Mechanical Engineering, SRM University, Chennai, India</i>	1987	<u>First class</u>	<i>Mechanical Engineering</i>

DETAIL OF TEACHING EXPERIENCE

<i>Name of the organization</i>	<i>From</i>	<i>To</i>	<i>Job description</i>
<i>Mechanical Engineering Department, College of Engineering, King Saud University, Riyadh, Saudi Arabia</i>	April 2009	Currently working	<i>Teaching for UG and PG, ABET Accreditation, Projects, Research, Planning</i>
<i>Mechanical Engineering Department, Anna University Tiruchirappalli, Tamilnadu, India</i>	December 1992	March 2009	<i>Teaching UG and PG, AICTE Accreditation, Projects, Research, Consultancy</i>
<i>Mechanical Engineering, SRM University, Chennai, India</i>	December 1991	December 1992	<i>Teaching for UG, Projects</i>

DETAIL OF INDUSTRIAL EXPERIENCE

<i>Name of the organization</i>	<i>From</i>	<i>To</i>	<i>Job description</i>
<i>Metallurgical and Engineering Consultants (I) Ltd., Vishakapatnam, India</i>	<i>August 1987</i>	<i>July 1989</i>	<i>Construction of Waste heat Recovery boiler</i>

DETAIL OF COMPLETED RESEARCH PROJECTS

<i>AREA</i>	<i>Project Title</i>	<i>Funding Agency</i>	<i>Role</i>	<i>Project Description</i>
<i>Heat Transfer</i>	<i>Effect of Lorentz force on flow and heat transfer characteristics in pipes: A numerical study</i>	<i>Saudi Aramco, Dhahran</i>	<i>CO-Investigator</i>	<i>Numerical study of effect of MHD on the heat transfer in pipe flows</i>
<i>Solar Photovoltaic</i>	<i>Theoretical Study of Application of Phase Change Materials as Cooling Medium for Photovoltaic Panels</i>	<i>Deanship of Research King Saud University Riyadh, KSA</i>	<i>Principal Investigator</i>	<i>Study of the effect of phase change material for cooling solar panels</i>
<i>Solar Thermal</i>	<i>Optimization of solar water heater for a 20 ton per hour process steam boiler</i>	<i>Department of Energy, Bharathidasan University, India</i>	<i>Principal Investigator</i>	<i>Design of solar water heater for preheating boiler feed water and determine the optimum parameters</i>
<i>Bio-Energy</i>	<i>Disposal and Energy recovery from Municipal Solid Waste</i>	<i>Tamil Nadu Energy Development Agency, India</i>	<i>Principal Investigator</i>	<i>Assessment of MSW generation and evaluation of potential energy technologies for disposal and energy recovery</i>

Bio-Energy	<i>Disposal and Energy recovery from Agricultural and Agro-Industrial biomass</i>	Tamil Nadu Energy Development Agency, India	Principal Investigator	<i>Assessment of Biomass generation and evaluation of potential energy technologies for disposal and energy recovery</i>
Bio-Energy	<i>Development of a fluidized bed rice husk gasification system</i>	Indian Renewable Energy Development Agency, India	CO-Investigator	<i>Design and development of a fluidized bed rice husk gasification system</i>
Bio-Energy	<i>Establishing a Center for Biomass Power generation and Co-generation</i>	Indian Renewable Energy Development Agency, India	CO-Investigator	<i>Establish a technical back up cell for assisting biomass power projects in India</i>

CONSULTANCY EXPERIENCE

<i>Name of the organization</i>	<i>Nature of consultancy</i>
Sugar Industry	<i>Boiler performance testing</i>
Cement Industry	<i>Waste heat recovery from clinker cooler and energy conservation study</i>
Textile Industry	<i>Energy Audit</i>
Paint and Pigment Industry	<i>Energy Audit</i>

Steel melting and rerolling	<i>Waste heat recovery and Energy Audit</i>
Dairy	<i>Energy Audit and utilization of solar energy for fed water preheating in boiler</i>

TRAINING PROGRAMS CONDUCTED

<i>Name of the organization</i>	<i>Area of Training</i>
Saudi Energy Efficiency Center, Riyadh, Saudi Arabia	Energy conservation in buildings
Agricultural Engineering Training Center, Trichy, South India	Solar and bio-energy utilization
Gandhi gram Rural University, Dindugul, South India	Solar and bio-energy utilization
Nardep Project, Vivekananda Kendra, KanyaKumari, South India	Solar and bio-energy utilization
Science and Technology Entrepreneur Park, NIT, Trichy	Energy Audit in Industries

AWARD, SCHOLARSHIP, MEMBERSHIP

Best Post Graduate Thesis Award from Anna University Chennai.
 Received GATE Scholarship, Government of India.
 Member of the Indian Society for Technical Education

1. Faisal Pazheri, Zakariya Kaneesamkandi, Mohd Othman, Nazar Malik Environmental friendly power dispatch at sugar plant with optimum bagasse utilization, Environmental Engineering and Management Journal, July 2013.
2. Muhammad Sadiq Munfath Khan and Zakariya Kaneesamkandi, Biodegradable waste to biogas: Renewable energy option for the Kingdom of Saudi Arabia. International Journal of Innovation and Applied Studies, Vol. 4 No. 1 Sep. 2013, pp. 101-113.
3. Zakariya Kaneesamkandi, "Combustion air pre-heating from ash sensible heat in municipal waste incineration systems", 7(3) December 2013, Research Journal of Applied Science, Engineering and Technology.
4. Abdulaziz Almujaheed and Zakariya Kaneesamkandi, "Construction of a test room for evaluating thermal performance of building wall systems under real conditions, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 2, Issue 6, June 2013.
5. Zakariya K.M., Chandrasekhar M., Gopal P., Thermal Management of Non-Concentrating Photovoltaic Panels under Extreme Ambient conditions, International Journal of Renewable Energy Technology. Vol.3, No.4, 2012. pp.372-385.
6. Zakariya K.M., Maher M. Shariff, Khalid N. Alammam and Regis D. Vilagines. Heat Transfer in Magnetohydrodynamic Fluid Flows - A Review, Research Journal of Applied Sciences, Engineering and Technology 4(15), 2012. pp. 2412-2421.
7. Faisal Rahman Pazheri, Zakariya K.M., Mohd Fouz Othman "Bagasse saving and emission reduction in Power dispatch at sugar factory by cogeneration and solar energy" 2012 IEEE International Power Engineering and Optimization Conference, PEOCO 2012 - Conference Proceedings, art. no. 6230898 , pp. 407-410.
8. K.M.Zakariya & P.Subramanian " Predicting the performance of solar drier using available energy analysis" , 2008, Material Science Research India, Volume 5, No.2.
9. T.Parameswaranpillai, P.R.Lakshminarayan & K.M.Zakariya " Lower volume fraction fracture toughness of composites" , 2008, Material Science Research India, Volume 5, No.2.
10. K.M.Zakariya & P.Subramanian " Comparison of performance of direct solar air heating with water based solar air heating for drying applications", 2008, Pestology Volume XXXII p.53-57.
11. K.M.Zakariya & P.Subramanian " Advantages of Water based Solar Air Heating for drying Applications", 2008, Chemical Weekly,p.213-216.

Recent International Conferences (Last 5 years)

1. Zakariya Kaneesamkandi, "Heat Recovery from Bottom Ash in Waste fired boilers – Status of technologies and thermal performance modeling" ASME Intyernational Mechanical ngineering Congress and Exposition, 15-21 November, California, USA.
2. Zakariya K.M., Sivakumar, P., Karthikeya, J and Rengaprasad, N. "Exergy Analysis of Solar Air Heater for Grapes Drying".International Conference on Energy Engineering 2009, Pondicherry, India. January 2009.

3. Zakariya M. Kaneesamkandi "Feasibility study of Co-firing MSW with Lignite for municipal corporations". IconSWM 3rd International conference on solid waste management, Mysore, India. July 2012.
4. Faisal Rahman Pazheri, Zakariya M.Kaneesamkandi, Mohd Fouz Othman. "Bagasse saving and emission reduction in Power dispatch at sugar factory by cogeneration and solar energy". IEEE International Power Engineering and Optimization Conference, Melaka, Malaysia June 2012.
5. Khalid N.Alammar, Maher M.Shariff, Regis D.Vilagines, Zakariya M.Kaneesamkandi and Shaker S.Abdullah " Simulation of fully developed turbulent MHD flow". The 2012 World Congress in Computer Science, Computer Engineering and Applied Computing, Nevada, USA, July 2012.

Present Contact details:

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Declaration

The above information is true to my knowledge and belief.

Zakariya.K.M.

4 March 2013