



Dr. K. SHANMUGASUNDARAM

Assistant Professor & Head

INFO



9944837853



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Thiruvannainallur -607203



SKILLS

Creative Teaching: ★★★★★

Research : ★★★★★

Presentation Skill : ★★★★★

Technical Skill : ★★★★★



LANGUAGE

Tamil 🌀 🌀 🌀 🌀 🌀

English 🌀 🌀 🌀 🌀 🌀



TEACHING

Nuclear Physics
Nanotechnology
Atomic Physics
Heat and Thermodynamics etc.,



RESEARCH AREAS

Solar Concentrator
Solar Dryer & Solar Still
Solar Pond
Environmental Protection
Nanomaterials

 WORK EXPERIENCE	Assistant Professor & Head	August 2015 – Present
	Department of Physics Government Arts and Science College, Thiruvannainallur	


 EDUCATION	Ph.D., with JRF	Physics (Solar Energy & Its Application)	Karpagam University	2015
	M.Sc.,	Physics	Bharathiar University	2010
	B.Sc.,	Physics	Periyar University	2007

 AWARDS	KURF	Karpagam University Research Fellowship	2010
	UGC-NRF	UGC National Research Fellowship	2011

 PATENT	Indian Patent	Application No.	202241035070 A	24.06.2022
	Title	Design of solar thermal based cells to circulate the fluid in the tubes and heat up the water for domestic utilization such as cooking for larger population		
	Applicant Name & Position	Dr. K. SHANMUGASUNDARAM & First Author Position		

 ORIENTATION PROGRAMME	122 nd Orientation Programme	UGC-Human Resource Development Centre, Pondicherry University,	01.02.2018 to 28.02.2018	"A" grade
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 REFRESHER COURSE	Refresher Course in Physics	UGC – Human Resource Development Centre, University of Madras	27 .11.2020 to 10.12.2020	"A" grade
	Refresher Course in Physics	Ministry of Education, PMMNMTT Ramanujan College, University of Delhi	10.4.2022 to 24.4.2022	"A+" grade
	Refresher Course in Physics	UGC – Human Resource Development Centre, Bharathiar University	07.10.2022 to 20.10.2022	"A+" grade

	Solar Energy Utilization	Scientific International Publishing House	ISBN-978-93-5757-001-5	2023
	Renewable Energy Technology	Academic Guru Publishing House	ISBN-978-93-95468-74-9	2022
	Basic Electronics Concept	Alpha International Publication (AIP)	ISBN-978-93-95978-41-5	2022



RESEARCH PUBLICATION

1	G. Maheswaran, Rajesh Ravi, R. Maheswar, K. Shanmugasundaram , K. Padmanathan, Umashankar Subramaniyan, Dr. Srinivasan Alavandar, Dr. R. Ganesh and Dr. V. Manikandan. Conceptual context of tilted wick type solar stills: A productivity study on augmentation of parameters. Solar Energy. Volume 221, May 2021 , 348 – 374.
2	Shanmugasundaram K , Sivasenthi E, Manikandan V and Ganesh Raju. Transforming Brackish Water into Ingestion Liquid Using Solar Still, Physico-Chemical Analysis. IOP Conf. Series: Material Science and Engineering 1091 (2021) 012003.
3	K. Shanmugasundaram , V. Manikandan and R. Ganesh. Correlation model for dual purpose double slope single basin solar still. AIP Conference Proceedings, 2020 .
4	V Manikandan, K Shanmugasundaram and B Janarthanan Performance Evaluation of Tilted-Wick Type Solar Still with the Effect of Stationary Thin Film of Water and Water Flowing Over the Condensing Glass Cover. International Journal of Trend in Research and Development, Volume 3(3), ISSN 2394-9333. 2016 .
5	V Mani kandan, K Shanmugasundaram , B Janarthanan and 4R Jayaprakash, Enhanced Performance of a Floating Cum Tilted Wick Type Solar Still for the Climatic Conditions of Coimbatore during winter. International Journal of Trend in Research and Development, Volume 3(3), ISSN: 2394-9333. 2016.
6	K Shanmugasundaram . Experimental Study on Different Designs of Solar Still and its Uses. International Journal of Trend in Research and Development, Volume 3(2), ISSN: 2394-9333. 2016.
7	K. Shanmugasundaram and B. Janarthanan. Comparative study of shallow solar pond with different depths. Mapana Journal of science. 2014.
8	K. Shanmugasundaram , R. Nikhila and B. Janarthanan. Analysis of water quality using Physico-chemical parameters in drinking water from different sources in Coimbatore district, Tamilnadu, India. International Journal for research in science & advanced technology. 2014.
9	K. Shanmugasundaram and B. Janarthanan. Modelling of shallow solar pond with spiral coil heat exchanger. International journal of frontiers sciences and technology research. 2014.
10	K. Shanmugasundaram and B. Janarthanan. Experimental analysis of single basin double slope solar still integrated with shallow solar pond. International journal of frontiers sciences and technology research. 2014.
11	K. Shanmugasundaram , V. Manikandan and B. Janarthanan. Experimental analysis of dual-purpose single basin double slope solar still. International journal of frontiers sciences and technology research. 2014.
12	V. Manikandan, K. Shanmugasundaram , B. Janarthanan and J. Chandrasekaran. Energy, Exergy and entropy analysis of a single slope floating cum tilted – wick type solar still. International journal of ambient energy. 2014.
13	R. Rajanarthini, K. Shanmugasundaram and B. Janarthanan. Performance analysis of double slope wick type solar still with varying thermal insulation beneath the wick surface. Desalination and water treatment. 2013.
14	V. Manikandan, K. Shanmugasundaram , B. Janarthanan and J. Chandrasekaran. Wick – type solar still – A review. Renewable and sustainable energy reviews. 2013.
15	K. Shanmugasundaram , V. Manikandan, S. Shanmugam and B. Janarthanan. Performance correlation for single basin double slope solar still. International Journal of energy and environmental engineering. 2013.
16	K. Shanmugasundaram and B. Janarthanan. Performance analysis of solar still integrated with shallow solar pond. International journal of innovative research in science, engineering and technology. 2013.
17	K. Shanmugasundaram and B. Janarthanan. Modelling thermal asymmetries in honeycomb double exposure solar still. International conference Proceeding. 2012.
18	S. Shanmugan, V. Manikandan, K. Shanmugasundaram , B. Janarthanan and J. Chandrasekaran. Energy and exergy analysis of single slope single basin solar still. International Journal of ambient temperature. 2012.
19	K. Shanmugasundaram and B. Janarthanan. Experimental and theoretical analysis of dual purpose double slope solar still with minimum water depth. International conference proceeding. 2013



CHAPTER CONTRIBUTION IN EDITED BOOK

1	K. Shanmugasundaram , M. Kavipriya and B. Janarthanan. Analysis of red and violet dye by using UV – Visible spectrometer. Recent Trends in Physics. 2014.	ISBN 978-81-926040-2-2.
2	K. Shanmugasundaram , B. Sindhuja and B. Janarthanan. Analysis of blue and black dye by using using UV – Visible spectrometer. Recent Trends in Physics. 2014.	ISBN 978-81-926040-2-2.
3	K. Shanmugasundaram and B. Janarthanan. Performance analysis of shallow solar pond with linear array heat exchanger tube. Recent Trends in Physics. 2014.	ISBN 978-81-926040-2-2.
4	K. Shanmugasundaram , K. Padma, B. Janarthanan and R. Nikhila. Physico-Chemical analysis of Aliyar dam water with respect to its suitability for drinking and irrigation purpose. Recent Trends in Physics. 2014.	ISBN 978-81-926040-2-2.



PAPER PRESENTATION IN (INTERNATIONAL/NATIONAL CONFERENCES & SEMINARS)

1	8 th International Conference on Science, Engineering and Technology (ICSET-2023) at Thailand	Nehru Institute of Engineering and Technology, Coimbatore.	04.03.2023
2	International Conference on Smart and Sustainable development in Multidisciplinary Science vision 2050.	Theivanai Ammal College for Women, Villupuram.	9.3.2023 to 10.3.2023
3	National Seminar on Solar Energy & Global warming	E.S. Arts and Science College, Villupuram	11 th March 2020
4	TANSCHÉ sponsored National conference on Advanced Materials on Energy, Environment and Biological applications.	Thiru.A. Govindasamy Government Arts and Science Colleg, Tindivanam.	27 th -28 th Feb 2020
5	International Conference on Sustainable Scientific Advancements.	Sri Vinayaga College of Arts and Science College. Ulundurpet.	22 nd – 23 rd Feb 2019
6	National Conference on Recent Trends in Chemical Research.	Immaculate College for women. Sankarapuram, Villupuram.	7 th Feb 2019
7	CSIR sponsored National Conference on Advanced Mathematical Modelling and Optimization Techniques for Scientific inventive research development.	P.A. College of Engineering and Technology, Pollachi.	21 st – 22 nd Jan 2019
8	National Conference on Material Science and Technology: Recent Trends and Future Prospects – 2016.	Arignar Anna Government Arts College. Villupuram.	29 th – 30 th Dec 2016
9	International Conference on Renewable Energy and Environment.	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore.	15 th -16 th Dec 2016
10	National level seminar on Advanced Materials and their Applications	Karpagam University, Coimbatore.	12 th – 13 th Feb 2015
11	National Seminar on Advanced Materials and Applications	Karpagam University, Coimbatore.	26 th -27 th Sept 2013
12	International Conference on Recent Advances in Physics 2013	Sri Vidya Mandir Arts and Science College, Uthangarai.	12 th – 13 th August 2013
13	National Level Seminar on Recent Trends in Solar Energy & Its Applications.	P.K.R. Arts College for Women, Gobichettipalayam.	5 th Sept 2012
14	International Conference on Emerging Trends in Science, Engineering and Technology.	J.J. College of Engineering and Technology, Tiruchirappalli.	13 th – 14 th Dec 2012



PARTICIPATED IN
(INTERNATIONAL/NATIONAL CONFERENCES/SEMINARS)

1	International conference on emerging trends in Higher energy astrophysics.	Tezpur University collaboration with Indian Association of Physics teachers	16.3.2022.
2	International e-conference on Climate change and water resources.	The new college, Kolhapur	21.3.2022.
3	International e- conference on emerging trends & challenges in chemical sciences,	Baburaoji Adaskar Mahavidyalaya Kaij, Beed.	10 th march 2021.
4	International Virtual Seminar on Nano Research and Development”	Karpagam Academy of Higher Education, Coimbatore, India	16th March 2021.
5	National Virtual Conference on Recent Advances in Materials Science (NVCRAMS 2021)”	St. Peter’s Institute of Higher Education and Research, Avadi, Chennai	7th & 8th October, 2021
6	Tamilnadu State Council for Science and Technology and DST sponsored International Conference on Scope of Research in Scientific post COVID-19.	Bharathi Womens College, Chennai-108	21.06.2020.
7	International Conference on Green chemistry for sustainable development.	Janardan Rai Rajasthan Vidyapeeth and Royal society of chemistry, Udaipur and London	25-26 June 2020.
8	International Virtual Conference on Advanced Functional Nanomaterials and Their Applications	Universitas Islam Indonesia and Nanotechnology and catalysis Research center, & Bangladesh University of engineering and Technology. University of Malaya and Bangladesh	9 th to 10 th July 2020.
9	International Conference on Advance Materials smart future,	SLPM & SGMM, Mandhal & Hingna.	9 th to 10 th July 2020.
10	National level seminar on Recent advances in crystal growth for nano-photonics and non-linear optics.	Nehru institute of engineering & Technology, Coimbatore.	24 th Nov 2018.
11	International conference on Advanced nanomaterials for energy, environment and healthcare applications	KSR college of arts and Science for women Namakkal.	31 st Aug & 1 st Sept 2018
12	National conference on Career and research opportunities in sustainable energy sectors,	Periyar University	March 8 th and 9 th 2018
13	National conference on Material science and technology.	Joseph arts and science college	25 th Oct 2017
14	National conference on Issues challenges and opportunities in electronic resource management for students	Government Arts and Science College, Thiruvennainallur.	23 rd Sep 2017.
15	DRDO-ARMREB sponsored Two days National Seminar	IFET College of Engineering, Villupuram.	1 st & 2 nd Sep 2017
16	National Seminar on Eco Friendly –Water Defluoridation	IFET College of Engineering, Villupuram	1 st April 2017
17	CSIR sponsored national level seminar on recent trends in mathematical modeling and simulation	P. A. College of engineering and technology	28 th Dec 2012
18	UGC sponsored national level Conference on “Green technology – Green Tech 09,	NGM College, Pollachi	18 th -19 th Feb 2010



WORKSHOP (INTERNATIONAL/NATIONAL)

1	Department of Higher Education, RUSA & World Bank Scheme MPHEQIP sponsored workshop on Research Methodology Tools and Techniques	Govt. Model Science College, Rewa (M.P.).	1.11.2021 to 7.11.2021.
2	National Level Workshop on Robotic	Rathinam College of Arts and Science, Coimbatore.	26-27 Sep 2017
3	National Workshop on Solar Thermal and Photovoltaic Systems,	Karpagam University, Coimbatore	11-12 th Sep 2017
4	UGC sponsored national level workshop on "Emerging trends in thin film technology	Gobi arts & Science College.	4 th March 2014



SHORT TERM COURSE

1	AICTE sponsored Short Term Programme on Water Quality Complication, Restoration and Environmental Conservation of Existing Water Bodies" Module-I.	Civil Engineering Department, IPS Academy, Institute of Engineering and Science, Indore	2.08.2021 to 7.08.2021
2	One week Online short term training program on Recent development of advanced materials and its applications in Technology,	KDK College of engineering & Bhiwapur Mahavidyalaya, Nagpur & Bhiwapur.	17 th -22 nd June 2020
3	One week Short Term Online Learning course on Radiological Imaging Techniques	Vinayaga Missions Research Foundation, Salem.	4 th -9 th May 2020
4	UGC sponsored one week online National Level Short Term course in E-Content Development	Milad – E-Sherief Memorial College, Kayakulam & UGC-HRDC, University of Kerala, Thiruvananthapuram	24.9.2020 to 30.9.2020



WEBINAR (INTERNATIONAL/NATIONAL)

1	DBT Sponsored Webinar on Tracker Software for Physics Practicals	D.A.V.College, Bathinda Dbt Star College SCH	1.11. 2021
2	MHRD's Innovation Cell Sponsored Webinar on "Impact Lecture Series - Session II".	Saradha Gangadharan College, Puducherry	11.10.2021
3	UGC Sponsored National Webinar on Professional Ethics for Teachers.	UGC-HRDC, Bharathidasan University, Tiruchirappalli	16.8.2021.
4	MHRD-RUSA 2.0 Biomaterials Sponsored National Webinar on Nanomaterials for Biomedical Applications	National Centre For Nanoscience and Nanotechnology, University of Madras.	14.8.2021.
5	PMMNMTT-MHRD Sponsored National webinar on The Importance of Data Visualization,	Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi	10.8. 2021



FACULTY DEVELOPMENT PROGRAMME (INTERNATIONAL/NATIONAL)

1	AICTE sponsored FDP on Design of Nanoelectronics and Nano photonic Devices using Advanced Software Tools	GITA Autonomous College, Bhubaneswar.	26th-April to 8 th May 2021
2	AICTE sponsored FDP on Electrospinning Nanofiber: Science and Technology and Applications.	Indian Institute of Information Technology, Nagpur	2021-7-12 to 2021-7-16.
3	AICTE sponsored FDP on Novel Materials and their Applications	Maharaja Ranjit Singh Punjab Technical University, Bathinda	2021-7-19 to 2021-7-23.
4	AICTE sponsored FDP on Recent Trends in the world of Photonics	RNS Institute of Technology.	26 th to 30 th July 2021
5	AICTE sponsored FDP on Desalination by using Green Technology	National Institute of Foundry and Forge Technology.	9-8-2021 to 13-8-2021
6	Under Paramarsh Scheme sponsored by UGC National FDP on National FDP- Transformation in Indian Education through New Education Policy- Challenges and Opportunities	Government First Grade College for Women, & St Aloysius College (Autonomous) Mangaluru.	5-7-2021 to 11-7-2021.
7	MHRD-PMMMNM on Teachers and Teaching (PMMMNM) of Ministry of Education sponsored FDP on Assessment and Evaluation in Higher Education	Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi . GRADE “A+” as required for promotion under CAS of UGC and AICTE	14 th to 20 th July 2021.
8	MHRD-PMMMNM on Teachers and Teaching (PMMMNM) of Ministry of Education sponsored FDP on E-Content Development”.	Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi . GRADE “A+” as required for promotion under CAS of UGC and AICTE	27 th – 31 st July 2020.
9	UGC (Paramarsh) Online FDP on “ICT in Teaching & Evaluation”	MSP Mandal’s Shri Shivaji College, Parbhani (Maharashtra). nd scored 48 out of 50 in the final Online MCQ Test.	13 th July – 18 th July 2020
10	UGC (Paramarsh) Online One Week Faculty Development Programme (FDP) on “E-Content Development	MSP Mandal’s Shri Shivaji College, Parbhani.	31 st August to 5 th Sep 2020.



ORGANIZED EVENTS

1	Symposium – Higgs Boson Big Bang Theory	15.10.2015
2	Dr. APJ Abdul Kalam Birthday Celebration	15. 10.2015
3	Monthly Seminar – Physics Related Topics	2015-2016
4	Science Exhibition	1.3.2016
5	Symposium – Spectroscopy and its Application	1.3.2016
6	Dr. Ambedkar Birthday Celebration	14.4.2016
7	Dr. APJ Abdul Kalam Memorial Day	27 th July 2016
8	Students Skill Development Programme	26.9.2016
9	Symposium – Synthesis Nano Gel in Sol-Gel method	29.10.2017
10	Symposium – Awareness about Education and Child Labour	10.8. 2017
11	Education awareness for students - Rely	10.8.2017

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