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7. Qualifications : B.E., M.Tech. and Ph.D

8. Area of Specialization (One paragraph about the Specialization)

- a) Biomass gasification
- b) Energy Efficient Buildings
- c) SPV system Design
- d) Fluidized Bed Systems

9. Research Projects

Sl. No	Funding Agency	Total Amount	Name of the Project	Period	Status (Completed/In Progress)
-	-	-	-	-	-

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10. Teaching Experience : 18 years

11. Research Guidance

Sl. No	Area of Research	Category (FT/PT)	Status (Completed/In Progress)
1.	Solar Drying of Agricultural Products	PT	Completed
2.	Co-Combustion	PT	In Progress
3.	Solar Photovoltaic Wind Hybrid System for Rural Electrification	PT	In Progress
4.	Gasifier Modelling	PT	In Progress
5.	Heat Exchanger Analysis	PT	In Progress
6.	Fluid Bed Gasification	PT	In Progress
7.	Biomass Pyrolysis	PT	In Progress

12. Publications (See Annexure – I, below)

13. Conferences (See Annexure – II, below)

14. Awards (See Annexure – III, below)

15. Books/Patents NIL

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16. Social Activities (See Annexure – IV, below)

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(Annexure – I)

Dr. E.NATARAJAN

Professor in Mechanical Engg. Department

List of Publications

Papers Published in International Journals

1. Narayanan, K.V. and **Natarajan., E.** (2007). “Experimental studies on cofiring of coal and biomass blends in India”, Renewable Energy, Volume 32, Issue 15, Pages 2461-2642.
2. Sivakumar.S, Pitchandi, K. and **Natarajan, E.** (2008)., ‘Modeling and Simulation of Downdraft Wood Gasifier’, International Journal of Applied Science, 8 (2) : 271 – 279..
3. Sivakumar, S., Pitchandi, K. and **Natarajan, E.** (2007)., ‘Comparative Analysis of Biomass Gasifier’, Asian Journal of Microbiology, Biotechnology and Environmental Sciences, Vol. 9, No. 4, pp. 1023 – 1028.
4. Shanmugam, V. and **Natarajan, E.** (2007). ‘Experimental study of regenerative desiccant integrated solar dryer with and without reflective mirror’, Applied Thermal Engineering, Vol. 27, pp. 1543- 1551.
5. Vijayalakshmi, M.M., **Natarajan, E.** and Shanmugasundaram, V. (2006), ‘Thermal bhaviour of building wall elements’, International Journal of Applied Sciences, ANSINET publishing, Vol.6 (15), pp.3128-3133.
6. Narayanan, K.V. and **Natarajan., E.** (2006). ‘ANN Model for emissions from Co-firing of coal and biomass in a travelling grate boiler in India’, Journal of Engineering and Applied Sciences, Medwell Online Publishing, Vol. 4, pp. 355 – 359.
7. Rajendra Prasad A. and **Natarajan, E.** (2006) ‘Optimization of integrated PV-wind power generation systems with battery storage’ Energy Vol.31, pp. 1607-1618.
8. Ganapathy Subramanaian, L.R. and **Natarajan, E.** (2006), ‘Modelling of SO₂ Emission from point sources in Manali Region of Madras, India’, International Journal of Applied Sciences, ANSINET publishing, Vol.6 (15), pp.3035-3043.

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9. Narayanan, K.V., and **Natarajan, E.** (2006), 'Co-firing of coal and biomass in a traveling grate boiler', International Journal of Applied Sciences, Vol.6, No.9, pp. 1924-1928.
10. Narayanan, K.V. and **Natarajan., E.** (2006) , "Tests on co-firing of coal and biomass in a traveling grate boiler", Indian Journal of Power and River Valley Development, vol.55, Issue 10&11, pp. 227 – 232.
11. Shanmugam V. and **Natarajan E.** (2005), 'Experimental investigation of forced convection and desiccant integrated solar dryer', Renewable Energy, Vol,31(8), pp.1239-1251.
12. **Natarajan, E.,** Nordin, A. and Rao, A.N. (1998), 'Overview of Combustion and Gasification of Rice Husk in Fluidized Bed Reactors', International Journal of Biomass and Bioenergy, Vol.14, Nos. 5/6, pp.533-546.
13. **Natarajan, E.,** Oman, M., Gabra, M., Nordin, A., Liliedahl, T. and Rao, A.N., and Rao, A.N. (1998), 'Experimental Determination of Bed Agglomeration Tendencies of Some Common Agricultural Residues in Fluidized Bed Combustion and Gasification', International Journal of Biomass and Bioenergy, Vol.15, No.2, pp.163-169.

Papers Published in National Journals

1. Narayanan, K.V., and **Natarajan.E,** "Tests on co-firing of coal and biomass in a traveling grate boiler", Indian Journal of Power and River Valley Development, vol.55, Issue 10&11, pp.227 - 232.
2. Sivakumar, S. and **Natarajan, E.** (2007)., 'Modeling and Simulation of Downdraft Biomass Gasifier,, National Journal of Engineering, Periyar Maniammai College of Technology for Women, Thanjavur.
3. Sivakumar, S., Pitchandi, K. and **Natarajan, E. (2007).**, 'Thermal Gasification Behavior of Biomass –A Study', National Journal of Engineering Today, August 2006, pp.31-34.
4. Sivakumar.S., Pitchandi.K, and Natarajan.E. (2000) "Analysis of Downdraft Biomass Gasifier Using CFD " , National Journal of Engineering Today, August, pp.6-9.

Papers Published in International Conferences

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1. Ganapathy Sundaram, E., **Natarajan E.** and Senthil Kumar K.R. (2008), 'BIOMASS GASIFICATION AS AN ENERGY SOURCE FOR RURAL INDIA', International conference on "Resource utilisation and Intelligent System (INCRUIS –2008), Kongu Engineering college, Erode, Jan 3-5 ,2008
2. Fogla, N., Pithandi, K. and **Natarajan, E.** (2007), 'Thermodynamic optimisation of heat pipe by minimizing entropy generation', Book of Abstracts - Third Int. Conf. on Thermal Engineering: Theory and Applications (ICTEA 2007), May 21-23, The Hasbemite University and Ryerson University, Jordan, pp.19.
3. Ganapathy Sundaram, E. and Natarajan E. (2007), 'Bio Mass Utilization Through Biorefineries' COBEM2007 19th International Congress of Mechanical Engineering, Brasília, DF, Brazil. November 5-9, 2007.
4. Ganapathy Sundaram, E., Natarajan E. and Senthil Kumar K.R. (2007), 'Studies on tar and particulate emissions of biomass gasifiers', International Conference on Advances in Energy Research (ICAER 2007), Indian Institute of Technology Bombay (IITB), December 12-14, 2007.
5. Ganapathy Sundaram, E., Natarajan E. and Senthil Kumar K.R. (2007), 'performance evaluation of down draft gasifier with different agricultural crop residue' GMSARN International Conference, Asian Institute of Technology (AIT) , Thailand , December 12-14, 2007.
6. Ganapathy Sundaram, E., Natarajan E. and Senthil Kumar K.R. (2007), 'biomass energy to meet the future energy needs of industries', International conference on emerging challenges in design and manufacturing Technologies 2007, Sathyabama University, Chennai, Nov 28-30, 2007
7. Shanmugam, V. and **Natarajan, E.** (2007), 'Forced convection solar drying integrated with regenerated solid desiccants' Proceedings of the International Conference on Urban planning and environment strategies & Challenges, Elphinstone College, Mumbai-32., pp-263-269.
8. Kannan, A. and **Natarajan, E.** (2007)., 'Adiabatic flame temperature and its influence on the process of cooking', Book of Abstracts - Third Int. Conf. on Thermal Engineering: Theory and Applications (ICTEA 2007), May 21-23, The Hasbemite University and Ryerson University, Jordan, pp.30
9. Ganapathy Subramnaian, L.R. and **Natarajan, E.** (2007), 'Prediction of Air Pollution Concentration in Manali Region Using Gaussian Plume Model', COBEM2007, 19th International Congress of Mechanical Engineering, 5-9 November.
10. Pitchandi. K., and **Natarajan. E.** (2006), 'Entropy Generation in periodic Regenerative Heat Exchanger due to Finite Temperature Difference',

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11. Narayanan, K.V., and **Natarajan. E.** (2006), ‘Gaseous emission characteristics in a coal and biomass co-fired 18.68 MW power plant’ , International conference on Electricity – the Energy carrier for the present and the future, Kolkota, February.
12. Sivakumar.S, Pitchandi.K., and **Natarajan. E.** (2006), ‘Modeling and optimization of Biomass Downdraft Gasifiers using fuzzy logic’, AIAA, June 2006, U.S.A.
13. Sivakumar.S, Pitchandi.K., and **Natarajan.E.** (2006), ‘Design and Analysis of Down Draft Biomass Gasifier Using CFD’’, International congress on Computational mechanics and simulation (ICCMS 06), IIT Guwahati.
14. Madasamy, P., H.Subramanian, T.V.K.Mohan, S.Velmurugan, **E.Natarajan** and S.V.Narasimhan, (2006).’, ‘Design of experimental facilities for evaluating the propensity of materials to undergo flow assisted corrosion (FAC)’ International conference on water chemistry of nuclear reactor systems, Oct 23 – 26, Jeju island, Korea (Accepted).
15. Madasamy, P, H.Subramanian, T.V.K.Mohan, S.Velmurugan, **E.Natarajan** and S.V.Narasimhan (2005), ‘Design and testing of FAC module for study of feeder pipe thinning under PHWR condition’ in proc. of International conference on Corrosion (**CORCON 2005**), 28th-30th November, 2005, Chennai, India.
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20. Sudhahar R., **Natarajan E.** and Sivakumar S. (2004), ‘CFD Analysis of Downdraft Gasifier’, The International Mechanical Engineering Conference &

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23. Shanmugam, V. and **Natarajan, E.** (2003). 'Solar flat plate collector for drying of agricultural products', Proceedings of the International Conference on Energy Technologies for sustainable Development, Malaviya National Institute of Technology, Jaipur, pp.343-348.
24. Vijayalakshmi M.M., **Natarajan E.** and Shanmugasundaram V. (2003), 'Thermal comfort in residential buildings', International Conference on Energy Environment Technologies for Sustainable Development, Malaviya National Institute of Technology, Jaipur, India, Oct 8-10.
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27. Sudhagar P. and **Natarajan E.** (2003), 'Heat transfer characteristics in Circulating fluidised bed', International Conference on Energy Environment Technologies for Sustainable Development, Malaviya National Institute of Technology, Jaipur, India, Oct 8-10.
28. Narayanan K.V and **Natarajan E.** (2003), 'Cofiring of coal and biomass fuels in power plants', International Conference on Energy Environment Technologies for Sustainable Development, Malaviya National Institute of Technology, Jaipur, India, Oct 8-10.
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31. Vijayalakshmi M.M., **Natarajan E.** and Shanmugasundaram V. (2003), 'Prospects and problems in the application of renewable energy in residential buildings', International conference on New Millennium – Alternative Energy Solutions for Sustainable Development and PSG College of Technology, 26th National Renewable Energy Convention of SESI, Peelamedu, Coimbatore – 641 004, 17-19 January, pp.377-380.
32. Rajendra Prasad A and **Natarajan E.** (2003) 'A Model for Optimizing the PV-Wind-Diesel Hybrid System for Rural Village Application', International conference on New Millennium Alternative Energy Solutions for Sustainable Development and PSG College of Technology, 26th National Renewable Energy Convention of SESI, Peelamedu, Coimbatore – 641 004, 17-19 January, pp.404-409.
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35. Ganapthy Subramanian, L.R. and Natarajan, E (2001), 'Global Warming Modelling', Proceedings of 25th National Renewable Energy Convention of SESI, 27th-29th December, at REC Warangal, pp. 378-383
36. Shanmugam, V. and **Natarajan, E.** (2001), 'Solar Flat Plate Collector for Drying Agricultural Products', International Conference on Energy Environment Technologies for Sustainable Development, Malaviya National Institute of Technology, Jaipur, India, Oct 8-10.
37. Ganapthy Subramnaian, L.R. and Natarajan, E. (2001), 'Air pollution Modelling' in the MINAC-2001, 18th October 2001, at JNTU College of Engineering, Anaparthi, pp 406 - 410.
38. Ganapthy Subramnaian, L.R. and Natarajan, E. (2000), 'Biomass Energy for Sustainable Development', Proceedings of National Conference on Commercialization Aspects of Renewable Energy Sources (CARES-2000),

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April 28-29, Department of Renewable Energy Sources, College of Technology & Agricultural Engineering, Agricultural University, Udaipur, pp. 80-86.

39. **Natarajan E.** and Rao A.N. (1998), 'Parametric Study on Gasification of Rice Husk in a Fluidized Bed Reactor', Abstracts of International Conference on Role of Renewable Energy Technology for Rural development (RETRUD-98), October 12-14, Kathmandu, Nepal, pp.17.
40. **Natarajan E.** and Rao A.N. (1998), 'Experimental Investigation on fluidized bed gasification of rice husk', Proceedings of 27th International Symposium on Combustion, August 2-7, University of Colorado at Boulder, USA, August 2-7. pp523.

Papers Presented and/or Published in National Conferences / Symposia

1. Ganapathy Sundaram, E., **Natarajan E.** and Senthil Kumar K.R. (2008), 'Studies on pyrolysis of Agricultural residues', Proceedings of the National conference on "Energy -2008", NIT Calicut, 31 January & 1st February.
2. Natarajan, E. (2008), "Bio-mass Energy Conversion and Utilization in India", National Seminar on Energy Crisis – Remedial Measures, Jan 3-4, 2008, Organised by SEEE, Department of Electrical and Electronics Engineering, S.A.Engineering College, Chennai -77.
3. Ganapathy Sundaram, E., Natarajan E. (2007), '**PROSPECTS OF BIO ENERGY CONVERSION THROUGH BIOMETHANATION**', National Conference on Recent Trends In Renewable Energy Conversion System And Applications, Annamalai University, Feb, 2007.
4. K.V.Narayanan, E.Natarajan, "An approach towards zero CO₂ emission", National conference on advances in Mechanical Engineering, Jawaharlal Nehru Technological University, Anantapur, 2001.
5. K.V.Narayanan, E.Natarajan, "CO₂ capture from flue gases of power plants", National conference on advances in Mechanical Engineering, Jawaharlal Nehru Technological University, Anantapur, 2001.
6. Pitchnadi K. and **Natarajan E.** (2005), "Study on entropy generation in Pipe-in -Pipe heat exchanger ", Presented in the national conference held in Muffakham Jah College of engineering and Technology, Hyderabad during July 28-30.
7. Sivakumar.S,and **Natarajan.E.** (2005), "Modeling and Simulation of Downdraft Biomass Gasifier" Muffakham Jah College of engineering and Technology, Hyderabad, July 28-30, pp 232 – 245.

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9. Rao, J.S., Natarajan, E and Praveen Kumar, P. (2005) , “Cold model study of pressurised fluidised bed gasifier using conical distributor for integrated gasification combined cycle power plants, Presented at ADSOPHOS 2K5 – Towards Intelligence: National Level Technical Symposium (February 25 –26) conducted at M.J.College of engineering and Technology, Hyderabad – 500 034
10. Vijayalakshmi M.M., **Natarajan E.** and Shanmugasundaram V. (2005), ‘Role of Insulation in energy efficient buildings’, presented in the three day national level seminar on Sustainable Technologies in Civil and Mechanical Engineering (STCM – 2005), July 28-30, 2005, M.J.College of Engineering and Technology, Hyderabad – 500 034
11. Madasamy P., Subramanian H., Mohan T.V.K., Velmurugan S. **Natarajan E.** and Narasimhan, S.V. (2004), ‘Theoretical simulation of hydrodynamic parameters for understanding FAC in PHWR’, Presented and published in National Conference on ageing management of structures, systems and components (NCAM-2004), Nuclear Power Corporation of India Ltd., N.U.Bhavan, Anushakthinagar, Mumbai – 400 094.
12. Rao J.S., **Natarajan E.** and Praveenkumar ‘Cold Model Study of PFBG using conical distributor for IGCC Power Plants’, Presented and Published in ADSOPHOS 2K5 – Towards Intelligence, National Level Technical Symposium conducted from 25th to 26th February 2005, M.J.College of Engineering and Technology, Hyderabad – 500 034
13. Narayanan K.V and **Natarajan E.** (2001), ‘CO₂ Capture from flue gases of power plants – A perspective’, Proceedings of National Conference on Advanced trends in Mechanical Engineering Research and Development’, Department of Mechanical Engg., JNTU College of Engineering, Anantapur – 515 002, 18th October, pp.118-122.
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15. Shanmugam V. and **Natarajan E.** (2001), Solar Cookers for rural India’, Proceedings of National Conference on Advanced trends in Mechanical Engineering Research and Development’, Department of Mechanical Engg., JNTU college of Engineering, Anantapur – 515 002, 18th October, pp.130-133.
16. Kandasamy K and **Natarajan E.** (2001), ‘Biomass:Energy for the twenty-first century’, Proceedings of National Conference on Advanced trends in

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Mechanical Engineering Research and Development', Department of Mechanical Engg., JNTU college of Engineering, Anantapur – 515 002, 18th October, pp.241-246.

17. Sudhagar P. and **Natarajan E.** (2001), 'Circulating bed technology', Proceedings of National Conference on Advanced trends in Mechanical Engineering Research and Development', Department of Mechanical Engg., JNTU college of Engineering, Anantapur – 515 002, 18th October, pp.247-256.
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20. Rajendra Prasad A. and Natarajan E. (2001) 'A comparative life cycle cost analysis of photovoltaic and diesel generator' Proc. of the 25th National Renewable Energy Convention of the SESI, REC, Warangal, India, pp. 171-177.
21. Ganapathy Subramanian, L.R. and **Natarajan, E.** (2001), 'Air pollution modelling', Proceedings of National Conference on Advanced Trends in Mechanical Engineering Research and Development', Department of Mechanical Engg., JNTU college of Engineering, Anantapur – 515 002, 18th October, pp.406-410.
22. **Natarajan, E.** (2000), 'Design Aspects for Commercial Photovoltaic Systems', the Proceedings of National Conference on Commercialization Aspects of Renewable Energy Sources (CARES-2000), April 28-29, 2000, Organised by Deptt. of Renewable Energy Sources, College of Technology and Agricultural Engineering, Udaipur, pp.65-71.
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24. Rajendra Prasad A. and **Natarajan, E.** (2000), 'Energy Storage Devices for Photovoltaic Systems', Proceedings of National Conference on Commercialization Aspects of Renewable Energy Sources (CARES-2000), April 28-29, 2000, Organised by Deptt. of Renewable Energy Sources, College of Technology and Agricultural Engineering, Udaipur, pp.62.

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26. **Natarajan E.** and Rao A.N. (2000) 'Measurement of Agglomeration Tendency in a Fluidized Bed Combustor and gasifier', Feb 25-26, 2000, Proceedings of National Symposium on Intelligent Measurement and Control (NSIMC-2000), Organised by M.I.T., Anna University, Chennai.
27. Rajendra Prasad A. and **Natarajan E.** (1999), 'Electricity by Photovoltaic Systems, Proceeding of the 23rd National Renewable Energy Convention '99, December 20-22, Devi Ahilya Vishwavidyalaya, Indore, 1999, pp.112-115.
28. **Natarajan E.**, Renganarayanan S. and Rao A.N. (1997), 'Economic Analysis of Fluidized Bed Rice Husk Gasification System in Rice Mills', Towards Commercialisation of Clean Energy, Proceedings of the National Solar energy Convention – 97, December 22-24, Anna University, Chennai, India, pp.581-588.
29. **Natarajan E.** and Rao A.N. (1997), 'Solar Photovoltaic Systems for Energy', Proceedings of National conference on Application of Solar Energy - Recent Developments', Energy Research Centre, Thiruvananthapuram, 20-21 November.
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31. **Natarajan E.**, Srinivasan K. and Rao A.N. (1995), 'Biomass gasification', National Conference on conversion and utilisation of biomass, Mahatma Gandhi Institute of Integrated rural energy Planning and Development, Delhi, November 16-17, pp.173-188.

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2. **Natarajan, E** and Renganarayanan, S. (2003), 'Comparative Analysis's of Biomass gasifiers', Indo-Swedish Workshop on Bio-Fuel Conversion, IIT Madras, 14-16 December.

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4. **Natarajan, E.** (2000), 'Judicious use of energy sources for sustainable development', Proceedings of ENFUSE Golden Jubilee Seminar on Energy and Environment – Current Status and Future Challenges (CDROM), June 16-17, 2000, Organised by Dr.M.Govardhan, Dept. of Mechanical Engg., IIT, Chennai – 600 025 .
5. **Natarajan,E.** (2000), 'Solar Pond: Operation, Types and design Principles', Presented in the Short term training programme on Low Energy Architecture: Organised by Prof.P.Swaminathan, 29th may to 10th June, 2000.
6. **Natarajan, E.** (2000), 'Solar pond Applications', Presented in the Short term training programme on Low Energy Architecture: : Organised by Prof.P.Swaminathan, 29th may to 10th June, 2000.
7. **Natarajan, E.** (1998), 'Environment and Sustainable Development', 30th National Seminar on Emerging Challenges in Energy and Environment', December 11 and 12, pp.195-200.
8. **Natarajan, E.** and Rao, A.N. (1998), Gasification of Rice Husk in Fluidized Bed Reactor for Power Generation in Rice Mills', One Day Business Meet on Bagasse based Co-Generation and Biomass Power Projects, Organised by Tamilnadu Energy Development Agency, Chennai, 25th September, pp.114-129.
9. **Natarajan, E.** (1997), 'Design of Photovoltaic Systems', Symposium on Current Status on Solar Energy Materials and Systems, Crystal Growth Centre, Anna University, Chennai-600 025, 24-25 February.
10. **Natarajan, E.** (1995), 'A General Approach to Solar Passive Energy Design', Workshop on Solar Passive Architecture, School of Energy, Environment and Natural Resources, Madurai Kamaraj University, Madurai, December 14.
11. Renganarayanan, S., **Natarajan, E.**, Velraj, R. and Rao, A.N. (1994), 'Configurations of Co-generation scheme for sugar industry', Bagasse to Power-Southern Regional Seminar on Co-generation in sugar industry, May 2-3, Madras, pp 58-60.
12. Sraraswathi, K., **Natarajan, E.** and Rao, A.N. (1993), 'Heat pipe heat exchanger for waste heat recovery in an oil refinery', Proceedings of the two day national seminar on Heat Pipe for rural and Industrial applications, National Physical Laboratory, New Delhi, pp 39-47.

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(Annexure – II)

Dr. E.NATARAJAN

Assistant Professor in Mechanical Engg. Department

List of Conferences / Seminars / Symposia / Workshops / Short-term Courses / Winter and Summer Schools etc. attended

Sl.No	Title	Organiser	Period	Remark
1	Winter School on Cogeneration and Waste Heat Recovery	Anna University, Chennai-25	05.12.1993 to 18.12.1993	14 days
2	Winter School on Desalination	Anna University, Chennai-25	12.12.1994 to 24.12.1994	13 days
3	Summer School on Fluidized bed Combustion.	Dept of Mech. Engg. REC Trichy	01.05.1995 to 06.05.1995	6 days
4	Programme on Solar PV System Design	Siemens, USA World Bank, IREDA-Delhi IIT, Chennai-600 036	30.10.95 to 10.11.95	12 days
5	National Conference on Conversion and Utilisation of Biomass.	Mahatma Gandhi Institute of Integrated rural energy Planning and Development, Delhi	16.11.1995 to 17.11.1995	2 days
6	Workshop on Solar Passive Architecture	School of Energy, Environmental and Natural Resources, Madurai Kamaraj University, Madurai	14.12.1995	1 day
7	Advanced Seminar on Solar PV and Training of Trainers course	Solar Energy Centre Gurgaon, Delhi	16.04.1996 to 20.04.1996	5 days
8	Advanced Seminar and Technical tour on Solar PV systems	Siemens Solar Industries USA	21.07.96 to 26.07.96	6 days
9	Short Term Course on fluidization Behaviour and bed Agglomeration	Energy Technology Centre, Pitea, Sweden	03.09.96 to 17.09.96	15 days
10	Short Term Course on Pellatization of Biomass Fuels	Energy Technology Centre, Pitea, Sweden	02.10.96 to 11.10.96	10 days

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Sl.No	Title	Organiser	Period	Remark
11	Short Term Course on Chemical Equilibrium calculations	Energy Technology Centre, Pitea, Sweden	04.11.96 to 12.11.96	9 days
12	Symposium on Current Status on Solar Energy Materials and Systems	Crystal Growth Centre Anna University Chennai-600 025	24.02.97 to 25.02.97	2 days
13	Developments in Environment Friendly Food Preservation and Processing Technologies for Sustainability	R and A/C Anna University Chennai-600 025	24.03.1997 to 25.03.1997	2 days
14	International Workshop on Renewable Energy Application to Plantation and other Industries	IIT Chennai – 600 025	09.04.1997 to 11.04.1997	3 days
15	Short Term Course on Statistical Experimental Design and Modelling.	Energy Technology Centre, Pitea, Sweden	07.05.97 to 16.05.97	10 days
16	Short Term Course on Principal Component Analysis	Energy Technology Centre, Pitea, Sweden	03.06.97 to 13.06.97	11 days
17	National Conference on Application of Solar Energy - Recent Developments	CPRI Thiruvananthapuram	20.11.97 to 21.11.97	2 days
18	TQM Implementation Strategies for Educational Institutions in India	Anna University Chennai-600 025	08.05.98 to 09.05.98	2 days
19	Summer school Training Programme on Vision Beyond 2000-Role of Technical Teachers	Gujarat Refinery Ltd Baroda Gujarat	18.05.98 to 30.05.98	13 days
20	Management Techniques for Senior Administrators	Anna University Chennai-600 025	07.12.98 to 18.12.98	12 days
21	Regional Seminar on Waste Management	Centre for University-Industry Collaboration, Anna University, Chennai-25	22.12.98 to 23.12.98	2 days
22	AICTE Programme on Standardisation in Engineering Practice.	Anna University, Chennai BIS, New Delhi AICTE, New Delhi	04.02.1999 to 05.02.1999	2 days
23	AICTE Programme on Recent Trends in Power generation and Energy	Sathyabama Engineering College, Chennai-600 119	15.03.1999 to 27.03.1999	13 days

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Sl.No	Title	Organiser	Period	Remark
	Management			
24	AICTE Programme on Energy Efficiency and Conservation (EEC 99)	Institute for Energy Studies, Anna University, Chennai-25	09.12.1999 to 10.12.1999	2 days
25	AICTE Short Term Course on Computer Communication	Ramanujan computing Centre, Anna University Chennai-600 025	20.12.1999 to 31.12.1999	12 days
26	AICTE National Conference on Commercialisation of Renewable Energy Sources	Agricultural University Udaipur - 313 001	28.04.2000 to 29.04.2000	2 days
27	AICTE Short Term Course on New Approaches to Resource Management.	Ramanujan computing Centre, Anna University Chennai-600 025	29.05.2000 to 10.06.2000	13 days
28	AICTE Short Term Course on Network Administration.	Ramanujan computing Centre, Anna University Chennai-600 025	22.01.2001 to 03.02.2001	13 days
29	Indo-Swedish Workshop on Biofuel Conversion	IITM, Chennai - 25	09.12.03 to 11.12.03	3 days
30	Indo-Swedish Workshop on Biofuel Conversion	Dept of Mech Engg. IITM, Chennai - 25	14.12.04 to 16.12.04	3 days
31	AICTE-ISTE Short Term Training Programme on Advanced Energy technologies	Dept of Mech Engg. IITM, Chennai - 36	20.12.04 to 24.12.04	5 days
32	AICTE Faculty Development Programme on Fundamentals of Nanoscience and Technology	Dept of Physics Anna University Chennai - 25	18.01.2007 to 31.01.2007	14 days
33	TEQIP Seminar on Recent Trends in Polymers	Dept of Chemistry Anna University Chennai - 25	01.02.2007 to 02.02.2007	2 days
34	TEQIP sponsored FDP on Finite Element Analysis	Dept of Mech Engg. Anna University, Chennai - 25	23.02.2007 to 03.03.2007	10 days

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(Annexure – III)

Prizes, Medals and other Honours Received

- Secured **UNIVERSITY FIRST RANK** in B.E.(Mechanical Engineering) in 1988.
- Winner of the **Sir Gabriel Stokes Prize (Mechanical Branch) 1988 and the Dr.A.L.Mudaliar Prize (1988)**.
- Winner of **Distinguished Alumnus Award** for the year 1999 from Alumni association of Vellore Engineering College, Vellore.

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(Annexure – IV)

Membership in Scientific and Professional Societies

- MISTE - Member of Indian Society for Technucal Education
- Life Member from 1994, Membership No: LM 18600
- MISME - Member of Indian Society for Mechanical Engineers (Life Member)
- Life Member from 1993, Membership No: L 270
- MCI - Member of Combustion Institute (Life Member)
- Life Member from 1989, Membership No: LMC-577
- MSESI - Member of Solar Energy Society of India
- Life Member from 1998, Membership No: 0808/LM/98
- MIE - Member of Institution of Engineers
- Life Member from 2001, Membership No: M/121446/7

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