



Curriculum Vitae

Personal Information

1. Name : **Dr. R. Sundaresan**
- Permanent Home Address : **Dr. R. Sundaresan**
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- Permanent Native Address : **Dr. R. Sundaresan**
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Vellore District, Tamil Nadu, India
3. Gender : Male
4. Date & Place of Birth : 02-01-1961, Sholinghur
5. Nationality : Indian
6. Community : Hindu, Agamudiyar

Academic Qualification

Degree	College / University	Year of Passing	Marks obtained
B.E. (Mechanical Engg)	Government College of Engineering, Salem, University of Madras	1984	66%
M.E. (Thermal Power)	Annamalai University, Annamalai Nagar	1992	73%
Ph.D.	IIT Madras, Chennai	2002	----

Ph.D. Thesis : “Heat Transfer Studies in a Circulating Fluidized Bed Riser”

Research Guide : **Prof. Ajit Kumar Kolar**
HTTP Laboratory
Department of Mechanical Engineering
Indian Institute of Technology Madras
Chennai

Work Experience

Sl. No.	Employer	Position Held	Period	
			From	To
1	Vellore Institute of Technology, Vellore-632 014 Tamil Nadu	Lecturer	10-07-1986	31-08-1993
		Senior Lecturer	01-09-1993	31-12-1999
		Assistant Professor	01-01-2000	30-11-2003
		Associate Professor	01-12-2003	30-06-2006
		Professor	01-07-2006	31-12-2008
		Senior professor	01-01-2009	17-01-2011
		R&D Coordinator Division Leader (Energy Division)	15-09-2005 17-03-2008	06-09-2007 31-03-2010
2	Galgotias College of Engineering and Technology, Greater Noida	Director (Principal)	20-01-2011	29-09-2015
3	Kingston Engineering College, Vellore-632059 Tamil Nadu	Principal	26-10-2015	23-05-2017
4	Baish Community College, Jazan University, Baish Saudi Arabia	Associate Professor	02-01-2018	Till date

Teaching Experience

Under Graduate	:	32 years
Post Graduate	:	10 years
Research Experience	:	9 years
Total Experience	:	31 years

Areas of Expertise

- Heat Transfer
- Circulating Fluidized Bed
- Biomass Gasification
- Renewable Energy

Courses Taught

Undergraduate

- Heat and Mass Transfer
- Renewable Energy Technologies
- Power Plant Engineering

- Engineering Thermodynamics
- Heat and Mass Transfer Laboratory
- Power Generation Systems
- Refrigeration and AC Technology
- Hydraulics and Pneumatics

Postgraduate

- Advanced Energy Technologies
- Thermodynamics, Heat Transfer and Fluid Flow
- Fluidized Bed Combustion Technology
- Solar Energy Laboratory

Awards & Recognition

- Best teacher award in 1995 and 1996 from VIT University, Vellore.
- Recipient of **Dr. Radhakrishnan Gold Medal Award** from “Global Economic Progress & Research Association (GEPRA) for “Contribution to Education and National Development” on 5th September 2015.
- Recipient of **Bharat Gaurav Gold Medal Award** from “Global Economic Progress & Research Association (GEPRA) for “Individual Achievements in Education and Research” on 20th August 2017.

Membership

- Membership of Scientific Societies : Life Member of ISTE
Life member of ISHMT
Life member of SESI (LM/1324/2008)
Fellow of Institution of Engineers (India)
Fellow member of Board of Quality Standards,
UK
- Number of Ph.D./M.S.(By Research) Guided
 - Ph.D. : 1 (Completed and awarded degree in Aug, 2008)
 - M.S. (By Research) : 1 (Completed and awarded degree in Aug, 2013)
- Number of Research Publications : 22

Professional Activities

Reviewer of Journals

- Energy Conversion and Management – Elsevier Publication
- Applied Thermal Engineering – Elsevier Publication

Particulate Science and Technology	– Taylor & Sons
Energy for Sustainable Development	– Elsevier Publication
Experimental Thermal and Fluid Science	– Elsevier Publication

List of Publications

(a) International Journal

1. **M. Nagaraja, R. Sundaresan, I. Charles, R. Natarajan and J. Santha Priya (2018)**, ‘Hydro Electric Power Generation using Tidal Waves’, *International Journal of Advanced Research in Water Resources and Hydraulic Engineering*, **Vol. 1**, Issue 1 & 2, pp. 20-25.
2. **M. Nagaraja, I. Charles, R. Sundaresan and R. Natarajan (2015)**, ‘Gas Composition Studies on Wood Residues **Gasification** for Small Scale Power Applications in Villages’, *International Journal of Technology*, **Vol.5**, Issue 1, pp. 69-73.
3. **Leena Singh, R. Sundaresan and Renu Sarin (2014)**, Waste to Energy Generation from Municipal Solid Waste in India, *International Journal of ChemTech Research*, **Vol.6**, Issue 2, pp.1228-1232.
4. **Vivek Kumar Singh, P. L. Ravi Teja, Rajeev Kumar and R. Sundaresan (2014)**, ‘Improved Biomass Solid Fuel Cooking Devices and Adoptability Issues’, *International Journal of Scientific Research Engineering and Technology*, **Vol.2**, Issue 11, pp. 711-716.
5. **Rajeev Kumar, R. Sundaresan, M. Nagaraja and Vivek Kumar Singh (2014)**, ‘Experimental and Theoretical Investigation of Biomass Gasification using Circulating Fluidized bed gasifier’, *The International Journal of Engineering and Science*, **Vol. 3**. Issue I, pp. 11-15.
6. **R. Sundaresan and Ajit Kumar Kolar (2013)**, ‘Axial heat transfer correlations in a circulating fluidized bed riser’, *Applied Thermal Engineering*, Vol. **50**, pp. 985-996. (Cited by 12)
7. **M. Nagaraja, R. Sundaresan, R. Natarajan and T. Srinivas (2013)**, ‘Energy and by-products recovery from Tea waste’, *International Journal Electrical Energy*, Vol. **I**, No. 1, March 2013, pp. 49-54.
8. **M. Nagaraja and R. Sundaresan (2013)**, ‘Gasification of Juliflorachips in a Circulating Fluidized Bed Gasifier’ *International Journal of Energy Science*, Vol. **3**, Issue 2, April 2013, pp. 91-98. (Cited by 3)
9. **M. Nagaraja, K. Sivakumar, R. Sundaresan and S. Narayanan (2012)**, ‘Kaizen for standardizing educational institutions’, *Journal of Management and Science*, Vol. **2**, Issue 4, pp. 29-36.
10. **Yagnavalkya Mukkamala and R. Sundaresan (2009)**, ‘Single-phase flow pressure drop and heat transfer measurements in a horizontal microfin tube in the transition regime’, *Journal of Enhanced Heat Transfer*, Vol. **16** (2), pp.1-19. (Cited by 7)
11. **Yagnavalkya Mukkamala and R. Sundaresan**, ‘Single phase experiments in a variable length twisted tape augmented horizontal microfin tube in the transition regime’, *International Journal of Heat Exchanger* (Accepted for publication).
12. **R. Sundaresan and Ajit Kumar Kolar (2002)** ‘Core heat transfer studies in a Circulating fluidized bed’, *Powder Technology*, Vol. **124**, pp. 138-151. (Cited by 24)
13. **Ajit Kumar Kolar and R. Sundaresan (2002)** ‘Heat Transfer characteristics at an axial tube in a circulating fluidized bed riser’, *International Journal of Thermal Sciences*, Vol. **41**, pp. 673-681. (Cited by 20)

(b) International Conference

1. **R. Sundaresan** and **Ajit Kumar Kolar**, (2009) 'Heat transfer at a long electrically-simulated water wall in a circulating fluidized bed' *Proceedings of the 20th International Conference on Fluidized Bed Combustion*, held at Xian, China, pp.350-356.
2. **R. Sundaresan** and **Ajit Kumar Kolar**, (2008) 'Heat transfer at the top of a CFB riser with smooth exit' *Proceedings of the 9th International Conference on Circulating Fluidized Beds*, held at Hamburg, Germany, pp.345-350.
3. **R. Sundaresan** and **Ajit Kumar Kolar**, (2005) 'A semi-empirical heat transfer model in the core of a CFB riser' *Proceedings of the Eighth International Conference on Circulating Fluidized Beds*, held at China, International Academic Publisher, pp. 261-267.
4. **Ajit Kumar Kolar** and **R. Sundaresan**, (2002) 'Surface length effect on heat transfer in the core of a circulating fluidized bed riser', *Proceedings of the Seventh International Conference on Circulating Fluidized Beds*, held at Niagara Falls, Canada, pp. 105 – 112. Canadian Society for Chemical Engineering Publication.
5. **Ajit Kumar Kolar** and **R. Sundaresan**, (2001) 'Effect of axial tube location on heat transfer in the core of a circulating fluidized bed', *Proceedings of the Fifth World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics*, held at Greece, Vol. 3, pp. 1729-1734.

(c) National Conference

1. **R. Sundaresan**, and **Yagnavalkya Mukkamala**, (2004) 'Experimental Investigations on a State of The Art Solar Stirling Engine', *Proceedings of the 6th ISHMT/ASME Heat and Mass Transfer Conference*, Tata – McGraw Hill Publishing Company, New Delhi, pp. 833-838.
2. **R. Sundaresan** and **Ajit Kumar Kolar**, (2003) 'Effect of Axial tube location and tube height on heat transfer in a circulating fluidized bed', *Proceedings of the 4th National Workshop & Conference on CFB Technology and Revamping of Boilers in India*, held at Kolkata, pp. 319-331.
3. **R. Sundaresan** and **Ajit Kumar Kolar**, (2002) 'Heat transfer to tubes in the near-exit zone of a circulating fluidized bed riser', *Proceedings of the Fifth ISHMT/ ASME Heat and Mass Transfer Conference*, Kolkata, pp. 1394-1401. Tata–McGraw Hill Publishing Company, New Delhi.
4. **R. Sundaresan** and **Ajit Kumar Kolar**, (2001) 'Effect of operating parameters on heat transfer in the core of a circulating fluidized bed', *Proceedings of 12th ISME Conference*, held at Chennai, pp. 69-75.
5. **Ajit Kumar Kolar** and **R. Sundaresan**, (1999) 'Heat transfer in the core of the upper dilute region of a circulating fluidized bed', *Proceedings of the National Seminar on Coal & Coal combustion in utility boilers*, held at Noida, pp. VI 74 - VI 87.

Seminar / Conferences / Workshop Organized / Attended

Organized

- (a) Coordinator for One day workshop on “**Question Paper Setting and Evaluation**” organized by Kingston Engineering College, Vellore held on 9th July 2016.
- (b) Coordinator for **One Day NBA Workshop** organized by Kingston Engineering College, Vellore held on 28th February 2016.
- (c) Convener for One day Faculty Development Program on **Communication Skills Integrated with Modern Teaching Methods** organized by Kingston Engineering College held on 30th November 2015.
- (d) Coordinator for One-day workshop on **Emerging Dimensions in Civil Engineering** organized by Galgotias College of Engineering and Technology, Greater Noida held on 5th November 2011
- (e) Convenor for Two-day International Seminar on **Decentralized Power Generation: Prospects and Challenges** organized by Vellore Institute of Technology, Vellore during July 10 – 11, 2006 held at VIT, Vellore-14.
- (f) Convenor for Two-day Workshop on **Energy and Environment** organized by Vellore Institute of Technology, Vellore in cooperation with Aachen University of Applied Sciences, Aachen, Germany and Technical University, Eindhoven, Netherlands during October 19 – 20, 2005 held at VIT, Vellore.
- (g) Principal coordinator for AICTE-ISTE STTP on **Energy and Cryogenic Engineering** November 15 – 26, 2004 held at VIT, Vellore-14.
- (h) Convenor for Three-day Workshop on **Energy Week** jointly organized by Vellore Institute of Technology, Vellore and Aachen University of Applied Sciences, Aachen, Germany during March 11 – 13, 2004 held at VIT, Vellore.

Conference Attended

- a) 20th International Conference on Fluidized bed Combustion, held at **Xian, China** during May 18-21, 2009.
- b) International Congress on Renewable Energy (ICORE 2008), held at Hotel Le-Royal Meridien, **Chennai** during October 16-17, 2008
- c) 9th International Conference on Circulating Fluidized Beds, held at **Hamburg, Germany**, during May 13 – 16, 2008.
- d) 6th ISHMT/ASME Heat and Mass Transfer Conference held at Kalpakkam, **Chennai** January 2004.
- e) 12th ISME Conference held at Crescent Engineering College, **Chennai** during January 10-12, 2001.

Seminar / Workshop Attended

1. Participated one-day training programme on **Leadership Traits**, organized by VIT University on 16th March, 2010.
2. Participated two-day International Summit on **Global Trends in Higher Education and Challenges** organized by VIT University on 28th and 29th November 2009.
3. Participated one-day training programme on **Relationship Building**, organized by VIT University on 19th September, 2009.
4. Participated three-day Faculty Development Programme on **Thermal Engineering** organized by SMBS, VIT University during July 2 -6, 2009.
5. Participated One-day seminar on **Works Ethics** organized by VIT University on 8th November, 2008.
6. Participated One-day Division Leader Training Programme on **Challenge of Change** organized by VIT University on 18th October, 2008.
7. Participated 3-day **Professional Development Programme** organized by VIT University during September 22-24, 2008.
8. Indo-German workshop on **Major Aspects of Energy Research in India and Germany: The Challenges for the Future**, 20th and 21st June 2007, held at Anna University, Chennai.
9. Participated One-day workshop on **Compact Heat Exchangers** organized by IIT Madras, Chennai on 10th January 2004.
10. Participated **Two-day Educational Workshop** organized by Academic Staff College, held at Vellore Institute of Technology, Vellore from 28th and 29th November 2003.
11. Seminar on **Energy Conservation**, 21st December 2002, held at Bangalore.
12. One day workshop on **Solar Appliances**, 23rd February 2001, held at Hotel Trident, Chennai.
13. National Seminar on **Non-Conventional Energy Sources in Community Development**, 16th February 2001, held at Annamalai University, Annamalai Nagar.
14. Participated in **“Faculty Empowerment Programme”** organized by VIT during March 21 – 24, 2000.

Guest Lecture Arranged

- Guest lecgture on **“Recent advances in Automotive Transmission System”** by **K.H. Dhirendra**, SKF Technologies India Pvt Ltd, Bangalore on 6th August 2016 held at Kingston Engineering College, Vellore.

- Arranged guest lecture on “**Lean Manufacturing and Supply Chain Management**” by **Dr. P. Parthiban**, Assistant Professor NIT, Trichy on 7th September 2012 held at GCET, Greater Noida.
- Arranged guest lecture on “**Emerging Trends in Wind Power**” by **Mr. K. S. Krithivasan**, Additional General Manager (Retd.), Desalination Product Groups & Wind Electric Generators, BHEL, Ranipet on 28th September 2010.
- Arranged guest lecture on “**Introduction to Gas turbine power plants and combined cycle power plants**” by **Mr. Anandan Kannan**, Deputy General Manager, BGR Energy Systems Limited, Chennai on 4th February 2010.
- Arranged guest lecture on “**Recent Developments in Wind Energy**” by **Mr. K. S. Krithivasan**, Additional General Manager, Desalination Product Groups & Wind Electric Generators, BHEL, Ranipet on 7th September 2009.
- Arranged guest lecture on “**Cold from Heat-Innovative Heat Driven Cooling System**” by **Dr. Dieter Lukoschus**, Professor of Electrical Engineering (Retired), University of Applied Sciences, Gelsenkirchen, Germany on 27th January 2009.
- Arranged guest lecture on “**Recent Trends in Biomass Gasification and Pyrolysis**” by **Dr. E. Natarajan**, Professor, Anna University, Chennai on 22nd December 2008.
- Arranged guest lecture on “**Energy Scenario: Status and Future Trends**” by **Mr. K. S. Krithivasan**, Additional General Manager, Desalination & Wind Electric Generators, BHEL, Ranipet on 6th August 2008.
- Arranged guest lecture on “**Generation of Pneumatic Energy**” by **Mr. M. Amirthalingam**, Special Chief Engineer-Highways (Retd.), Tiruvannamalai on 3rd April 2008.

Major Research Projects

- **Principal Investigator** on “Experimentation and CFD Analysis of a 10 kW_e Circulating Fluidized Bed Biomass Gasifier” – Funded by DST, New Delhi, Cost **Rs. 25.62 Lakhs** (2007-2010-Completed).
- **Principal-investigator** on “Three Dimensional Numerical study of DC Plasma Spray Torch” – Funded by Board of Research on Nuclear Sciences, Department of Atomic Energy, Mumbai, cost **Rs. 7.868 Lakhs** (2007-2008-Completed).
- **Co-investigator** on “Development of technology for Upgradation of producer gas from Biomass Gasifier as feed stock in Solid Oxide Fuel Cell for Power Generation” – Funded by DST, New Delhi, Cost **Rs. 21.52 Lakhs** (2006-2009-Completed).

- **Co-investigator** on “Performance Enhancement of a Micro-Controlled Room Air-Conditioner using Twisted Tapes and Internally Finned Tubes” – Funded by UGC, New Delhi, Cost **Rs. 2.62 Lakhs** (2004-2005-Completed).

Other Information

- Established Energy Systems Laboratory for M.Tech. (Energy Systems Engineering).
- Participated ISTE-Winter School on “**Co-generation and Waste Heat Recovery**” held at Anna University from December 5th – 18th, 1993.
- Participated in Quality Improvement Programme on “**Reliability Modeling and Evaluation**” held at IIT Bombay from May 2nd – 13th, 1994.
- Attended CEP Course on “**Clean Power Generation**” held at IIT New Delhi from July 6th – 10th, 1998.
- Attended “**Computational Fluid Dynamics Fluent / Gambit Training**” held at Pune from May 23rd – 26th, 2000.
- Associated with AICTE-ISTE Summer school on “**Recent Trends in Energy Conservation through Exergetic system optimization**” organized by VIT, Vellore from June 19th – 30th, 2000.
- Associated with three day workshop on “**Advances in Fluidized Bed Technologies and Applications**” organized by VIT, Vellore from July 13th – 15th, 2001.

Abroad Assignment

- Visits Greensafe International Pt Ltd, **Singapore** from 20th May 2010 to 27th May 2010.
- Visits **Xian, China** to present research paper in 20th International Conference on Fluidized Bed Combustion during 18-21 May 2009.
- Visits **Technical University, Hamburg Harburg, and Leibniz University Hannover, Germany** from 13th May to 20th May 2008.
- Visits **Technical University, Eindhoven, The Netherlands** and **Aachen University of Applied Sciences, Aachen, Germany** from 23rd April 2005 to 14th May 2005 under EU-ASIA Link Programme for curriculum development of new B.Tech. Course in Mechanical and Energy Engineering.
- Visits **University of Applied Sciences, Gelsenkirchen, Germany** from 15th April to 15th September 2003 for MoU project on “**Solar Cooling**”.

References

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