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Education

B.E.,	Mechanical Engineering	Bangalore University, with distinction, 1984.
Master degree	Faculty of Engineering	Indian Institute of Science, Bangalore, India, 1995
Ph D	Faculty of Engineering	Indian Institute of Science, Bangalore, India, 1997.

Employment

• Professor	June 2017 to present
• Associate Professor	March 2012 to June 2017
• Principal Research Scientist	August 2008 to August 2012
• Various research positions at IISc with tenure	August 1985 to August 2008
• Student trainee and Project Engineer	Sept 1984 to July 1985

Specialization and Expertise

The research, design and development work has majorly focused on areas related to energy by addressing both scientific and technological challenges in the area of combustion of solid, liquid and gaseous fuels. A major part of the research has been in the form of contributions to fundamental combustion science, which has further provided impetus towards technology development as a part of sponsored research and industrial project outputs. The scientific research outputs have significantly contributed towards the translational research, an essential component in the engineering domain – "Process to Product philosophy." Some of the specific areas of research are,

- Thermochemical conversion process
  - Oxy-steam gasification for producing hydrogen rich syngas for fuel cell applications
  - Propagation rates in packed bed reactors
  - Evaluation of tars from gasifier
- Catalyst development and FT process for liquid fuel
- SOFC using alternate fuel
- In-cylinder diagnostics for alternate fuel
- Clean coal technology
- Hydrolysis process during biological conversion
- Methanol and DME from syn-gas
- Energy system modeling
- Modeling of renewables systems
- Standards for gasifiers and stove evaluation

Taking forward the research outcomes, through Translational research process, the engineering of the technology products developed has serviced both industrial needs as well as Indian Rural Sector. Uniquely, the research activity that I had begun earlier in my career, with further advancement in recent times has translated to technology packages that have been transferred to various countries like Africa (Zambia, Kenya, Benin, Nigeria,), Latin America (Brazil, Cuba), Europe (Switzerland, Italy), Asia (Japan, Cambodia, Sri Lanka) and the United States of America which have unique combinations of high energy efficiencies on one side and reliability (low MTBF on the other) and achieving these without too much tradeoff between the two criteria. This work has led to **mainstreaming of bio-energy** in the renewable sectors.

Honors and Awards

1. **Keynote address** titled " Biomass gasification and by-products" at the μCHP 16 – micro cogeneration through biomass gasification, University of Bolzano, Italy Dec 2 and 3 2016.
2. **AREAS Foundation Day Awards for excellent performance in the field of renewable energy** - Awarded in recognition of its performance in the area of biomass gasification technology for the year 2015 by the Minster of State, MNRE., August 27, 2015. Jointly by Prof. S Dasappa and Dr. NKS Rajan
3. Shivapuji, A. M., and Dasappa, S. (2015). Performance evaluation tool for simulating gas engine – a GUI package, Proceeding of - The International Bioenergy Conference and Exhibition 2015, Shanghai, **Best Visual Presentation Award**
4. **Plenary talk** titled "Small capacity producer gas engine adaption from natural gas for decentralized power generation application" at the International Bioenergy (Shanghai) Exhibition and Asian Bioenergy Conference 2015.
5. **Plenary lecture at the** 24th European Biomass Conference & Exhibition – Amsterdam, Netherlands, between 6 and 9th June 2016.
6. **Best Visual Presentation Award,** Shivapuji, A. M., & Dasappa, S. (2015). Performance evaluation tool for simulating gas engine – a GUI package, Proceeding of - The International Bioenergy Conference and Exhibition 2015, Shanghai,
7. Invited lecture, **Research to the product: A treatise on sustainable biomass energy** at Department of Management, Indian Delivered lecture Energy Series at the GE, John Welsh Centre, Bangalore to the Energy and water group focusing on Renewable Energy in India. 2007.
8. Delivered **Robert Bosh Lecture Series** at Robert Bosch Engineering and Business Solutions Limited, Bangalore, March 2009, "Research to Reality: a perspective " Institute of Science, 15 March 2013.
9. **Best Visual Presentation Award** at the 17th European Biomass Conference and Exhibition, Hamburg, 29th June – 3rd July 2009.
10. CII National Award for the **"Innovative Energy Saving Product / Service" of the year Award** for its producer gas generator set that was selected for its uniqueness, yet adaptability to a variety of applications Sept 2007, jointly between Cummins India Limited and ABETS, IISc.
11. **Best paper and presentation award** at the World Bamboo Core member of the team, which was awarded **"FICCI Annual Award for Outstanding Achievement in Research in Science and Technology"** by the Prime Minister, during the Annual General Meeting of FICCI held in Delhi on 24 December 2005.
12. Best paper and presentation award at the World Bamboo Congress, New Delhi, 2004 New Delhi, 2004.
13. Core member of the team which was awarded **"Nina Saxena Excellence in Technology Award – 2011" IIT Kharagpur, 18 August 2011.**
14. Best paper award at the **19th National Conference on IC Engines and Combustion, 2005.**
15. **Prof. Satish Dhawan Young Engineers State Award** instituted by Government of Karnataka, for the year 2004, (honored in 2006)

16. **Young Scientists Award**, For the best paper and presentation at the Fourth National meet on Recent Advances in Biomass Gasification Technology, Mysore,1993, sponsored by the Ministry of Non-Conventional Energy Sources, Government of India.
17. **Young Scientists Award**, For the best paper and presentation at the Third National meet on Recent Advances in Biomass Gasification Technology, Baroda,1991, sponsored by the Ministry of Non-Conventional Energy Sources, Government of India.
18. **Young Scientists Award**, For the best paper and presentation at the First National meet on Recent Advances in Biomass Gasification Technology, Bombay,1990, sponsored by the Ministry of Non-Conventional Energy Sources, Government of India.

Summary of Academic Experience

Summary of Faculty experience

- **Graduate student mentoring**
    - Doctoral dissertations and Masters Thesis: Five Ph.D. thesis awarded, and five ongoing in the area of combustion, solids, gas and liquids with a focus on experiments and modeling of processes. The thermo-chemical conversion process, Internal combustion engines, solid oxide fuel cell, hydrogen generation, FT process for liquid fuel and bioenergy. Hybrid energy, Coal gasification, Methanol and DME from syn-gas, Energy system modeling.

Ph D Awarded

1. Anand M Shivapuji, *In-cylinder experimental and modeling studies on producer as fueled operation of spark-ignited gas engines*, 2015.
2. Dario Prando Ph.D. at the Free University of Bolzano, Italy *Use of Biomass in South-Tyrol : Energy conversion and distribution to the final users*, 2015 (Jointly with Marco Baratieri and Andrea Gasparella)
3. Snehesh Shivananda Ail, *Combustion Synthesized Cobalt catalysts for liquid fuel generation via Fischer-Tropsch reaction*, 2016.
4. Sadhan Mahapatra, *Experimental and analysis on wood gasification in an open top downdraft gasifier*, 2016.
5. Sandeep Kumar, Experiments *and Analysis on Wood Gasification in an Open Top Downdraft Gasifier*, 2016.

Ph D Ongoing

1. Rakesh N, *Experiments and Modeling of fueling an SOFC with producer gas*, 2013.
2. Ravi Kumar, *Experiments and Modeling of Biochemical conversion of biomass*, 2014. (Jointly with HN Chanakya).
3. Arvind Gupta, *High purity hydrogen from biomass through thermo-chemical conversion*, 2015.
4. Suresh N, *Experiments and Modeling of PEM fuel cells*, 2015. ERP (Jointly with Anushu Bharadwaj)
5. Arashdweep Singh, Thermo-*chemical conversion of biomass to Activated carbon and other by products*, 2017 (Jointly with LN Rao).

MTech Research Awarded

- Ravi Kumar Master thesis (M Sc) at the Indian Institute of Science: *Effect of Extractives and Crude proteins on the kinetics of hydrolysis in a solid state bioreactor*, 2013. (Jointly with HN Chanakya)

    - Master's thesis advised: **20 master's thesis** in the area of combustion, gasification, fuel cells and IC engines with students from other institutions.

Ongoing M Tech research

1. Rohit Baruah, Experimental investigations on the incineration of sanitary napkins with focus on emissions, 2015 - (Jointly with HN Chanakya).
2. Amit Kumar, Water-gas shift reaction, 2015 - (Jointly with LN Rao).

- **Graduate level teaching at IISc Bangalore (2002- present) IISc**

  I was instrumental in developing academic program at the centre by offering courses, which later led to gain academic status with intake of research students. Most of the courses are jointly offered due to the interdisciplinary nature of the subjects taught. Developed a compulsory 200 level course of CST students with other faculty - Sustainable energy and environment lab, 300 level course Mathematical Analysis of Experimental Data

  1. Bio-energy Systems (first time introduced by me at the Centre) 2002, 2003, 2005, 2007, 2008,2010
  2. Sustainable energy and environment lab 2011, 2012, 2013,2014, 2015, 2016
  3. Alternate fuels for reciprocating engines 2011, 2012, 2016 (Alone)
  4. Renewable Energy, Environment and Economics 2003, 2007, 2010 2011,
  5. Energy systems and sustainability 2004, 2012, 2013, 2014, 2015
  6. Thermo-chemical and biological energy recovery from biomass 2014, 2016
  7. Renewable Energy Technologies 2014, 2015,, 2106
  8. Mathematical Analysis of Experimental Data, 2016

  Undergraduate teaching at IISc

  1. Design Principles in Environmental Engineering, 2016

- **Research support and collaboration**

    - Extramural Research support: Research grants and support from agencies like MNRE, DST, UNIDO, UNDP, RCUK, Italian MATT, SIDA, Cummins, EKZ – Switzerland, DRDO, Tata Motors,

- **Global collaborations and Teamwork**

    - Collaborative research with KTH, EKZ, ETH, UNIDO, UNDP, RCUK, MATT, in various scientific programs, have resulted in publications and report of archival value

- **<u>Travel and presentations</u>:** Have extensively travelled to and presented research outcomes in the USA, Mexico, Austria, Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, United Kingdom, Cuba, Brazil, Chile, Uruguay, Benin, Ethiopia, Kenya, Nigeria, South Africa, Tanzania Uganda, Zambia, Swaziland, Cambodia, Fujairah, Malaysia, Nepal, China, Japan, Canada, Austrailia, and Thailand as part of invited lectures, conference, meetings, workshops, program reviews and industrial collaboration.

Summary of research output (papers, patents, technology development)

	Total
Journals	54
Books	3
Chapters in books	12
Working papers (UNIDO)	2
Patents granted	14
Patents filed	9
Conferences/seminars/Symposia	113
Reports/Monographs, etc	26
Journals, submitted	6
Total	**239**
Awards and recognition	14
Project funds generated, Million INR	**650**
Technology transfers (India and overseas)	17

Google scholar		
Citation indices	All	Since 2012
Citations	1559	978
h-index	21	17
i10-index	31	28
Scopus		
h-index	16	
Students guidance		
5 Ph.D. awarded		
1 Master's thesis awarded		
5 Ph.D. and **2** Master's theses are in progress		

Publications

Book

1. Biomass to Energy: The Science and Technology of the IISc Bio-energy systems, S Dasappa, HS Mukunda P J Paul, NKS Rajan and team CGPL, Dept of Aerospace Engg., Indian Institute of Science, 2003. (155 pages)
2. Derek J Gardiner, Sukanta Roy, Momir Djurovic, Richard Corkish, Ajith de Alwis, Hiroshi Yoshino, Atul Raturi, M Ravindran, S Dasappa, Arun Kumar, Mohd Nordin Hasan, Science plan on sustainable energy, as a part of International Council for Science (ICSU) , Regional office for Asia and the Pacific, June 2009.

Chapters in Books:

1. S. Dasappa, Thermochemical Conversion of Biomass, Transformation of Biomass: Theory to Practice, John Wiley & Sons, Ltd, 133-157, 2014.
2. S. Dasappa, Biomass gasification: Some of the experiences from India, Handbook Biomass gasification, Second Edition, BTG, Netherlands, 2012.
3. S. Dasappa, Status, potential and challenges of promoting biomass gasification technologies for industrial applications in Africa; An UNIDO publlication, 2008.
4. S Dasappa, Biomass Gasification: for energy needs of the Tea Industry,, Economic crisis in Teas Industries – Strategies for Sceintific Management, Eds NK Jain, F Rahman and Peter Baker, Stadium Press LLC, 2008.
5. H. S. Mukunda and S. Dasappa, "Regional programme on Biomass energy – Gasification and Bio-fuels for productive uses in the LAC Region" An UNIDO publlication, 2006-07.
6. S Dasappa, "Overview of a few gasification technology packages in use overseas", Chapter in a book entitled "Biomass Based Decentralized Power Generation" published by SPRERI, 2005.
7. PJ Paul, S. Dasappa, G Sridhar, H V Sridhar, " Biomass Derived Energy Carriers as Fuels in Engines and Fuel cells, Chapter in a book entitled "Biomass Based Decentralized Power Generation" published by SPRERI, 2005.
8. P J Paul, M Jayamurthy, S Dasappa, G Sridhar, H V Sridhar, H S Mukunda, NKS Rajan, C Brage, T Liliedahl and K Sjostrom, "Tar characterisation in new generation agro-residue gasifier-cyclone and downdraft open top twin air entry systems", Published in Biomass Gasification and Pyrolysis: State of the Art and Future prospects, Eds: Kaltschmitt K and Bridgwater AV, CPL Press, UK, 1997.
9. H. S. Mukunda, S. Dasappa, P J Paul, N K S Rajan, G Sridhar, H V Sridhar and U Shrinivasa "Thermo-chemical conversion of biomass – a retrospective and a prospective", Chapter in book entitled " Rural Technology : a 25 years retrospective" Vol. 2. as part of Silver Jubilee celebration, ASTRA, 2004.
10. H S Mukunda, S Dasappa, P J Paul, N K S Rajan, U Shrinivasa, G Sridhar and H V Sridhar, "Fixed bed gasification for electricity generation", Published in Biomass Gasification and Pyrolysis: State of the Art and Future Prospects, Eds: Kaltschmitt K and Bridgwater AV, CPL Press, UK, 1997.
11. H S Mukunda, S Dasappa and U Shrinivasa, ``Wood Gasification in open top gasifiers -- Technology and Economics", published in a book entitled Renewable Energy - Sources for Fuels and Electricity, Island Press, Washington D C, 1993.
12. B.N. Baliga and S. Dasappa `` Economics of wood based Published in a book "Power generation through renewable sources of energy," Tata McGraw Hill, 1991.

Journal Papers

1. Shivapuji, A. M., and Dasappa, S. Analysis of thermodynamic scope engine simulation model empirical coefficients: Suitability assessment and tuning of conventional hydrocarbon fuel coefficients for bio syngas. Accepted for publication in the International Journal of Hydrogen Energy, 2017.
2. Shivapuji, A. M., and Dasappa, S. Quasi dimensional numerical investigation of syngas fuelled engine operation: MBT operation and parametric sensitivity analysis; Accepted for publication in Applied Thermal Engineering, 2017.
3. AS Snehesh, HS Mukunda, S Mahapatra, S Dasappa, Fischer-Tropsch route for the conversion of biomass to liquid fuels-Technical and economic analysis, Energy, 182-191, 2017.
4. Sandeep K and , S. Dasappa, Modeling and analysis of single particle conversion of biomass in a packed bed gasification system. Applied Thermal Engineering.:12: pp.1382-1395, 2017.
5. D. Prando, S. Shivananda Ail, D. Chiaramonti, M. Baratieri, S. Dasappa, Characterisation of the producer gas from an open top gasifier: Assessment of different tar analysis approaches Fuel 181 566–572, 2016.
6. Snehesh A Shivananda and S Dasappa. Investigations into enhanced wax production with combustion synthesized Fischer-Tropsch catalysts accepted Energy Conversion and Management, Volume 116, Pages 80–90, 2016.
7. Sadhan Mahapatra, K Sandeep, S Dasappa Gasification of wood particles in a co-current packed bed: experiment and model analysis, Fuel Processing Technology 145, 76-892016.
8. Monikankana Sharma, Rakesh N and S. Dasappa Solid oxide fuel cell operating with biomass derived producer gas: status and challenges, Renewable & Sustainable Energy Reviews 60, 450-463, 2016.
9. Snehesh A Shivananda and S Dasappa, Biomass to liquid transportation fuel via Fischer-Tropsch synthesis - Technology review and current scenario, accepted for publication in Renewable & Sustainable Energy Reviews, 58, 267-286, 2016.
10. AM Shivapuji, S Dasappa, Influence of fuel hydrogen fraction on syngas fueled SI engine: Fuel thermo-physical property analysis and in-cylinder experimental investigations, International Journal of Hydrogen Energy,.40 (32), 10308-10328, 2015
11. Monikankana Sharma, Suresh Attanoor and S. Dasappa, Investigation into co-gasifying Indian coal and biomass in a down draft gasifier-Experiments and analysis, Fuel Processing Technology, 138, 435-444, 2015.
12. K Sandeep, S Dasappa, First and second law thermodynamic analysis of air and oxy-steam biomass gasification, International Journal of Hydrogen Energy 39 (34), 19474-19484, 2014.
13. AM Shivapuji and S Dasappa, In-cylinder investigations and analysis of a SI gas engine fuelled with H_2 and CO rich syngas fuel: Sensitivity analysis of combustion descriptors for engine diagnostics and control, International Journal of Hydrogen Energy 39 (28), 15786-15802, 2014.
14. Sadhan Mahapatra and S. Dasappa, Experiments and analysis of propagation front under gasification regimes in a packed bed" Fuel Processing Technology 121, 83-90, 2014.
15. Sadhan Mahapatra and S. Dasappa, Influence of surface area to volume ratio of fuel particles on gasification process in a fixed bed", Energy for Sustainable Development 19, 122-129, 2014.
16. Anand M Shivapuji, and S. Dasappa, Selection and thermodynamic analysis of a turbocharger for a producer gas-fuelled multi-cylinder engine" Journal of Power and Energy, vol 28(3), 340-356, 2014.
17. Sandeep K and Dasappa S, Oxy–steam gasification of biomass for hydrogen-rich syngas production using downdraft reactor configuration, International Journal Energy Research,; 38:174–188, 2014.
18. Anand M Shivapuji, and S. Dasappa, Experiments and Zero D modeling studies using specific Wiebe coefficients for producer gas as fuel in spark ignited engines - Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 227(3), 504-519. 2013.

19. S Dasappa,Scientific and technological aspects of fixed bed biomass gasification, The American Chemical Society, 246, 2013.
20. S Dasappa, S Kumar, First and second law thermodynamic analysis of biomass gasification The American Chemical Society, 246, 2013.
21. S. Dasappa and H V Sridhar. Performance of diesel engine in a dual fuel mode using producer gas for electricity power generation, International Journal of Sustainable Energy, 2013, Vol. 32, No. 3, 153–168, Taylor and Francis.
22. S Dasappa, G Sridhar, and PJ Paul. Adaptation of small capacity natural gas engine for producer gas operation, - Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2012 vol. 226 no. 6, 1568-1578.
23. S Dasappa, HV Sridhar and Indrajit Muzumdar, Experimental study and Thermodynamic analysis of a turbocharger with producer gas as fuel" Journal of Mechanical Engineering Science, 2012 vol. 226 no. 4 1004-1015 , Springer.
24. Sadhan Mahapatra and S. Dasappa, An approach for off-grid biomass distributed generation in lieu of grid extension, Energy for Sustainable Development, Energy for Sustainable Development, 16 (2012) 146–154, Elsevier.
25. P.M. Gnanendra, D.K. Ramesha, S. Dasappa, Preliminary investigation on the use of biogas sludge for gasification, *International Journal of Sustainable Energy*, Vol. 31, No. 4, August 2012, 251–267. Taylor and Francis.
26. S. Dasappa, Potential of biomass energy for electricity generation in Sub-Saharan Africa Journal on Energy for Sustainable Development, 15, 2011, 203–213, Elsevier.
27. S Dasappa, D.N. Subbukrishna, K.C. Suresh, P.J. Paul and G. S. Prabhu, Operational experience on a grid connected 100 kWe biomass gasification power plant in Karnataka, *Energy for Sustainable Development*, 15, 2011, 231–239, Elsevier.
28. S. Dasappa, H. V. Sridhar, G. Sridhar, and P.J. Paul, Science and technology aspects of bio-residue gasification, Biomass conversion and biorefinery, 1, 2011, 121–131, Springer.
29. H. S. Mukunda, S. Dasappa, P. J. Paul, N. K. S. Rajan, Mahesh Yagnaraman, D. Ravi Kumar and Mukund Deogaonkar Gasifier stoves – science, technology and field outreach ; Current Science, Vol. 98, NO. 5, 2010, 627-638. Indian Academy of Sciences.
30. S. Dasappa, Sustainable energy from Biomass – present and future for the Asia-Pacific region, Special issue : Sustainable Energy in Asia and the Pacific – Emerging Technologies and Research Priorities, Malaysian Academy of Sciences, 2010.Sustainable Energy in Asia and the Pacific.pdf
31. Sadhan Mahapatra, H.N. Chanakya and S. Dasappa, Evaluation of various Energy devices for Domestic Lighting: Technology and Economics, Energy for Sustainable Development, 13, 2009, 271–279, Elsevier.ESD_lighting.pdf
32. Ravindranath, N. H., Balachandra, P., Dasappa, S and Usha Rao, K., "Bioenergy Technologies for Carbon Abatement", Biomass and Bioenergy, Vol. 30, No. 10, 2006, pp 826 - 837.Carbon abatement.pdf
33. G. Sridhar, H. V. Sridhar, Basawaraj, M.S.Sudarshan H. I. Somsekhar, S. Dasappa and P. J. Paul Case Studies on Small Scale Biomass Gasifier Based Decentralized Energy Generation Systems, MGRIRED Journal (Southern Region) Vol-1, Issue, 1 March 2007.
34. G. Sridhar, H.V. Sridhar, S. Dasappa, P.J. Paul, N.K.S. Rajan and H.S. Mukunda, Development of Producer Gas Engines, Journal of automobile engineering, Part D, Proc. Institute of. Mechanical Engineers, Vol. 219, 2005, pp – 423-438.
35. G. Sridhar, S. Dasappa, H.V. Sridhar, P.J. Paul and N.K.S. Rajan, Gaseous emissions using producer gas as fuel in reciprocating engines, SAE Technical Paper 2005-01-1732, 2005, doi:10.4271/2005-01-1732.
36. S. Dasappa, P.J.Paul, H.S. Mukunda, N.K.S.Rajan, G. Sridhar and H.V.Sridhar. "Biomass gasification technology – a route to meet energy needs", Current Science, Vol. 87, No. 7 pp. 908 – 916, 2004.

37. N.H.Ravindranath, H.I.Somashekar, S.Dasappa, C.N.Jaysheela Reddy, Sustainable biomass power for rural India: Case study of biomass gasifier for village electrification. Current Science, Vol. 87, No. 7 pp. 932 – 941, 2004.
38. S Dasappa, "Biomass gasification for energy needs of Tea Industry, International Journal of Tea Science, Special issue on Impact of Science on the Economics of Tea Industry, Vol 3, pp 83-94, 2004.
39. S. Dasappa, H. V. Sridhar, G. Sridhar, P. J. Paul, and H. S. Mukunda, Biomass Gasification – a substitute to fossil fuel for heat application, Biomass and Bioenergy, v. 23, pp. 637-649, 2003.
40. S Dasappa and P J Paul, Gasification of char particles in packed beds – analysis and results, International Journal of Energy Research, 25:1053-1072, 2001.
41. H I Somashekar, S Dasappa and N H Ravindranath, Rural bioenergy centers based on biomass gasifiers for decentralized power generation: case study of two villages in southern India, The Journal of the International Energy Initiative, Energy for sustainable development, vol. IV No. 3 Oct 2000.
42. S Dasappa, P J Paul, H S Mukunda and U Shrinivasa, "Wood-char gasification: Experiments and analysis on single particles and packed beds", proceeding of the Twenty-seventh International Symposium on Combustion, Boulder, Denver, USA, 1998.
43. G Sridhar, H V Sridhar, S Dasappa, P J Paul, N K S Rajan, U Shrinivasa and H S Mukunda, "Technology for gasifying pulverised bio-fuels including agricultural residues", Energy for Sustainable Development; The Journal of the International Energy Initiative, vol. III, No.2, 1996.
44. N M Patel, P J Paul, H S Mukunda and S Dasappa "Combustion studies on concentrated distillery effluents" proceeding of the the Twenty-sixth International Symposium on Combustion, The Combustion Institute 1996.
45. H S Mukunda, P J Paul, S Dasappa, U Shrinivasa, H Sharan, R Buehler, P Hasler and H Kaufmann, "Results of an Indo-Swiss programme for qualification and testing of a 300 kW IISc-Dasag gasifier" Energy for Sustainable Development; The Journal of the International Energy Initiative, vol. 1, No.4, 1994.
46. H S Mukunda, S Dasappa, P J Paul, N K S Rajan and U Shrinivasa, "Gasifiers and combustors for biomass - technology and field studies", Energy for Sustainable Development; The Journal of the International Energy Initiative, vol. 1, No.3, 1994.
47. S Dasappa, H V Sridhar, P J Paul, H S Mukunda and U Shrinivasa, "On the combustion of wood-char spheres in O_2/N_2 mixtures - Experiments and Analysis", proceedings of the Twenty-fifth International Symposium on Combustion, Irvine, California, USA, 1994.
48. S Dasappa, P J Paul, H S Mukunda and U Shrinivasa "The Gasification of Wood Char Spheres in CO_2 -- N_2 mixtures -- Analysis and Experiments" Chem. Engg. Sci., vol.49, No. 2, pp. 222--232,1994.
49. H S Mukunda, S Dasappa, B.Swathi and U Shrinivasa, "Studies on Stove For Powdery Biomass", International Journal on Energy Research, vol.17, 2,pp. 81-291 1993.
50. B N Baliga , S Dasappa, H S Mukunda and U Shrinivasa, ``Gasifier based power generation: Technology and Economics", Sadhana, Indian Academy of Sciences, Vol.18, Part 1, March 1993
51. S N Srinivas, N H Ravindranath, S Dasappa, U Shrinivasa and H S Mukunda, " Wood Gasifier Based Rural Power Generation System :A case study", Pacific & Asian Journal of Energy 2, New series, 81 - 91,Vol. 2, No. 2, Dec 1992.
52. S. Dasappa, U. Shrinivasa, B.N. Baliga, H.S. Mukunda, `` Five-kilowatt wood gasifier technology: Evolution and field experience", Sadhana, Indian Academy of Sciences, Vol.14, Part 3, Dec. 1989.
53. H.S. Mukunda, U. Shrinivasa and S. Dasappa, `` Portable single-- pan wood stoves of high efficiency for domestic use ", Sadhana, Indian Academy of Sciences, Vol.13, Part.4, Dec. 1988.
54. S. Dasappa, Vikram Reddy, H.S. Mukunda and U. Shrinivasa, `` Experience with gasifiers for 3.7 kW Engines ", AMBIO - The Royal Swedish Academy of Sciences, Vol.14, 1985.

Working papers

1. H. S. Mukunda and S. Dasappa, "Regional programme on Biomass energy – Gasification and Bui-fuels for productive uses in the LAC Region" An UNIDO publlication, 2006.
2. S. Dasappa, Status, potential and challenges of promoting biomass gasification technologies for industrial applications in Africa., An UNIDO publlication, 2007.

Patents

Granted

1. S. Dasappa, P. J. Paul and N.K.S. Rajan, Producer gas carburetor, European PATENT granted.2496818 June 2015.
2. S. Dasappa, P. J. Paul and N.K.S. Rajan, Producer gas carburetor, US PATENT 9,181,901 granted November 2015.
3. HS Mukunda, S. Dasappa, P.J. Paul, N.K.S. Rajan, D.N. Subbukrishna, A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Vietnam Granted Patent No. 11795, dated, 2013.
4. H.S. Mukunda, P.J. Paul, S. Dasappa, N.K.S. Rajan, G. Sridhar, H.V. Sridhar An improved biomass gasifier, Japanese Patent granted No. 4805520, Dated 2011.
5. HS Mukunda, S. Dasappa, P.J. Paul, N.K.S. Rajan, D.N. Subbukrishna, A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Japan Granted Patent No. 4537379, dated, 2010.
6. H.S. Mukunda, S. Dasappa, P.J. Paul, NKS Rajan, DN Subbukrishna A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Indonesian Patent granted No. ID P 0024190, Dated 2009.
7. S. Dasappa, H.S. Mukunda, P.J. Paul, N.K.S. Rajan, G. Sridhar, HV Sridhar, A process and apparatus for cleaning tar and dust laden gas to highest level of purity using Cn Technology, Indian Patent granted No. 215917, Dated 2008.
8. H.S. Mukunda, S. Dasappa, P.J. Paul, NKS Rajan, D.N Subbukrishna. A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Chinese Patent granted No. ZL 200480005829.5, Dated 2008.
9. H.S. Mukunda, S. Dasappa, P.J. Paul, NKS Rajan, DN Subbukrishna A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Indian Patent granted No. 216477, Dated 2008.
10. HS Mukunda, S. Dasappa, P.J. Paul, NKS Rajan, M. Jayamurthy, A process of removing hydrogen sulfide from a gaseous stream containing hydrogen sulfide. Indian Patent Granted no. 193111.
11. H.S. Mukunda, S. Dasappa, P.J. Paul, N.K.S. Rajan, G. Sridhar, H.V. Sridhar, Fuel efficient biomass stove and a method of operating the stove, Indian Patent granted No. 229283, Dated 2009.
12. H.S. Mukunda, PJ Paul, S Dasappa, NKS Rajan, G Sridhar, HV Sridhar, An improved biomass gasifier, , Indian Patent granted No. 217056, Dated 2008.
13. HS Mukunda, PJ Paul, S Dasappa, NKS Rajan, , G Sridhar, HV Sridhar "Biomass Gasifier" Oct. 2000 9623(P-11) Switzerland 1840/99 Patent no. 693 929.
14. HS Mukunda, PJ Paul, S Dasappa, NKS Rajan, , G Sridhar, HV Sridhar "Biomass Gasifier" Oct 1998 Indian Patent no. 217056.

Patents Filed

1. S Dasappa and Sandeep Kumar, System and Method for producing hydrogen rich syn-gas for hydrogen generation Indian Patent Application No. 6783/CHE/2015 dated 21/12/2015.
2. Snehesh Shivananda Ail and S Dasappa, Metal catalysts and process for preparation, Indian Patent Application No. 6490/CHE/2015 dated 03/12/2015.
3. HS Mukunda, S. Dasappa, P.J. Paul, N.K.S. Rajan, D.N. Subbukrishna, A novel process and apparatus for the manufacture of precipitated silica from rice husk ash, Thailand patent application No. 088822.
4. H. S. Mukunda, S. Dasappa, N.K.S. Rajan and P. J. Paul, Biomass stove apparatus and method for its use, H, Indian Patent application No: 1763/CHE/2008.
5. H. S. Mukunda, S. Dasappa, N.K.S. Rajan and P. J. Paul, IISc Ejector Induced Gasification Stove - n kg/hour Indian Patent application No: 3202/CHE/2008.
6. S. Dasappa, P. J. Paul and N.K.S. Rajan, Producer gas carburetor, Indian PATENT APPLICATION NO: 2659/CHE/2009.
7. S. Dasappa, H.S. Mukunda, P.J. Paul, N.K.S. Rajan, G. Sridhar, H.V. Sridhar, A process and apparatus for cleaning Tar and Dust laden gas to highest level of purity using C^n Technology, PCT/IN2010/000713 filed on 1-12-2010.
8. H.S. Mukunda, S. Dasappa, P.J. Paul, N.K.S. Rajan, , G. Sridhar, H.V .Sridhar, Fuel efficient biomass stove and a method of operating the stove, PCT, application No. 45524-50484).
9. S. Dasappa, D.N. Subbukrishna, P. J. Paul, N.K.S. Rajan, Charcoal from biomass using gasification, Indian Patent Application No. 2246/CHE/2011.

International/National Conferences Papers

1. Rumi Rajbongshi, Pranab Deb, Sadhan Mahapatra and S Dasappa , Biomass gasifier based hybrid energy system optimization for energy access by using HOMER, Proceedings of the 24th European Biomass Conference and Exhibition, 1612-1618, 2016
2. S Dasappa, Anand M Shivapuji, Amit Kumar, Modeling of Solid oxide fuel cell for producer as application, proceeding of the 24th European Biomass Conference and Exhibition, pp 831-836, 2016.
3. S Dasappa and Bharti, Well to wheel - a case study of usage of Beema Bamboo as a Sustainable energy source, Proceeding of the 24th European Biomass Conference and Exhibition, pp 837-841, 2016.
4. S Dasappa, Is thermo-chemical conversion process of biomass – a route for fuel cell application? Proceeding of the 24th European Biomass Conference and Exhibition, pp 903-907, 2016.
5. S Dasappa, Anand Shivapuji and Amit Kumar, Small capacity producer gas engine adaption from natural gas for decentralized power generation application, Proceedings of - The International Bioenergy Conference and Exhibition, 29-40, 2015.
6. Anand M Shivapuji, S Dasappa, Performance evaluation tool for simulating gas engine – a GUI package, proceeding of - The International Bioenergy Conference and Exhibition, 45-47, 2015.
7. P. Balachandra, Sadhan Mahapatra, D C Baruah, H N Chanakya and S Dasappa, Eco-Enterprises, Policies and Institutional Setup for RHEES - North East Proceedings of - The International Bioenergy Conference and Exhibition, pp 154-160, 2015, ISBN 978-88-89407-13-4.
8. H N Chanakya, S Dasappa and P. Balachandra, Meeting the energy needs of the village using biomass - a concept to implementation Accepted - The International Bioenergy Conference and Exhibition 2015, ISBN 978-88-89407-13-4
9. Shivapuji, A. M., Kumar, A. and Dasappa, S. Combustion characterization of compressed natural gas and syngas fuelled engine operation under steady and transient conditions, proceedings of the

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11. Snehesh Shivananda Ail and S Dasappa, Characterization of SiO_2 supported Co catalysts synthesized by solution combustion, Proceedings of the 8th International Conference on Environmental Catalysis, Ashville, USA, 2014.
12. S Dasappa, DN Subbu Krishna, Bikas Bose and Tauri H, Adaptation of MW level natural gas lean burn engine for producer gas operation – A grid connected power plant, Proceedings of the 22nd European Biomass Conference and Exhibition, 2014, 867-870.
13. S. Dasappa, K C Suresh and D N Subbukrishna, Experience of operating an open top biomass gasifier using a low density fuel – Coconut fronds, Proceedings of the 22nd European Biomass Conference and Exhibition, 2014, 614-617.
14. S. Dasappa, D N Subbukrishna and NKS Rajan, Sweetening of biogas in spray towers fro power generation, Proceedings of the 22nd European Biomass Conference and Exhibition, 2014, 554-557.
15. S. Dasappa, P. Prabhakar and D N Subbukrishna, Biomass gasification to substitute fossil fuel in food industry, Proceedings of the 22nd European Biomass Conference and Exhibition, 2014, 1579-1563.
16. Shivapuji, A. M., & Dasappa, S.. Sensitivity analysis of mixture quality on combustion phasing and its impact on 0D simulation of a producer gas fuelled multi-cylinder engine 19 - 22 May 2013, Gyeongju, South Korea. **This paper was awarded the Young Investigator Award 2013.**
17. Anand M Shivapuji, Amit Kumar, Prakash E S and Dasappa S, Experiments and CFD simulation of producer gas fuelled SI engine: Towards addressing high exhaust enthalpy and cooling loads, proceedings of the 23rdNational Conference on I. C. Engine and Combustion, 2013.
18. Anand M Shivapuji, S Dasappa Knock and its prediction in producer gas fuelled SI engines proceedings of the International Conference on Polygeneration Strategies, pp 227 – 236, 2013. ISBN: 978-3-9502754-8-3.
19. Shivapuji, A. M., and Dasappa, S., Sensitivity analysis of mixture quality on combustion phasing and its impact on 0-D simulation of a producer gas fuelled multi-cylinder engine. Proceedings of the 9th Asia Pacific Conference on Combustion, pp 449 – 452, 2013.
20. S Dasappa, D N Subbukrishna H V Gopinath, David Chiaramonti, Roberto Mussi, Andrea Maria Rizzo, Small scale fixed bed gasification system for power generation, proceedings of the International Conference on Polygeneration Strategies, pp 286 – 291, 2013. ISBN: 978-3-9502754-8-3.
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23. Sandeep K, Snehesh S and S Dasappa, Carbon-dioxide sequestration through biomass gasification, Proceedings of the 19th European Biomass Conference and Exhibition, Pages .. 2011.
24. Sadhan Mahapatra and S. Dasappa Off-grid biomass gasification based rural electrification in lieu of grid extension, Proceedings of the 19th European Biomass Conference and Exhibition, Hamburg, Berlin, 2011.
25. G.S. Sheshagiri, N.K.S. Rajan, S. Dasappa, P.J. Paul "Agro residue mapping of India", Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 375-382.

26. D. N. Subbukrishna, S. Dasappa, P.J. Paul, N.K.S. Rajan, K.C. Suresh. Treatment of Water used for Producer gas cooling and cleaning in IISc biomass gasification technology, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 661-664.
27. D.N. Subbukrishna, S. Dasappa, P.J. Paul, N.K.S. Rajan. Charcoal and power generation using biomass gasification, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 814-816. Best Visual Presentation Award
28. H V Sridhar G Sridhar, S Dasappa, PJ Paul and H S Mukunda, On the operation of high pressure biomass gasifier with gas turbine, Proceedings of the 15th European Biomass conference and Exhibition, 2007, 964-967.
29. G Sridhar, D N Subbukrishna, H V Sridhar, S Dasappa, PJ Paul and H S Mukunda, Torrefaction of Bamboo, Proceedings of the 15th European Biomass Conference and Exhibition, 2007, 532-535.
30. G Sridhar, S Dasappa, H V Sridhar PJ Paul and NKS Rajan, Green Electricity – A case study of a Grid linked Independent Power Producer, Proceedings of the 15th European Biomass conference and Exhibition, 2007, 2256-2260.
31. D N Subbukrishna, K C Suresh PJ Paul, S Dasappa, and NKS Rajan, Precipitated silica from Rice husk ash by IPSIT process, Proceedings of the 15th European Biomass conference and Exhibition, 2007, 2091-2093.
32. H V Sridhar, G Sridhar, S Dasappa, N K S Rajan and P J Paul, Experience of using various biomass briquettes in IBG (IISc Bioresidue Gasifier), Proceedings of 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, 2005, 749-752.
33. H V Sridhar, G Sridhar, S Dasappa, P J Paul, N K S Rajan and K Ramakrishnan, Adaptation and performance evaluation of stationary SI Engines for producer gas applications, Proceedings of the 19th National Conference on IC Engines and Combustion, Annamalai University, Chidambaram, December, 2005, 485-489. ***This won the best paper award.***
34. D N Subbukrishna, S Dasappa, P J Paul and NKS Rajan, Hydrogen Sulfide removal from biogas by ISET process, Proceedings of 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, 2005, 1596-1599.
35. G Sridhar, H V Sridhar, S Dasappa, P J Paul, D. Subbukrishna and N K S Rajan, Green Electricity from Biomass Fuelled Producer Gas Engine, Proceedings of 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, 2005, 1489-1492.
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37. H. V. Sridhar, G. Sridhar, S. Dasappa., N. K. S. Rajan, P. J. Paul and H. S. Mukunda, Experience on use of biomass gasifiers in crumb rubber industries, Proceedings of the National conference on advances in mechanical engineering held at Shimoga, Karnataka, 12-14 February 2004.
38. H. V. Sridhar, G. Sridhar, S. Dasappa., N. K. S. Rajan, P. J. Paul and H. S. Mukunda, Field experience of IISc gasification systems, Proceeding of the seminar on biomass gasifiers, Rubber Board, Kottayam, 2003.
39. H N Sharan, H S Mukunda, S Dasappa, P J Paul, N K S Rajan and U Shrinivasa, The technology and economics of biomass-based independent rural power producers using IISc- DASAG woody biomass gasifiers, presented at the International conference on Developments in Thermochemical Biomass Conversion, Banff, Canada, 1996.
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41. H S Mukunda, U Shrinivasa, P J Paul, S Dasappa and N K S Rajan, "Stand alone small power level system", presented at the Seventh Annual conference of India Nuclear Society on India's energy needs and option, BARC, Mumbai, April 1996.

42. P Nanjundappa, H I Somashekar, H N Chanakya, S Dasappa, U Shrinivasa and H S Mukunda, Biomass gasifiers : a boon to semi-arid agriculture, presented at the International conference on Biomass Energy Systems, Tata Energy Research Institute, New Delhi, 1996.
43. H S Mukunda, S Dasappa, P J Paul, N K S Rajan and U Shrinivasa, "Biomass Gasification : Technology and field studies", Proceedings of one day workshop on Rural Energy Programme - Prospects and Problems, KSCST, IISc, 1995.
44. G Sridhar, G A Rakesh, J Srinivasan, S Dasappa, P J Paul, and H S Mukunda, Experimental studies on the performance of Hamara ST-5 Stirling Engine and possibilities for performance improvement", proceedings of the Fourth National meet on Recent Advances in Biomass Gasification Technology, Mysore , 1993.
45. H V Sridhar, S Dasappa, P J Paul, H S Mukunda and U Shrinivasa, "On the combustion of wood-char spheres in vitiated air -- Analysis and Experiments", proceedings of the Fourth National meet on Recent Advances in Biomass Gasification Technology, Mysore , 1993 **Best paper award.**
46. H S Mukunda, U Shrinivasa, P J Paul, S Dasappa and A E Krishnakanth, "Development of powdery biomass gasifiers", presented at the Third National meet on Recent Advances in Biomass Gasification Technology, Baroda, 1991.
47. P. Nanjundappa, H. I. Somasekhar, H. N. Chanakya, S. Dasappa, U. Shrinivasa, and H. S. Mukunda., Applications of Biomass Gasifiers for irrigation - A field study, Paper presented at the workshop on Water shed development and Bioenergy, Feb. 1994.
48. PJ Paul, S. Dasappa, G Sridhar, H V Sridhar, " Biomass Derived Energy Carriers as Fuels in Engines and Fuel cells, presented at the National Seminar on Biomass Based Decentralized Power Generation, Sponsored by MNES, DST and ONGC, Gujarat, 2005.
49. PJ Paul, S. Dasappa, G Sridhar, H V Sridhar, " Biomass Derived Energy Carriers as Fuels in Engines and Fuel cells, presented at the National Seminar on Biomass Based Decentralized Power Generation, Sponsored by MNES, DST and ONGC, Gujarat, 2005.
50. S Dasappa, "Biomass gasification fundamentals and technology", at the National workshop on Recent Advances in Renewable Energy Technologies organized by BNMIT and ASTRA, 2003
51. S Dasappa, G Sridhar, H V Sridhar, NKS Rajan, PJ Paul and A Upasani, Producer gas engines – proponent of clean energy technology, Proceedings of the 15th European Biomass conference and Exhibition, 2007, 976-980.
52. S Dasappa, Gasification technologies and by products, presented at a special workshop, on Small Scale Biomass Energy Program, organized by Biomasss One-stop Clearing House, Energy and Environment Foundation, Thailand, 2003.
53. S Dasappa, H V Sridhar, P J Paul, H S Mukunda and U Shrinivasa, "Wood-char sphere conversion with H_2O and its mixtures with CO_2, O_2 and N_2 - Experiments and Modeling", Poster presentation at the Twenty-sixth International Symposium on Combustion, to held in Naples, 1996.
54. S Dasappa, Invited talk on "Biomass gasification – a route for off grid power generation" the International Congress on Renewable Energy and Sustainable Development, ICORE 2005, Pune, 2005
55. S Dasappa, Invited talk on "Power generation using biomass gasification" proceedings of the International Congress on Renewable Energy and Sustainable Development, ICORE 2004, Bangalore, 2004.
56. S Dasappa, On the estimation of power from a diesel engine converted for gas operation – a simple analysis, Proceedings of the Seventeenth National Conference on I.C. Engines and Combustion, Suratkal, Dec. 18-20, 2001
57. S Dasappa, P J Paul and H S Mukunda, " Fluid Dynamic studies on Ejectors for Thermal Applications of Gasifiers", proceedings of the Fourth National meet on Recent Advances in Biomass Gasification Technology, Mysore , 1993.

58. S Dasappa, P J Paul, Mukunda and U Shrinivasa, " On the modelling of gasification of char spheres with CO_2, CO and N_2" , presented at the Third National meet on Recent Advances in Biomass Gasification Technology, Baroda, 1991.
59. S Dasappa, P J Paul, H S Mukunda and U Shrinivasa, Gasification of agro residues for engine application, Proceeding of the Fourth International Conference Small Engines and their fuels, Thailand, 1993.
60. S Dasappa, P J Paul, N K S Rajan, H S Mukunda and U Shrinivasa, "Woody biomass gasification for thermal, mechanical and electrical applications", Proceedings of the First International workshop on Energy perspectives in plantation industry, Coonoor, 1993.
61. S Dasappa, Power Generation from Wood, proceeding of Advances in Wood Science and Technology, a compulsory course for IFS officers, organized by Institute of Wood Science and Technology, Bangalore, 2004.
62. S N Srinivas, N H Ravindranath, S Dasappa, U Shrinivasa and H S Mukunda, "A Gasifier Based Rural Power Generation System : Performance and Problems", presented at the Third National meet on Recent Advances in Biomass Gasification Technology, Baroda, 1991.
63. S. Dasappa and H.S. Mukunda, `` Combustion of cylinders and vertical plates of wood ", proc. of the IX National Conference on IC Engines and Combustion, Dehradun, November, 1985.
64. S. Dasappa, G. Sridhar, H.V. Sridhar, P. J. Paul and H. S. Mukunda, On the advances in thermo chemical conversion technology, Proceeding of the 2nd world conference on biomass for energy, industry and climate change, Rome, Italy, 10-14 May 2004.
65. S. Dasappa, H. V. Sridhar, C. S. Bhaskar Dixit and H. S. Mukunda, Biomass combustion device for puffed rice conversion. Proceedings of 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, 2005, 1600-1602.
66. S. Dasappa, H.S. Mukunda, B.N. Baliga and U. Shrinivasa, `` Status of wood gasification at the IISc", presented at the International conference, Energy from biomass and wastes XII, New Orleans, Louisiana, Feb. 1988.
67. S. Dasappa, P J Paul, G. Amar Kumar, Biomass gasification to replace oil in rubber, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 2188-2191.
68. S. Dasappa, P.J. Paul, D.N. Subbukrishna. “High temperature application using biomass gasification”, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 1010-1012.
69. S. Dasappa, P.J. Paul, Prabhakar. “Metallurgical application using biomass gasification”, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 2026-2029.
70. S. Dasappa, P.J. Paul, V. Chinchankar, M. Kulkarni. “Preliminary investigation into naturally aspirated and turbo charged producer gas engines”, Proceedings of the 17th European Biomass Conference and Exhibition, 2009, 811-813.
71. S. Dasappa, Status, potential and challenges of promoting biomass gasification technologies for industrial applications in Africa. The First High-level Biofuels Seminar in Africa publication of the International Institute for Sustainable Development (IISD), Vol. 9, NO. 1, 2007.
72. S. Dasappa, V. Ramesh and Vikram Krishnan, `` Improvements on 3.7 kW IISc Gasifier ", First National meet on Recent Advances in Biomass gasification technology, IIT Bombay, 1989. **Best paper award.**
73. S. Dasappa, Vikram Reddy, H.S. Mukunda and U. Shrinivasa, `` Wood gasifiers " proc. of the Second USAID/GOI workshop on Alternative Energy Resources and Development, New Delhi, February 1985.
74. S. Dasappa, Vikram Reddy, H.S. Mukunda and U. Shrinivasa, `` Wood gasifiers for engines less than 7.5 kW " presented at the 7th Miami International Conference on Alternate Energy Sources, Miami, December 1985, published in Alternative Energy Sources VII Vol.4 Bioconversion/Hydrogen, Hemisphere publishing Corporation, New York,1987.

75. Sandeep K and S Dasappa, Hydrogen production through Biomass gasification, proceedings of the World Hydrogen Technologies Convention (WHTC), 2009.
76. U Shrinvasa, H S Mukunda, S Dasappa and Svati Bhogle, ``Utilisation of powdered biomass", Idea paper submitted to Department of Non--Conventional Energy Sources, New Delhi, 1987.
77. U. Shrinivasa, S. Dasappa, B.N. Baliga, V. Ramesh and H.S. Mukunda, `` Development of 100 kW gasifier for Electricity generation ", First National meet on Recent Advances in Biomass gasification technology, IIT Bombay, 1989.

National and International conferences/workshops

International – Invited talks

1. S. Dasappa Gas engine and producer gas – an IISc …. July 2014, Cummins Inc, Columbus
2. S.Dasappa, Energy through biomass – July 2015, Purdue University,
3. S Dasappa, Biomass gasification …… Virtual Seminar, July 2015, Princeton
4. Delivered series of lecture at Satake Corporation Japan on Thermo-chemical conversion of biomass and gas engines March 2015
5. S. Dasappa, Invited talk at the 10th India Innovation Summit Innovation for Inclusive Growth, Bangalore August, 2014, on Bioenergy …
6. IOCL, New Delhi
7. S.Dasappa, Status of biomass energy in India, Asia-Europe event, 22nd European Biomass Conference and Exhibition, Hamburg, June, 2014.
8. S. Dasappa, Delivered a Plenary paper at a National technical meet, TECHNOURE, Havana, Cuba, Dec 2005
9. S. Dasappa, present a paper at the 5th GFSE workshop organized by the Austrian government, May 2005.
10. S Dasappa, Invited talk on "Biomass gasification – a route for off-grid power generation" the International Congress on Renewable Energy and Sustainable Development, ICORE 2005, Pune, 2005.
11. S Dasappa, "Biomass gasification at IISc - Technology Development, Scale-up and Technology Transfer" Invited talk at the special work shop organized by the International Energy Initiative, New York, held in Rome, Italy, 2004.
12. S Dasappa, Village Energy Security – biomass gasification, Invited talk at the International Workshop on Energy Technologies for Decentralised Rural Electricity Services provision, organized by Stockholm Environment Institute, at Studsvik, Sweden, 2004.
13. S Dasappa, Biomass gasification at Kaputa, Stake holder workshop Towards the UNIDO/GEF project on renewable energy based mini-grids in Zambia, organized by Ministry of Power and UNIDO, at Lusaka, 2004.
14. S Dasappa, Use of bamboo wastes in the energy sector, invited talk at the World Bamboo Congress, New Delhi, 2004.
15. S Dasappa, On the thermo chemical conversion technology for meeting the energy needs of the tea industry, Plenary lecture at the 3rd International Conference on Global Advances in Tea Science, Kolkatta in Nov 2003.
16. S Dasappa, G Sridhar, H V Sridhar, Paul, PJ, NKS Rajan and H S Mukunda, Biomass gasification: Science and Technology, Roundtable on Biomass Gasifier Technology: Opportunities and Challenges, organized by UNIDO and IISc, Bangalore, 2003.
17. S Dasappa, Status of Biomass gasification technology at IISc, Invited talk at the special work shop organized by the International Energy Initiative, New York, held in Sevilla, Spain, 2002.

National- invited talks

1. S Dasappa, Water and biomass energy production technology, Workshop on Water and Farmer organized by Jalaspandana and Pragati, Bangalore, 2003.
2. S. Dasappa, Biomass gasification a renewable source of energy, Invited talk at Power Systems Training Institute, GOI in a workshop on Renewable Energy Sources during Sept 2003.
3. S Dasappa, "Biomass gasification – a distributed energy source", National Workshop on Distributed Generation Technologies for Power Supply in Rural Areas, Organized by BHEL, MoP, and MNES, New Delhi, 2003.
4. S Dasappa, "Overview of A few gasification technology packages in use overseas", invited talk at the National Seminar on Biomass-Based Decentralized Power Generation, Baroda, 2004.
5. S. Dasappa, Village Energy Security – a perspective, invited talk at workshops organized by MNES, in Delhi, Guwahati and Bangalore, 2004.
6. S Dasappa, Biomass gasification – an IPP, presented at the National meet on "Creating 100,000 Sustainable Electricity Utilities" Empowering *Panchayati Raj* Institutions, Independent Power Producers Association of India (IPPAI) October 12-13, 2004.

Lectures at national and international fora

1. S Dasappa, Recent trends and advances in Biomass-derived fuels, an Invited lecture at Bapuji Institute of Engineering and Technology, Davangere, 2003.
2. S Dasappa, "Biomass as an energy source, AICTE-ISTE Short term training program on Biomass Power – current scenario and Future Projection, Mandya, 2004.
3. S Dasappa, "Bioenergy prospects", an Invited lecture at a National Workshop on Renewable Energy, East Point College, Bangalore, 2004.
4. S Dasappa, "Biomass gasification technology for power generation, Workshop organized by the Industry Institute Partnership Cell, The National Institute of Engineering, Mysore, 2004.
5. S Dasappa, " R & D at IISc on Biomass gasification", lecture at the University of Lusaka, Zambia 2004.
6. S Dasappa, "On the Advances in Thermo- Chemical Conversion Technology – an overview", International Training Programme on Renewable Energy Options For BIMSTEC & ASEAN Member Countries, Bangalore, Dec 2004

Technical Reports

1. S Dasappa, HS Mukunda, PJ Paul, G Sridhar, H V Sridhar Testing of high density saw dust briquette from Holland, submitted to Umhelt, Switzerland, 1999 (50 pages).
2. HS Mukunda, PJ Paul, S Dasappa, NKS Rajan, G Sridhar, H V Sridhar, Report on the Powdery biomass gasification, MNES, 2000 (162 pages).
3. Giordano, P, Hasler,P and Dasappa S, Test report on different biomass in the IISc open top co-current gasifier, Swiss federal office of Energy, Switzerland (20 pages).
4. S Dasappa, H S Mukunda, P J Paul, G Sridhar, H V Sridhar, Ash extraction and control system for safe operation of gasifier, MNES report, 2001.
5. HS Mukunda, PJ Paul, S Dasappa and NKS Rajan, Report on the Gasification Action Research Project, MNES, 2002 (50 pages).
6. Usha Rao, K., Dasappa, S., Balachandra, P., Somashekar, H. I. and Ravindranath, N. H., "Report on Techno-economic and Environmental Assessment of Bioenergy Technologies (BETs) in India", Asian Regional Research Programme in Energy, Environment and Climate – Phase-II, Asian Institute of Technology, Bangkok, Thailand, February 2002, 26 Pages.

7. Ravindranath, N. H., Usha Rao, K., Dasappa, S., Balachandra, P. and Sangeetha, G., "Report on Abatement Cost of Selected Bioenergy Technologies Substituting Fossil Fuel and Traditional Biomass Energy Systems in India", Asian Regional Research Programme in Energy, Environment and Climate – Phase-II, Asian Institute of Technology, Bangkok, Thailand, February 2002, 13 Pages.
8. Balachandra, P., K. Usha Rao, Ravindranath, N. H., Dasappa, S. and Sangeetha, G. (2002) Report on Techno-Economic and Environmental Assessment of Fossil Fuel Technologies for India, Asian Regional Research Programme in Energy, Environment and Climate – Phase-II, Asian Institute of Technology, Bangkok, Sept 2002.
9. S Dasappa, G Sridhar, H V Sridhar, P J Paul and HS Mukunda, Testing of Cummins Gas Engine couple to IISc Biomass gasifier, report submitted to M/s Cummins, 2003.
10. Balachandra, P., Ravindranath, N. H., and Dasappa, S., "Ranking of Barriers and Identifying Important Measures for Bioenergy Technologies in India," Asian Regional Research Programme in Energy, Environment, and Climate – Phase III, Asian Institute of Technology, Bangkok, Thailand, March 2004, 45 Pages.
11. Ravindranath, N. H., Balachandra, P., and Dasappa, S., "Biomass Energy in Asia - Assessment and Strategy Formulation," Asian Regional Research Programme in Energy, Environment and Climate – Phase III, Asian Institute of Technology, Bangkok, Thailand, December 2004, 144 Pages.
12. HS Mukunda, PJ Paul, S Dasappa, NKS Rajan, G Sridhar, H V Sridhar, Report on the Advanced Biomass Gasification Project, MNES, 2004 (100 pages).
13. S Dasappa and HV Sridhar, Joint Performance Report on the 50 kW dual fuel system to electrify an Island, Cuba July 2007.
14. S Dasappa and Suresh K, Technical report on the performance of the 20 kW gasification for Zambia, June 2008.
15. Ramesh, S Dasappa, and P J Paul, Scientific investigations on the after cooler burning, Oct 2009.
16. S Dasappa, Potential for power generation in Nigeria and Benin for demonstration purposes, Nov 2009.
17. S Dasappa, Technology Evaluation and Setting up technical standards for gasification program in Cambodia, UNIDO, July 2010
18. Presented a paper "Gasification - a route to meet industrial energy needs" at the Experts group meeting on " Promoting renewable energy technologies for industrial applications" Sponsored by UNIDO, organized by TERI, Delhi,18 -19 Dec 2007.
19. Invited lecture on "Power Generation from Renewables" in the MHRD/AICTE sponsored winter school at National Institute of Technology, Surathkal, Karnataka, 7 March 2009.
20. Invited talk "Conversion of Non-fermentable waste to energy" at the Workshop on "Strategies for urban solid waste management in the state of Karnataka" organised by KSCST, DST and Government of Karnataka, Bangalore, 29 Dec 2006.
21. Invited talk on "Potential of biomass energy" at the' Millennium Energy Summit - 2007', organised by Central Glass and Ceramic Research Institute and Millennium Institute of Energy Management, Kolkata, 27-29 Sept 2007.
22. S Dasappa, Invited talk on Biomass gasification – a route for off-grid power generation" the International Congress on Renewable Energy and Sustainable Development, ICORE 2005, Pune, 2005.
23. S.Dasappa, H N Chanakya and HI Somashekar, Invited talk at the Indo-French Workshop and conference on Science, Technology and Humanities - A Tryst with Sustainable Development held at IISc Bangalore January, 2010.

Grants and Contracts

Ministry of New and Renewable Energy

- Hydrogen Generation using Biomass Gasification for Fuel Cell Application (HBGF) 2016-20**(PI)**
- Design and Evaluation Sanitary napkin destroyer – Emission measurements, 2016-18. **(PI)**
- Hydrogen and liquid fuels from biomass gasification Oct 2009 – Sept 2013 **(PI)**
- Advanced biomass research Centre Mar 2009 – Feb 2013**(Co-PI)**
- Advanced RDF gasification systems Oct 08 – Sept 13**(Co-PI)**
- Strategic development of bio-energy – Phase II Feb.05 – Jan 08**(Co-PI)**
- Power generation on biogas-Development of H_2S Scrubbing system – H_2S Ph II, Oct 98 – July 2000**(Co-PI)**
- Strategic Development of Bio Energy (SDB)Sept 99 to Dec 2004 **(Co-PI)**
- Advanced Biomass Gasification (ABG) Mar 2000 to Aug 2004 **(Co-PI)**
- Gasifier Action Research Project (GARP) Mar 98 to Jun 2002 **(Co-PI)**
- Strategic Development of Bio Energy (SDB) Apr 2002 - 2005 **(Co-PI)**

United National Development Program

- Sensitization workshop" and "Skill development training" on sub-megawatt scale biomass power generation 2012-2013 **(PI)**

DRDO

- Investigations on **M**ulti-fuel **G**asification using **F**ixed bed configuration (MGF), 2014-2015. **(PI)**

Italian Ministry for the Environment, the Land and the Sea.(MATT) and MNRE **(PI)**

- Research using wastes from oil seeds and meeting the environmental standards – Design and development of biomass gasification technology, Aug 2014 **(PI)**

Department of Science and Technology and Research Council UK

- Rural Hybrid Energy Enterprise Systems (RHEES)
    a. As a research component of this project, SOFC will be fuelled with producer gas 2013 – 2016 **(PI)**
    b. Energy solutions for rural – 2013 – 2016 **(PI)**

United Nations Industrial Development Organization.

- Distributed power generation system using biomass gasification for an island - Cocodrilo, Cuba **(PI)**
- Distributed power generation technology of 35 kg/hr Biomass gasifier plant at Ndola, Zambia **(PI)**

National Mission on Bamboo Application.

1. Design and Demonstration of 35 kg/hr biomass gasifier with 100% producer engine for army in Manipur, Feb 06 to May 07
2. Design and Demonstration of 90kg/hr gasifier system, Dec 06 0- May 07

Karnataka Council for Technology Up gradation

- Development. of stoves for puffed rice preparation **(PI)**

Carnegie Mellon University, Pittsburgh

- Electricity from Biomass for Rural India

Bioenergy for Rural India

- Rural electrification, Hosahalli

Association with other major projects/programs of the Institute

- Team member – National Combustion Centre R and D (NCCRD), Indian Institute of Science, Bangalore, supported by Department of Science and Technology.
- Team member - Solar Energy Research Institute for India and the United States (SERIIUS)
  - A Joint Research Consortium for Accelerating Solar Electricity Development under the U.S.-India Joint Clean Energy Research and Development, with Lead institutions being Indian Institute of Science and National Renewable Energy Laboratory
- Core team member at CST on a proposal submitted to Ministry of Human Resource Development, on Centre of Excellence in Energy and Environment Research
- Core team member for the developing the proposal on Biofuels and Clean Coal Technologies: Systems & Materials under the Tata Centre Initiative

Consultancy projects

- Mangalore Refineries Pvt Ltd, Biomass assessment for 2G ethanol in Karnataka, 2016-17.
- SIDA and Asian Institute of Technology funding support - Assessment and Strategy Formulation for bioenergy systems
- UNIDO – Renewable energy entrepreneurship development July 2006- Sept 06
- Technical support for developing procedures for the implementation of Narayani-Shanker Biomass Power Plant (600 kWe) in Nepal
- Design of MW level gasification system for charcoal production to meet environmental conditions Oct 07 – 08.

Technology transfers

- **Biomass stoves**
  - BP Energy India Pvt. Ltd. Bangalore (currently First Energy Pvt Ltd , Pune) 2005
- **Producer gas engine**
  - Cummins India Ltd. Pune **2006**
- **Gasification technology (2005 – 2012)**
  - Hitemp Furnaces Limited, Bangalore,
  - Allgreen Energy Pvt Ltd. Bangalore.
  - GE Energy Inc, USA, 2011
- **H_2S scrubbing technology**
  - Anama Energies Pvt. Ltd. Pune 2007.
  - Green power International ltd. New Delhi.2009

- **Silica Technology**
    - Usher Eco Power Ltd. Mumbai. 2010

Graduate Research Supervision

Master's Thesis completed

1. Arun Shivashimpi, Development of ECU based Carburetion system for Stationary Power Generating Producer gas engine, Siddaganga Institute of Technology, Tumkur, 2016.,
2. Nithin D, Numerical Assessment of influence of Engine geometry on the In-cylinder Turbulence and Turbulent Flame propagation in a Spark ignited Internal Combustion engine, JSSATE, Bangalore, 2016.
3. Naresh Kumar, Experimental investigations on production of activated carbon from downdraft gasifier, Vellore Institute of Technology University, 2016.
4. Punith, Numerical simulation of SOFC, JSSATE, Bangalore, 2016.
5. Vaibhav Gulakhe, Analysis of Premixed and Diffusion Syngas flames, Government college of Engineering, Amravati, 2015.
6. Manikanta, Numerical investigation of solid oxide fuel cell for Syngas application, SDM College of Engineering and Technology Dharwad, 2015.
7. Vishwanath Walikar, Numerical and experimental investigation of producer gas fueled burner, The Oxford college of Engineering , Bangalore, 2015.
8. Mallikarjun Bhure, Experimental and Numerical analysis of Producer gas fueled I.C Engine carburetor, B.V. Bhoomraddi College of Engineering and Technology Hubli, 2015.
9. Bharadwaj.B.S, Thermodynamic and Fluid-dynamic Investigation of Char Combustion, The Oxford college of Engineering, Bangalore, 2015.
10. Mahesh, Heat transfer analysis for fixed bed Fischer-Tropsch process, The Oxford college of Engineering , Bangalore, 2014.
11. Amit Kumar, CFD Simulation and Experimental Validation of Producer Gas Fuelled SI Engine, U.B.D.T College of Engineering Davangere, 2013.
12. Suresh Attanoor ,Combustion and Gasification of Coal- Biomass Mixture, Experiments and Analysis, SDM College of Engineering and Technology Dharwad, 2013.
13. Manjunath Basude, In suit generation of activated carbon from biomass using downdraft gasifier, B.V. Bhoomraddi College of Engineering and Technology Hubli, 2013.
14. Deepak, C Study of in-cylinder process in diesel engine on dual fuel mode, Master of Engineering Thesis (ME), UVCE, Bangalore University, Bangalore. 2011.
15. Dhruva Kumar. M, Experimental Investigation of Natural Gas Engine using Producer Gas Engine as a fuel and modeling of mixing chamber", Master of Engineering Thesis (ME), UVCE, Bangalore University, Bangalore, 2011
16. Indrajit Mazumdar. Performance evaluation of a turbocharger for producer gas operation, M Tech Dissertation, Department of Energy, Tezpur University, 2005.
17. Manjunath Basude, In-situ generation of activated carbon from biomass-using down draft reactor configuration, Visvesvaraya Technological University, Belgaum, 2013
18. Sushil kumar, Producer gas burners, Visvesvaraya Technological University, Belgaum, 2006
19. Swapna Singha Rabha, Particle Flow in Packed Bed Reactor, TEZPUR UNIVERSITY, 2005.
20. Shylesh Narti, Experimental investigation into combustion front propagation rate in packed bed, Visvesvaraya Technological University, Belgaum, 2004.

Undergraduate dissertation project

- Supervised 20 batches (70 students, from different engineering colleges) in their undergraduate dissertation project in the area of combustion and gasification

List education and short term courses organized (Jointly)

1. National Training program on biomass utilization for energy generation (7 days), Sponsored by Ministry of Non Conventional Energy Sources, June 2000. Participated by Agencies involved in Energy programs at decision making level, 17 participants from various parts of country took part.
2. International Training Program on "Modern Biomass Technologies" (12 days), Sponsored by Ministry of Non Conventional Energy Sources, April 2001. Nine participants from four countries (Costa Rica – 1, Brazil – 3, Uganda – 3, Thailand – 2).
3. International training program "Biomass utilization for Energy" (10 days) Sponsored by Ministry of Non Conventional Energy Sources, Oct 2002. Seventeen people from seven countries (Brazil – 4, Cuba – 3, Thailand – 3, Cambodia – 3, Nepal – 2, Sudan – 1, Austria – 1
4. In all the above courses, lecture sessions were mostly handled by the faculty from IISc involved in the bio energy technologies, lab visit and field visits. Some experts in the industries were also invited for special areas.
5. Training program for the IISc licensees on biomass gasification technology (5 days) for implementation level and decision making level, April 2005. About 20 participants from various parts of the country participated.
6. National Training program on biomass utilization for energy generation (7 days), Sponsored by Ministry of Non Conventional Energy Sources, June 2000. Participated by Agencies involved in Energy programs at decision making level, 17 participants from various parts of country took part.
7. International Training Program on "Modern Biomass Technologies" (12 days), Sponsored by Ministry of Non Conventional Energy Sources, April 2001. Nine participants from four countries (Costa Rica – 1, Brazil – 3, Uganda – 3, Thailand – 2).
8. International training program "Biomass utilization for Energy" (10 days) Sponsored by Ministry of Non Conventional Energy Sources, Oct 2002. Seventeen people from seven countries (Brazil – 4, Cuba – 3, Thailand – 3, Cambodia – 3, Nepal – 2, Sudan – 1, Austria – 1
9. Training program for the IISc licensees on biomass gasification technology (5 days) for implementation level and decision making level, April 2005. About 20 participants from various parts of the country participated.
10. International Training Programme on Bio-energy 10 dayMar 2006 MNRE
11. Development of Stoves AEROCOP 7 days April 2007 Overseas participants for cooking energy
12. International Training Programme on Bio-energy June 2007 MNRE Overseas participants in the energy sector
13. International Training Programme on Bio-energy MEA 8 dayNov 2010 Overseas participants in the energy sector
14. Sensitization workshop on Skill development training" on sub megawatt scale biomass power generation, 2013.

Advanced Bioenergy Energy Technology Society, CGPL, IISc

September 2002 to date – Founder member of Advanced Bioenergy Energy Technology Society, CGPL, Indian Institute of Science, Bangalore 560 012, India.

Program Executive (Courtesy)

- As a part of this activity, interactions with the industry have been both at R and D and commercializing the technology. Interactions have resulted in

consultancy projects, technology transfers and the projects implemented using the technology packages developed.

- Further, both the scientific and technological superiority has resulted in technology transfer to developing and developed nations.
- These technological interventions in industries have resulted in saving over 1000 tons of oil annually resulting in mitigating over 3000 tons of CO_2.

Professional Activities

Member of various bodies

- Member, Expert group Sub – Committee on Methanol and DME, DST 2017.
- Chairperson, Screening Committee for Scientists at National Institute of Bio-Energy, MNRE, Government of India, 2016.
- Nominated Member from IISc on the Empanelment of External Domain Experts, Petroleum Conservation Research Association (PCRA), 2016.
- Invited Member of Technical Committee for the assessment of Lignocellulosic biomass for 2nd Generation Ethanol Plant, HPCL, 2016.
- Member, Biomass power committee, Ministry of New and Renewable Energy, 2016.
- Member Bioenergy committee Ministry of New and Renewable Energy, 2016.
- Expert member on the National Lab Policy for Renewable Energy Sector(NLPRE), MNRE, 2016.
- Member, Scientific Committee, 24th European Biomass Conference and Exhibition, 2016
- Session chairman at the 24th European Biomass Conference and Exhibition, Berlin, 2016.
- Member, R and D policy, Ministry of New and Renewable Energy, 2016.
- Member, Task Force on Waste to Energy under the Chairmanship of Dr.K.Kasturirangan, Member, Planning Commission, 2015
- Involved in evaluation of National Test facilities for Stove, Indian Institute of Technology (IIT), Delhi, Institute of Minerals and Materials Technology (IMMT- CSIR), Bhubaneswar, and College of Agricultural Technology, Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur as a part of National Biomass Cookstoves Initiative of the Ministry of New and Renewable Energy, Government of India. 2013-15
- Involved as a part of a national team on developing test protocols and standards for stove testing, which has led to being BIS standard.2014-15.
- Developed test protocols and standard for gasification systems for thermal and power generation application as a pre-requisite for BIS. 2014-15
- Scientific Committee 35th Symposium on Combustion 2014.
- Member, National Sub-Committees of Steering Committee, on various aspects of hydrogen energy and fuel cells as a part of Hydrogen board, MNRE, 2014.
- Expert member at the Global Calculator's 2-day expert workshop on the Land Use, Bioenergy and Food sector (Land/Bio/Food), 23rd and 24th April 2014 at Imperial College London,.
- Member, stove protocols 2012 – 2014.
- Expert member, National Core support evaluation of SEED program 2012 – 2014.
- Member, National Expert Committee for SEED Programmes in the Department of Science and Technology, 2013 – 2014.
- Session chairman for "Biomass energy" at the International Renewable Energy Exhibition and Conference organized Tamil Nadu Energy Development Agency (TEDA) 15 Jan 2011.
- Member, International Scientific Committee, 19th European Biomass Conference and Exhibition, 2011.
- Co-chairman, on the session Gas Cleaning at the 19th European Biomass Conference and Exhibition – Berlin, Germany, 2011.
- Member: Evaluation and Awarding of the best Visual Presentations at the 19th European Biomass Conference and Exhibition – Berlin, Germany, 2011.
- Member, Strategy and Action Plan for Initiating Biomass Mission, Ministry of New & Renewable Energy, 2010.

- Member working group: Development of standards, specifications, test procedures for biomass gasifiers. Ministry of New & Renewable Energy, (Biomass Division), 2010.
- Member, Working Group on various Biomass Sectors, Ministry of New & Renewable Energy, (Biomass Division), 2010.
- Member, Bureau of Indian Standards, (BIS) for Bio-energy systems & devices, improved chulhas, biomass plants and biomass gasifier systems Sub-Committee MED 04:2, since 2009.
- Member, Reviewing Environmental standards and guidelines for producer gas plants and biomass gasifier, MNRE, 2009.
- Member, Judges panel, The GE Edison Challenge, GE India Technology Centre. 2009.
- Member - ICSU-ROAP Science Planning Group, Malaysia, 2008 - 2009.
- Member, Science and Society Programme of Department of Science & Technology, Core Support programme, 2008.
- Member, GEF Operation program 6, for UNIDO for Zambia,2006-2007. Renewable Energy Based Electricity Generation for Isolated Mini-Grids in Zambia
- Member Programme Advisory Committee (PAC), Science and Technology Application for Rural Development (STARD) of DST, since 2007.
- Member, GEF Operation program 6, UNIDO for Cuba, 2005-2007. Production and Delivery of Modern Energy Services based on Renewable Energy in Cuba. Case Isla de la Juventud
- Member, Village Energy Security Program, Ministry of New and Renewable Energy, 2006
- Team member of the group for developing a national document entitled; National mission on decentralized biomass energy for villages and Industries, MNRE, 2006.
- Resource person for the National Village Electrification Program of MNES (2004-2005).
- International Biomass Expert for the UNIDO-GEF Renewable energy based mini-grid program in Zambia, (2003-2005).
- Member of a committee for sanction of research project at MNES (2000-2003)
- Member of a national subcommittee on arriving at Test protocol for gasifier testing (1999-2000)

Editorial activities

Reviewer

Journals

1. Biomass and Bioenergy – The International Journal, Elsevier Science Publications Ltd.
2. International Journal of Sustainable Energy, Taylor & Francis
3. Energy for Sustainable Development, Elsevier Science Publications Ltd.
4. Journal of Mechanical Engineering Science ,Sage publications
5. Current Science, a Journal of Indian Academy of Sciences.
6. Thermal energy, Elsevier Science Publications Ltd
7. Journal of Thermal Science, Institute of Nuclear Sciences Vinca.
8. Sustainable Energy Technologies and Assessments
9. Journal of Renewable and Sustainable Energy
10. Proceedings of ICE - Energy journal
11. Bioresource Technology, Elsevier Science Publications Ltd
12. Applied thermal Engineering, Elsevier Science Publications Ltd
13. International Journal of Energy Elsevier Science Publications Ltd
14. International Journal of Hydrogen Energy Elsevier Science Publications Ltd

Conferences

1. Member, International Scientific committee : European Biomass Conference and Exhibition, 2011, 2012, 2013,2014,2015, 2016
2. Member, International Scientific committee , 35th Symposium on Combustion,