



Curriculum Vitae

1. **Name in full (in block letters)** : K. SANKARANARAYANASAMY
2. **Father's Name** : R. KRISHNASAMY
3. **Address for communication** : NO. 18, 7TH STREET, NIT QUARTERS, TIRUCHIRAPPALLI, TAMIL NADU, PIN: 620015
4. **Contact Nos.** : 0431-2503403(O), 0431-2500704(R), 09486001114(M)
5. **Nationality** : INDIAN **Community:** BC (Hindu Vadugar)
6. **Email ID** : ksnsamy@nitt.edu
7. **Date of Birth** : 02-10-1959 **Age** : 52 Years
8. **Educational qualifications (from Matriculation onwards)**

Sl. No.	Degree	University/Institution	Year	Main Subjects	Division/Equivalent
1.	S S L C	Tamil Nadu State Board	1975		84%
2.	P U C	Madurai University	1976	Maths, physics, Chemistry	78.8%
3.	B.E.(Hons)	Madras University	1981	Mechanical Engineering	Honours
4.	M. Tech.	I.I.T. Madras	1983	Production Engineering	8.7 CGPA
5.	Ph.D.	I.I.T. Madras	1989	Gear Manufacturing	---

9. **Field / Area of Specialization** : Mechanical Engineering / Design & Manufacturing Processes

10. **List of all previous employment:**

Sl. No.	Name of the Employer/ Institution	Period		Designation
		From	To	
1.	REC / NIT Tiruchirappalli	May2000	Till Date	Professor
2.	REC Tiruchirappalli	May 1992	May2000	Assistant Professor
3.	REC Tiruchirappalli	Aug 1989	May 1992	Lecturer
4.	Bharath Electronics Ltd. Bangalore	July 1983	July 1985	Deputy Engineer

11. **Academic / Administrative Experience:**

- Board of Studies Member of Mechanical Sciences for Anna University 2000 to 2004 & 2011 to present
- Head of the Department of Mechanical Engineering at REC / NIT Tiruchirappalli from 2000 to 2004 & 2008 to 2010
- Dean Planning & development at N I T Tiruchirappalli from Sep 2010 to June 2011
- Dean Students' Welfare at N I T Tiruchirappalli from March 2011 to Sep 2013
- Senate member of N I T Tiruchirappalli since 2004
- President of faculty Association of NITT for two years
- Founder President of Joint Council for faculty of NITs
- Special Invitee for PRSG committee for the project Development of Artificial Intelligence based Technology for Laser Welding (WRI).
- Coordinator of M. Tech. in Industrial Safety Engineering since 2000
- Academic Council Member for KSR College of technology, Tiruchengodu since 2010

- Board of Studies Member of Mechanical Engineering / Industrial Safety Engineering for KSR College of Technology Tiruchengodu, Kongu Engineering College Perundurai, Bannari Amman Institute of Technology Bannari, Karpagam University Coimbatore
- Board of Studies member for Sri Ramachandra Medical University Chennai
- Organized Safety Auditing of small scale Industries in and around Tiruchirappalli through the PG students of Industrial Safety Engineering
- Faculty Advisor for SAE INDIA Collegiate Club at N I T Trichy
- Conducted academic audit for Karunya University for Three years
- Initiated research based consultancy at NITT by taking up projects from BHEL Trichy and NLC Neyveli
- Helped small entrepreneurs in design and development of huge material handling equipment and repair
- Improved quality of life at N I T Trichy hostels by bringing in better systems for hostel and mess management
- Chief coordinator for Festember, an all India students' cultural event since 2010

12. No. of Ph.D. guided (Completed / In progress):

Sl. No.	THESIS TITLE	NAME	YEAR	UNIVERSITY	Status
1	Extraction of manufacturing features from a wire frame model using CAD data as input	V. Dhanalakshmi	2004	Madurai Kamaraj University	Completed
2	Fracture criteria in the design of Aerospace Pressure Vessels	T. Christopher	2005	ManonmaniamSundaranar University	Completed
3	Fracture criteria in the Aerospace Pressure Vessels	K. Muthurajan	2007	ManonmaniamSundaranar university	Completed
4	Investigations on process parameters, Modeling and Weld Characterization for laser joining of thin section stainless steel	K.R.Balasubramanian	2008	National Institute of Technology, Tiruchirappalli	Completed
5.	Computer Simulation and Experimental investigation on liquid flow through Labyrinths	S.P.Asok	2009	ManonmaniamSundaranar University	Completed
6.	A study on Tolerance Synthesis and Analysis of Assembled Products	Karthick Jayaram J	2011	National Institute of Technology, Tiruchirappalli	Completed
7.	Some studies in hand transmitted and whole body vibration on tracked excavator with breaker	M.S. Alphin	2012	National Institute of Technology, Tiruchirappalli	Completed
8.	Investigations on temperature distribution in laser beam welding using Finite Element simulation and experimental analysis of laser weld for AISI 304 stainless steel sheets	N. Siva Shanmugam	2012	National Institute of Technology, Tiruchirappalli	Completed
9.	Occupational Health and Ergonomic aspects of CNC Machine operation	K. Muthukumar	2012	National Institute of Technology, Tiruchirappalli	Completed
10.	<i>Some studies on whole body vibration for tractor semi-trailer drivers</i>	P. Velmurugan	2013	National Institute of Technology, Tiruchirappalli	Completed

11.	<i>CFD analysis of laser keyhole welding process</i>	T. Suthakar		National Institute of Technology, Tiruchirappalli	In progress
12.	Equal channel angular extrusion	S. Surendarnath		National Institute of Technology, Tiruchirappalli	In progress
13.	Fiber composites	J. Ronald Aseer		National Institute of Technology, Tiruchirappalli	In progress
14.	Laser Hybrid welding process	K. Ganesh Kumar		National Institute of Technology, Tiruchirappalli	In progress
15	Ergonomics in Industrial Safety	Gopanna		National Institute of Technology, Tiruchirappalli	In progress
16	Vibration analysis on MMC	Parthiban		National Institute of Technology, Tiruchirappalli	In progress

13. Publications in National and International Journals & Conferences:

International Journals

1. T. Suthkar, K.R.balasubramanian,K. Sankaranarayananasamy, G. Buvanasekaran "Studies on weld shape formation and Marangonicvection in Nd:YAG laser welding" published in the Int. J. Mechatronics and Manufacturing Systems, Vol. 5, Nos. 3/4, 2012 pp226-246.
2. K. Muthukumar, K. Sankaranarayananasamy, A.K. Ganguli, "Discomfort Analysis in CNC Machine Operations", Safety and Health at Work, Vol. 3, 2012, pp. 146-153.
3. K. Muthukumar, K. Sankaranarayananasamy, A.K. Ganguli, "Analysis of frequency, intensity and interference of Discomfort in CNC Machine Operations", Human factors and Ergonomics in Manufacturing & Service Industries – Accepted for Publication.
4. 4. K. Muthukumar, K. Sankaranarayananasamy, A.K. Ganguli, "Occupational Health and ergonomic aspects of CNC machine operation", International Journal of Occupational Safety and Ergonomics – Accepted for Publication.
5. 5. J. Jaise, N. B. Ajay Kumar, N. Siva Shanmugam, K. Sankaranarayananasamy and T. Ramesh, "Power system: a reliability assessment using FTA", International Journal of Systems Assurance Engineering and Management, DOI: 10.1007/s13198-012-0100-2.
6. Georgekutty S Mangalathu, N. Siva Shanmugam, K. Sankaranarayananasamy, T. Ramesh & K. Muthukumar, "System safety in LPG fired furnace – A Multi Criteria Decision Making Technique", Advances in Production Engineering and Management – Accepted for Publication.
7. P.Velmurugan, L.A. Kumaraswamidhas, K. Sankaranarayananasamy, "Influence of road surfaces on whole-body vibration for suspended cabin tractor semi-trailer drivers", Journal of Low Frequency Noise, Vibration and Active Control – Accepted for Publication.
8. T. Suthakar, K. Sankaranarayananasamy, K.R. Balasubramanian, G.Buvanasekaran, K. Krishnamurthy 'Effect of Peclet Number on the thermo capillary convection and molten pool shape formation during laser welding using CFD' Advanced materials research Vols 383-390 (2012) pp 6231-6235.
9. K.R. Balasubramanian, T. Suthakar, K. Sankaranarayananasamy, G.Buvanasekaran 'Laser welding simulations of stainless steel joints using finite element analysis' Advanced materials research Vols 383-390 (2012) pp 6225-6230.
10. P.Velmurugan, L.A.Kumaraswamidhas, K. Sankaranarayananasamy, Measurement of whole-body vibration exposure from tractor semi trailers, Human Factors and Ergonomics in Manufacturing and service industries, Vol. 22, No. 4 Jul-Aug 2012.
11. C. Hemalatha, K. Sankaranarayananasamy and T. Radhakrishnan, "Ducting Optimization – A Case Study", International Journal of Applied Research in Mechanical Engineering – Accepted for Publication.
12. N. Siva Shanmugam, G. Buvanasekaran and K. Sankaranarayananasamy, Some studies on weld bead geometries for laser spot welding process using finite element analysis, Materials & Design, Volume 34, February 2012, Pages 412-426.
13. P.Velmurugan, L.A. Kumaraswamidhas, K. Sankaranarayananasamy, Optimization of whole body vibration analysis for suspended cabin tractor semi-trailer, International Journal of Vehicle Noise and Vibration, Vol. 8, No. 2, 2012, pp. 150-165.
14. L.A.Kumaraswamidhas, P.Velmurugan and K. Sankaranarayananasamy, Optimization of Human Comfort Reaction for Suspended Cabin Tractor Semitrailer Drivers, World Academy of Science, Engineering and Technology, Vol. 81 (2011), pp. 816-822.

15. P.Velmurugan, L.A. Kumaraswamidhas, K. Sankaranarayananasamy, Whole Body Vibration Analysis for Drivers of Suspended Cabin Tractor Semitrailer, *Experimental Techniques*, DOI: 10.1111/j.1747-1567.2011.00786.x.
16. Alphin.M.S, K.Sankaranarayananasamy, S.P.Sivapirakasam "Segmental Vibration characteristics of seated occupant from lumped parameter models" *Journal of Vibration and control*,DOI: 10.1177/1077546311423065.
17. P.Velmurugan, L.A. Kumaraswamidhas, K. Sankaranarayananasamy, Investigation on Influence of stiffness and hydro-pneumatic suspension for Dynamic Analysis of a Heavy Truck using ADAMS Simulation, *International Journal of Human Factors Modelling and Simulation*, Vol. 2, No. 3, 2011.
18. Alphin.M.S, K. Sankaranarayananasamy, S P Sivapirakasam "Experimental Investigation to study the Influence of Handle Diameter on Low Frequency Hand Arm Vertical Vibration" *Journal of Human Factors and Ergonomics in Manufacturing & Service Industries*, DOI: 10.1002/hfm.20306.
19. Alphin.M.S, K. Sankaranarayananasamy "Finite Element Analysis to predict the Dynamic Characteristics of Human Trunk-Neck-Head for Whole Body Vibration" *International Journal of Human Factors Modelling and Simulation*, Vol. 2, No.1/2, 2011, pp. 14 – 25.
20. Georgekutty S Mangalathu, N. Siva Shanmugam, K. Sankaranarayananasamy & T. Ramesh, "Decision Making in Risk Assessment of Producer Gas Furnaces: An Integrated Approach with AHP &Promethee Techniques" *International Journal of Manufacturing Engineering*, 2011, Vol. 10, Issue 1, pp. 49-54.
21. K.R. Balasubramanian, K. Sankaranarayananasamy, T. Suthakar and S.P. Sivapirakasam "Mathematical modelling and optimisation of laser welding of butt joints" *Int. J. Computational Materials Science and Surface Engineering*, Vol. 3, No. 4, 2010.
22. Alphin.M.S, K. Sankaranarayananasamy and S.P.Sivapirakasam,"Experimental Evaluation of Whole Body Vibration exposure from Tracked Excavators with Hydraulic Breaker Attachment in Rock Breaking operations", *Journal of Low Frequency Noise, Vibration And Active Control* Volume 29 Number 2 2010,Pp.101-110.
23. Muthu P,V. Dhanalakshmi and K. Sankaranarayananasamy, "Design and manufacturing tolerances optimisation with quality loss functions",*Int. J. Advanced Operations Management*, Vol. 2, Nos. 1/2, 2010.
24. N. Siva, Shanmugam , G., Buvanashakaran , K., Sankaranarayananasamy , S. Ramesh, Kumar "A transient finite element simulation of the temperature and bead profiles of t-joint laser welds " *Materials & Design*, Volume 31, Issue 9, October 2010, Pages 4528-4542.
25. N. Siva Shanmugam, G. Buvanashakaran, and K. Sankaranarayananasamy , " Experimental and finite element simulation of Laser Beam Welding of AISI 304 Stainless steel sheet ", *Journal of Experimental Techniques*, Volume 34, Issue 5, pages 25–36, September/October 2010.
26. S Sivakumar, V Dhanalakshmi, K Sankaranarayananasamy, "Interaction of CAD/CAI through feature extracted from STEP File", *Journal of manufacturing Technology Today*, Vol. 08, Issue 12, pp.20-27,Dec 2009.
27. KarthickJayaram J and K Sankaranarayananasamy, "Influence of 3PL in tolerance synthesis of an assembly: a successive case study, *International Journal on services technology and Management*, Vol. 12, pp.81, 2009.
28. P.Muthu, V.Dhanalakshmi, and K. Sankaranarayananasamy "Optimal tolerance design of assembly ofminimum quality loss and manufacturing cost using metaheuristic algorithms", *Int J AdvManufTechnol*, Volume 44, Numbers 11-12, 2009,pp. 1154-1164.
29. G. Buvanashakaran, N. Siva Shanmugam, K. Sankaranarayananasamy & R. Sabarikanth, "A Study on Laser Welding Modes with varying Beam Energy Levels", *Proceedings of the Institution of Mechanical Engineers (IMechE)*, Part C, *Journal of Mechanical Engineering Science*, Vol. 223, No. 5, pp. 1141-1156, 2009.
30. N. Siva Shanmugam, G. Buvanashakaran, K. Sankaranarayananasamy and K. Manonmani, "Influence of Beam Incidence Angle in Laser Welding of Austenitic Stainless Steel Using Finite Element Analysis", *Journal of Multidiscipline Modeling in Materials and Structures*, Volume 5, 2009, pp. 257-262.
31. S. P. Asok, K. Sankaranarayananasamy, T.Sundararajan, P. Starwin, R. Kalieswaran and M. Dinesh, "Pressure Drop Characteristics of water flow through Static Angular and Triangular Cavity Labyrinth Seals", *Engineering Applications of Computational Fluid Mechanics* Vol. 2, No. 4, pp. 482–495, 2008.
32. S. P. Asok, K. Sankaranarayananasamy, T.Sundararajan,ANDR.Manivanan, "Effect of Labyrinth Cavities on cavitation reduction in a conical Valve", *International journal of Fluid Mechanics Research* Vol. 35, No. 5, pp. 395–416, 2008.
33. K.Jayaram, K. Sankaranarayananasamy, S.Arunachalam, T.Page,"Tolerance Synthesis and cost Optimization inAssembly:A Neural Network Approach", *Journal on Future Engineering and Technology*, Volume 3, No.4, 2008.
34. N. Siva Shanmugam, G. Buvanashakaran, K. Sankaranarayananasamy & K. Manonmani, "Some Studies on temperature profiles in AISI 304 stainless steel sheet during laser beam welding using FE simulation", *International Journal of Advanced Manufacturing Technology*, Volume 43, Numbers 1-2, 2008, pp.78-94.
35. K.R. Balasubramanian, N. Siva Shanmugam, G. Buvanashakaran and K. Sankaranarayananasamy, "Numerical and experimental investigation of laser beam welding of AISI 304 stainless steel sheet, *Advances in Production Engineering & Management*", *Journal*, Vol 3, No. 2, pp 93 - 105, 2008.
36. S.P. Asok, K. Sankaranarayananasamy, T. Sundararajan, K. Rajesh and G. SankarGaneshan, "Neural network and CFD-based optimization of square cavity and curved cavity static labyrinth seals", *Tribology International*, Vol 20, pp 1204-1216, 2007.

37. KarthickJayaram and K Sankaranarayananasamy, "Tolerance Synthesis of Robot Dynamic Parameters Using Artificial Neural Network", Journal on Manufacturing Engineering, Issue 4, pp56-60, 2007.
38. K.R. Balasubramanian, G. Buvanashakaran and K. Sankaranarayananasamy, "Mathematical and ANN modeling of Nd:YAG laser welding of thin SS sheets", Journal on Manufacturing Engineering, Issue 2, pp56-60, 2007.
39. K.R. Balasubramanian, K. Sankaranarayananasamy and G. Buvanashakaran, "Analysis of Laser welding parameters using artificial neural network" International Journal for the Joining of Materials, Volume 18 No. 3/4, pp99-104, December 2006.
40. G. Buvanashakaran K.R. Balasubramanian, and K. Sankaranarayananasamy, "Characterization of process parameters for Laser welding of stainless steel" WRI JOURNAL, Volume 27 No.2, pp 14-21, April - June 2006.
41. K.G. Muthurajan, K. Sankaranarayananasamy, S.B. Tiwari, and B. NageswaraRao, "Finite element modelling of adhesively bonded joints", Trends in Applied Science Research, Vol.1 (1), pp 25-40, 2006.
42. K.G. Muthurajan, K. Sankaranarayananasamy, S.B. Tiwari, and B. NageswaraRao., "Post-buckling of a thin film strip in a composite laminate", Trends in Applied Science Research, Vol.1 (1) pp 46-60, 2006.
43. K.G. Muthurajan, K. Sankaranarayananasamy, S.B. Tiwari, and B. NageswaraRao., "Evaluation of Carbon/Epoxy delamination fracture toughness", Trends in Applied Science Research, Vol.1 (2), pp144-1554, 2006.
44. V. Dhanalakshmi, K. Sankaranarayananasamy, S. Arunachalam, and S. C. L. Koh "Extraction of simple and concatenated features from a wire frame model using IGES data" Intl. J. Manufacturing Technology and Management, Volume 9, Issue ¾, pp 350 – 371, 2006.
45. V. Dhanalakshmi, K. Sankaranarayananasamy, SubramaniamArunachalam, S.C.LennyKoh, "Creating agility by simplifying product flow in a multiproduct assembly line", International Journal of Enterprise Network Managementvol.1, No.2, pp.166-178, 2006.
46. B.Suresh, G.Chandramohan, J.N.Prakash, V.Balusamy and K.Sankaranarayananasamy, "The Role of Fillers on friction and slide wear characteristics in Glass-Epoxy Composite systems" Journal of Minerals and Materials Characterization and Engineering Vol.5, pp 87-101, 2006.
47. T. Christopher, K. Sankaranarayananasamy and B. NageswaraRao, "Failure assessment of flawed steel cylinders tested under internal pressure", Steel Grips, Vol. 3, pp.130-137, 2005.
48. T. Christopher, K. Sankaranarayananasamy and B. NageswaraRao, "Correlating cryogenic fracture strength using a modified two-parameter method". Jl. Of Engineering Fracture Mechanics Vol 72 pp 475-490,2005.
49. S.Arunachalam, Tom Page, K. Sankaranarayananasamy and V.Dhanalakshmi, "A Novel approach to part family formation in cellular Manufacturing using Fuzzy Analysis in CAD/CAM". SME Technical paper,ID TP05PUB67, 12 pp, 2005.
50. K.G. Muthurajan, K. Sankaranarayananasamy, S.B. Tiwari, and B. NageswaraRao., "Nonlinear vibration analysis of initially stressed thin laminated rectangular plates on elastic foundations" Journal of sound and vibration Vol 282, pp 949-969, 2005.
51. T. Christopher, K. Sankaranarayananasamy and B. NageswaraRao, "Failure assessment of tensile cracked specimens of Aluminum alloys" Trans. ASME Vol. 126, pp 404-406, Aug 2004.
52. V. Dhanalakshmi, K. Senthilkumaran, K. Sankaranarayananasamy, S. Arunachalam and T. Page "Automatic evaluation of alternate tool access directions (TADs) using STEP for minimal setup changes" SME 2004 TP04PUB315.
53. K.G. Muthurajan, K. Sankaranarayananasamy, S.B. Tiwari, and B. NageswaraRao, "Determination of elastic constants from measured natural frequencies of specially orthotropic cantilever plates". Material Science and Technology Vol. 20, pp 1303-1309, Oct 2004.
54. T. Christopher, K. Sankaranarayananasamy and B. NageswaraRao, "Fracture Behaviour of Maraging Steel Tensile Specimens and Pressurized Cylindrical Vessels" Jl. Of Fatigue and Fracture Engineering Materials and Structures, Vol 27, pp 177-186, 2004.
55. K.G. Muthurajan, K. Sankaranarayananasamy, and B. NageswaraRao "Evaluation of elastic constants of specially orthotropic plates through vibration testing." Journal of sound and vibration Vol 272 pp 413-424, 2004.
56. T. Christopher, K. Sankaranarayananasamy and B. NageswaraRao, "Fracture strength of flawed cylindrical pressure vessels under Cryogenic temperature " Cryogenics, Vol. 42, pp 616-673, Aug 2002.
57. T.Christopher, B.S.V.RamaSarma, P.K.GonindanPottai, B.NageswaraRao and K. Sankaranarayananasamy and B. NageswaraRao, "A Comparative study on Failure pressure estimations of unflawed cylindrical vessels" International Journal of pressure Vessels and piping, Vol. 79, pp 53-66, 2002.
58. K. Sankaranarayananasamy and M.S.Shanmugam "Measurement on Pinion type Gear shaping cutter using coordinate Measuring Machine." SPIC Vol.2101 Measurement Technology and Intelligent instruments, p.817, 1993.
59. K. Sankaranarayananasamy and M.S.Shanmugam "Minimization of Error on the effective profile of pinion type gear shaping cutters." Int.J.Mach. Tools manufact. Vol 28, No.4, pp 591-601, 1988.
60. K. Sankaranarayananasamy and M.S.Shanmugam "Minimum Achievable Quality of Involute Gears in generation processes." Int.J.Mach. Tools manufact. Vol 28, No.1, pp 1-10, 1988.

International Conferences

1. N. Siva Shanmugam, G. Buvanashakaran, K. Sankaranarayanan and S. Malarvizhi, Prediction of weld bead geometry for Laser spot welding of AISI 304 Stainless steel sheet using Finite element analysis” in the international conference IN-TECH 2011 at Bratislava, Slovakia from 01.09.2011 to 03.09.2011.
2. K. Sankaranarayanan, T. Suthakar, K. R. Balasubramanian and G. Buvanashakaran, Studies on effect of Marangoni convection in laser welding of austenitic stainless steel using CFD” in the international conference IN-TECH 2011 at Bratislava, Slovakia from 01.09.2011 to 03.09.2011.
3. P.Velmurugan, L.A.Kumaraswamidhas and K. Sankaranarayanan, Optimization of Human Comfort Reaction for Suspended Cabin Tractor Semitrailer Drivers, VIIth International Conference on Mechanical and Industrial Engineering (ICMIE 2011), September 28-30, 2011, world academy of engineering science and technology, Singapore.
4. P.Velmurugan, L.A.Kumaraswamidhas and K. Sankaranarayanan, Optimization of Human Comfort to Vibration in Unuspended Cabin tractor semitrailer, 1st International Conference In South Asia on “Global Manufacturing Systems & Management” (ICGMSM - 2011), pp 277 - 286, August 1-3, 2011, Coimbatore Institute of Technology, Coimbatore, India.
5. P.Velmurugan, L.A.Kumaraswamidhas , K. Sankaranarayanan, Investigation on Influence of Speed for Ride Comfort Analysis in Unuspended Cabin Tractor Semitrailer, Proceeding of the 5th International Conference on Advances in Mechanical Engineering (ICAME-2011), June 06-08, 2011 S.V. National Institute of Technology, Surat - 395 007, Gujarat, India.
6. Alphin.M.S, K. Sankaranarayanan "Whole Body Vibration Characteristics from Lumped Parameter Mathematical Models" International Conference in Mathematical modeling, MMIP-2011, NIT Calicut, March 2011.
7. Alphin.M.S, K. Sankaranarayanan, S.P.Sivapirakasam “Whole Body Vibration in Tracked Excavators with Hydraulic Breaker”, Proceedings of International Conference on Advances in Industrial Engineering Applications, Anna University, Chennai, Paper No.: HM 08, 6 - 8 January 2010.
8. A.V.Dileep, N.Siva Shanmugam, K. Sankaranarayanan, T.Ramesh “Risk Assessment In Seamless Steel Tube Process Using Fuzzy TOPSIS Method”, Proceedings of International Conference on Advances in Industrial Engineering Applications, Anna University, Chennai, Paper No.: MC 10, 6 - 8 January 2010.
9. J.Jaise, N.Siva Shanmugam, K. Sankaranarayanan, T.Ramesh “Assessment of power system reliability using Fault Tree Analysis”, Proceedings of International Conference on Advances in Industrial Engineering Applications, Anna University, Chennai, Paper No.: RE 15, 6 - 8 January 2010.
10. Georgekutty S Mangalathu, N.Siva Shanmugam, K. Sankaranarayanan, T.Ramesh “System safety in LPG fired furnace-A multi criteria decision making technique”, Proceedings of International Conference on Advances in Industrial Engineering Applications, Anna University, Chennai, Paper No.: MC 11 , 6 - 8 January 2010.
11. N. Siva Shanmugam, G. Buvanashakaran & K. Sankaranarayanan, “Finite Element Simulation of Laser Welding for Lap joint using sysweld”, Proc: Symposium On Joining Of Materials(SOJOM 08), Indian Welding Society (IWS), Welding Research Institute, 2008.
12. N. Siva Shanmugam, G. Buvanashakaran & K. Sankaranarayanan, “Finite Element Simulation of Laser Welding Process of T-joint Specimens”, Proc: International Conference of Manufacturing Research (ICMR08), Brunel University, London, September 9 - 11, 2008, pp. 665 – 674.
13. N. Siva Shanmugam, K.R. Balasubramanian, G. Buvanashakaran & K. Sankaranarayanan, “Thermal analysis of laser welding process on T-joint specimens”, Proc: IISc Centenary - International Conference on advances in Mechanical Engineering, Bangalore, July 2-4, 2008, Paper No. 84.
14. K.R. Balasubramanian, N. Siva Shanmugam, G. Buvanashakaran and K. Sankaranarayanan, “Finite Element Simulation For Laser Beam Welding of Austenitic Stainless Steel Sheet”, International Welding Symposium, IWS 2K8, paper no. 58, pp 1-10, 13th - 15th February 2008, New Delhi.
15. N. Siva Shanmugam, G. Buvanashakaran, K. Sankaranarayanan and S Arunachalam, “Modeling of Temperature Distribution for high density heat source used in material joining process”, International Conference on 24th International Manufacturing Conference IMC 24, 20-31 August 2007, Waterford Institute of Technology, Waterford, Ireland.
16. K.R. Balasubramanian, K. Sankaranarayanan and G. Buvanashakaran, The Use of Nd:YAG Lasers in Future Automobile Applications National Conference on "Emerging Trends in Automobile Technology" SEDAN 2007, Bharathidasan Institute of Technology, Bharathidasan University, Tiruchirappalli, 8th & 9th February 2007.
17. K.R. Balasubramanian, K. Sankaranarayanan and G. Buvanashakaran, Modeling Of CW Nd:Yag “Laser Welding Of Stainless Steel Using ANN”, Proceedings of the National Conference on FACTORY AUTOMATION, ROBOTICS AND SOFT COMPUTING., National Institute of Technology, Warangal, Andhra Pradesh, pp 211-216, 18-19 January 2007.
18. K.R. Balasubramanian, K. Sankaranarayanan, G. Buvanashakaran and G. Balaji, “Effect of Laser Welding Parameters on Bead Profile of Austenitic Stainless Steel”, Proceedings of the International conference on Advances in Mechanical Engineering, ICAME 2006, SRM University, Chennai, India, pp 235 – 239, 14-16 December 2006.

19. K. Sankaranarayanan, K.R. Balasubramanian, V. Ravikumar, "Thermal Analysis of the influence of an annular fin with different profiles in a ceramic tube of heat transfer equipment", Proceedings of the ISTE Sponsored National Conference On Recent Advances in Mechanical Engineering, NCRAME-06, Rayat Institute of Engineering & Information Technology, Nawanshahr, Punjab, pp 18-27, September 8-9, 2006.
20. K.R. Balasubramanian, G. Buvanashakaran and K. Sankaranarayanan, "Comparison Of Multiple Regression Analysis And Artificial Neural Network For Modeling Of Nd:Yag Laser Cladding" Proceedings of the International Conference on Modeling and Simulation 2006, Kuala Lumpur, Malaysia Paper No.152, 3-5 April 2006.
21. K.R. Balasubramanian, G. Buvanashakaran and K. Sankaranarayanan, Modeling of laser cladding using artificial neural networks, National conf. on Recent Advances in Manufacturing Technology (RAMT'06), Velammal Engg. College, Chennai, pp 173-177, 3rd Feb, 2006.
22. K.R. Balasubramanian, G. Buvanashakaran, K. Sankaranarayanan and Sastikumar D, "Laser Surface Alloying of Co Based Coating on Carbon Steel". Proceedings of the international Conference on Resource Utilization and Intelligent Systems. KonguEngg. College, India, pp 626-631, Jan 4-6, 2006.
23. KarthikJayaraman and K. Sankaranarayanan, "Tolerance Synthesis and Cost Optimization in Assembly: Neural Network Approach". Proceedings of the international Conference on Resource Utilization and Intelligent Systems. KonguEngg. College, India, pp 524-529, Jan 4-6 2006.
24. KarthikJayaraman J and K. Sankaranarayanan, "Precise tolerance optimization of Robot dynamics parameters using artificial Neural Networks". Proceedings of the International Conference on manufacturing Science and Technology, Melaka,malaysia, paper no 488, Aug 28-30,2006.
25. K.R. Balasubramanian, G. Buvanashakaran and K. Sankaranarayanan, "Investigations on solid state Nd:YAG laser stellite cladding on carbon steel substrate". Proceedings of the National Conference on Latest Trends in Mechanical Engineering, Dr.MCET, Pollachi, pp 146-153, 1-2nd April 2004.
26. G. Buvanashakaran, S. Manoharan, K. Sankaranarayanan and K.R. Balasubramanian, "Application of Artificial neural network for Nd:YAG Laser Welding", Proceedings of the International Symposium on Joining of Materials, SOJOM 2004, BHEL, Trichy, WEB 1, pp 1-10, 22-23rd July 2004.
27. Senthilkumar. M, S.P.Asok, T.sundararajan, and K. Sankaranarayanan, "CFD Modelling of LID Driven cavity Flow"10 thInternational Topical meeingon Nuclear Reactor thermal hydraulics, Seol, October 5-9,2003.
28. V. Dhanalakshmi, K. Sankaranarayanan, S. Arivukkarasan, G.Valarmathi "Expert systems for Feature Extraction of Rotational Parts" AIMS, MIT,Annauniversity, Chennai, 2001.
29. K. Sankaranarayanan and M.S.Shanmugam "Computer Aided design of Pinion type Gear Shaping Cutter" 13th AIMTDR Conference, Jadavpur University, 1988.

14. Journal Reviewer

- International Journal of Production Research
- Journal of Structural and Multidisciplinary Optimization
- Journal of Engineering and Technology Research
- Journal of Educational Research

15. Books Reviewed

- CAD/CAM by P.N. Rao
- Machine Drawing by Ajeet Singh
- Materials Science and Engineering by Smith
- Shop Theory by James Anderson and E. E. Tatro

16. Projects completed / In progress

Project Title	Project Duration in years	Amount Received Rs. In Lakhs	Funding Agency	Status
Design and Development of low cost weeding machine and its implements 2001-2003	3	5.00	MHRD-2001	Completed
Process Modeling and Online Monitoring of Laser Beam Welding 2007-2009	2	18.48	DST-2007	Completed
Support System for CFBC FBHE Coils and Back Pass Surfaces on CFBC boilers	9 months	9	BHEL, Trichy	Completed
Distribution of Load Transfer Pattern and Stress Distribution with Large openings in the furnace walls of CFBC boilers	6 months	7.5	BHEL, Trichy	Completed
Study of Operational issues of drag link feeder in existing CFBC boilers and issuing guidelines for improvement	6 Months	16	BHEL, Trichy	Completed
Failure analysis of High Pressure Feed water Heaters of TPS I Expansion	2 months	5.34	NLC Neyveli	Completed
Design and Analysis of Leak Proof Joints for Supercritical Boiler Tubes Test Facility	6 months	9.04	BHEL, Trichy	Ongoing
Comparative study and analysis of FBHE coil support arrangement between BORL and Koniambo CFBC boiler – Milestone I Predicting metal tube temperature for FBHE coils of Koniambo & BORL	1	20.34	BHEL, Trichy	Ongoing

17. Workshop / Seminars Conducted

- Member of Organizing committee(Exhibition Committee) for Workshop on Occupational Health & Safety Management conducted by Institution of Engineers (India) on 20th October 2001 at BHEL, Trichy.
- Conducted a Two week special Programme on Advanced Safety Engineering for DRDO Scientists during 9th-20th December 2003 at NIT, Trichy.
- Conducting Training on Industrial safety to Employees (Scientists, Supervisors and Workers) of IGCAR for 10 to 15 days per year since 2009 at IGCAR. (Three years of Programme Completed).
- Organized Two week Special Lecture session on Composite Materials and nano Composites for faculty and Research Scholars by Prof. R. Prabakaran Visiting Professor from ODU, Virginia on TEQIP Program. 16th- 29th January 2008.
- Organized Two days' Workshop on Composite Materials for Faculty Members of Other Engineering Colleges during week end on 19th& 26th January 2008. Under TEQIP.
- Organizing committee member for International Symposium on Joining of Materials, 2012 (Chairman- Finance Committee) 18th- 21st January, 2012.
- Prepared offsite emergency plan for Karur District.

18. Countries visited

- China in 1988
- USA in 2002
- Malaysia in 2004
- Slovakia in 2011

19. Details of Memberships in societies.

- Fellow of Institution of Engineers (India)
- Life Member of ISTE
- Life Member of Indian Welding Society
- Member of SAEINDIA