

# National Institute of Technology, Tiruchirappalli: Performa for CV of Faculty/ Staff Members

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## Curriculum Vitae



### Brief Profile:

Dr. K. R. Balasubramanian is currently working as an Associate Professor in the Department of Mechanical Engineering. He did Bachelor of Engineering in Mechanical Engineering from Shanmugha College of Engineering, Thanjavur, Master of Engineering in Design & Production of Thermal Power Equipment from Regional Engineering College, Trichy. He obtained his Doctoral degree from National Institute of Technology, Trichy. Prior to joining NIT, Trichy he worked as Lecturer in the Kings College of Engineering, Thanjavur and Sudharsan College of Engineering, Pudukottai and as Research Assistant in REC, Trichy. He has published more than 85 papers in reputed International Journals. He has authored a book titled “Additive Manufacturing of Multi-Material and Composite Parts” and has contributed 4 book chapters. He has completed 6 research projects funded by various agencies including, DRDO, DST, BHEL and IGCAR. He has guided 7 Ph.D scholars and he is currently guiding 10 Research Scholars. He is a life member of professional bodies such as The Institution of Engineers (India), Indian Society for Technical Education (ISTE) and Indian Welding Society (IWS). He has organized two International Conference and many workshops. His research interests include Renewable Energy, Laser Materials Processing, Fluid flow and Heat Transfer in mini and micro channels, Design of Experiment, Additive Manufacturing.

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1. Name: **Dr. K. R. BALASUBRAMANIAN**
2. Designation: Associate professor
3. Office Address: Dr. K. R. Balasubramanian,  
Associate Professor - Mechanical Engineering Department  
National Institute of Technology, Tiruchirappalli - 620015.
4. Telephone: 0431-2503419  
Mobile (Optional): +91-94435 61873, 8838735970
5. Email (Primary): [krbala@nitt.edu](mailto:krbala@nitt.edu) Email (Secondary):kribalas@gmail.com
6. Field(s) of Specialization: Design & Production of thermal power equipment
7. Employment Profile

Sl. No.	Name of the Employer	Period	Designation / Nature of Assignment
1.	National Institute of Technology, Trichy. - 15.	12.03.2018 onwards	Associate Professor / Teaching & Research
2.	National Institute of Technology, Trichy. - 15.	10.04.2006 to 11.03.2018	Assistant Professor / Teaching & Research
3.	Kings College of Engineering, Punalkulam, Pudukkottai – 613 303.	1 year	Lecturer / Teaching
4.	Sudharsan College of Engineering, Pudukkottai – 622 501.	2 years	Lecturer / Teaching
5.	Regional Engineering College, Tiruchy. - 15	1 year	Research Assistant / Teaching

### 8. Academic Qualifications (From Highest Degree to High School):

Sl. No.	Academic Institution	Period of Study/ Research	Year of Passing	Main Subjects of Study / Research
1.	National Institute of Technology, Trichy.	Jan 2009		Investigations on Process Parameters, Modeling and Weld Characterization for Laser Joining of Thin Section Stainless Steel / Ph.D
2.	Regional Engineering College, Tiruchy.	Aug 2001 to Jan 2003	January 2003	Design & Production of Thermal Power Equipment / M.E
3.	Shanmugha College of Engineering, Thanjavur.	1995-1999	March 1999	Mechanical Engineering / B.E

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## 9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Nodal Officer (Finance)	NIT Trichy	01-11-2013	Till now
PSI club – Faculty Incharge		2018	Till now
Hostel Warden		2012-01-04	31-12-2015

## 10. Academic/Administrative Responsibilities outside the University

Editorial Review Board member for International Journal of Surface Engineering and Interdisciplinary Materials Science [**IJSEIMS**]

Reviewer of International Journal of Advanced manufacturing Technology [**IJAMT**]

## 11. Awards, Associateships etc.

## 12. Fellowships

## 13. Details of Academic Work

### (i) Curriculum Development

- Development of course plan for the following courses taught at UG & PG programme
- Faculty advisor, PAC chairman & Project evaluation committee member

### (ii) Courses taught at Postgraduate and Undergraduate levels

#### Postgraduate level

- Safety management,
- Human factor and ergonomics and
- Computational fluid dynamics.

#### Undergraduate level

- Basics of mechanical engineering,
- Engineering thermodynamics
- Fluid mechanics,
- Engineering graphics,
- Machine drawing and
- Renewable energy.

### (iii) Projects guided at Postgraduate level

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**M.S. Guidance**

Sl. No	Thesis Title	Name	Year of Award	As Guide/co-guide
1.	Investigations On Prediction Of Local Heat Flux On Membrane Water-Wall Tubes Of Sub-Critical Boiler	G. Sankar	2016	Guide
2.	Studies on performance of utility boiler with variation in ash content of coal	Harikrishnan S. Pillai	2016	Guide
3.	Behaviour Based Safety Approach to Improve Workplace Safety”–A comparative study of Heavy Manufacturing Industry and Multi-storey Building Construction	D. Dinakaran	2020	Guide
4.	Postural Discomfort Analysis among EOT Crane Operators and Tube Edge Preparation Workers of Heavy Engineering Industry	R Anandakumar	2020	Guide

**PG DISSERTATIONS**

Sl. no	Title	Student name	Year
1.	Ergonomic assessment in the heavy equipment manufacturing industry to reduce musculoskeletal disorders	Deepmala kumari	2021
2.	Treatment of wastewater containing phenol by liquid-liquid extraction	Deepmala kumari	2021
3.	Machine learning approach to predict thermophysical properties of nanoencapsulated PCM	Vipul Atmaram Dhotre	2021
4.	Synthesis and comparative study of SiO <sub>2</sub> and TiO <sub>2</sub> shell based nanoencapsulation of binary eutectic PCM	Vipul Atmaram Dhotre	2021
5.	Kinetic performance of bio-char based form-stable PCM for medium temperature range applications	Jatoth Mahesh	2021
6.	Synthesis and Characterization of Form stable Bio-based composite PCM material	Jatoth Mahesh	2021
7.	Numerical investigation of melting behavior of phase change material dispersed with nano-particles in Concentric pipes	Akula Sai Sankar	2020
8.	Characterization of a novel composite PCM for building applications	Akula Sai Sankar	2020
9.	Numerical investigation of hypersonic flow passed different after body configuration	Bhukya Koteswararao Naik	2020
10.	Dynamically simplified temperature Transforming model for low temperature composite PCM slab	Bhukya Koteswararao Naik	2020

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11.	Experimental analysis of insole material in safety shoe and the effect of different insole material in the ground reaction force during material handling	Anuradha Mishra	2019
12.	Prediction of incident energy released during ARC flash in industries using MATLAB	Anuradha Mishra	2019
13.	Identification of biomechanical risk factors followed by postural analysis among construction workers	C NIKITHA	2019
14.	Characterisation and thermal stability analysis of novel form stable composite PCM for solar photovoltaic applications	Sahith G	2019
15.	Ergonomic study, analysis and process improvement of manual handling workers on LPG gas cylinder	Mukilvanan M	2019
16.	Dynamic Analysis of Flat Plate Loop Heat Pipe (Phase-I Development of Non-Isothermal Incompressible Two-Phase Solver)	Saurabh Prajapati	2018
17.	Hand-arm vibration transmission analysis of angle grinder using accelerometer	Jivesh Kumar	2018
18.	Experimental analysis of PCM Integrated –Circular Natural Circulation Loop	Abin francis	2018
19.	PCM Integrated - Solar Thermal Collector for Direct Steam Generation (Phase-I Development of Solver for Solid-to-Solid PCM)	Abin francis	2018
20.	Evaluation Of the Effect of Floor Mats and Shoe In-Soles on Standing Posture	Pankaj Panwar	2017
21.	Analysis Of Force on The Hands of Workers While Operating Hand Drilling Machine	Pankaj Panwar	2017
22.	Study On Effect of Variation in Welding Position During Overhead Welding	Bibhor Kumar Vibhuti	2017
23.	Incident Data Analysis and Risk Assessment in A Casting Industry	Nishtu. A. P	2017
24.	Investigations On Prediction of Local Heat Flux on Membrane Water Wall Tubes of Sub-Critical Boiler	Sankar G	2016
25.	Computer Monitoring Safety System Assessment For Generator Rotor Cooling System	Mondi Dheeraj Kumar	2016
26.	Studies On the Performance of Utility Boiler with Variation in Ash Content of Coal	Harikrishnan S Pillai	2016
27.	Investigation Of Work-Related Disorders and Ergonomics Design of Seat in Forklifts	Karanam Venkiteshvarlu	2016
28.	Fatigue Evaluation in Manual Handling Using Surface Emg and Ergonomic Design consideration Of Trolley	Singamsetty Vamshi Krishna	2016
29.	Comparison Of Oil Fire Suppression Using Water Mist Ultrasonic Vibrator and Twin Fluid System	M Harihara Sudhan	2016
30.	Design And Development of The Handle For Vibrating Plate Compactor for Mitigating Hand-Arm Vibration	N. Sivasankara Naik	2015

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31.	Oxidation Behaviour on T22 Steel Using High Velocity Oxy Fuel Coating	Ashu Kumar	2015
32.	A Mathematical Approach for Determining Fatigue Of Muscle Group Using Fatigue Model by Emg And Its Validation	Sangamshetty Vamshi Krishna	2015
33.	Experimental Study of Suppressing Oil Fires Using Water Mist Ultrasonic Vibrator and Optimizing Fire Extinguishing Parameters	M. Harihara Sudhan	2015
34.	Economic Assessment and Recommendations for Design of Mobile Crane Cabin	Mondi Dheeraj Kumar	2015
35.	Analysis Of Hand Transmitted Vibrations During Soil Compaction with Vibrating Plate Compactor	N Sivasankara Naik	2014
36.	Computational Fluid Dynamic Analysis of Tig Welding of 304 L Stainless Steel Molten Pool	Ashu Kumar	2014
37.	Design And Implementation of Automatic Nitrogen Fire Suppression System in Electrical Enclosures	Jiss Mathew	2014
38.	Excremental Investigations and Mathematical Modelling of Seated Occupants Exposed to Vertical Vibrations in Midi Bus	Seenath K T	2014
39.	Numerical Investigation of Three-Dimensional, Transient Heat Transfer and Fluid Flow Weld Pool During Tig Welding of 3041 Stainless Steel	Rohith Thomas	2014

**UG PROJECTS**

Sl. No	Title	Year
1.	Numerical investigation of immersed jet cooling for thermal management of Li-ion battery	2021
2.	Developing a PCM based thermal management system for Li-ion battery packs	2021
3.	Numerical investigation of PCM based baffle structured heat sink for thermal management of electronic components	2020
4.	Thermal stress analysis of parabolic trough receiver with concentrated solar radiation	2019
5.	CFD analysis of vortex induced vibration of absorber tube in solar trough collector	2019
6.	Electromagnetic Reciprocating Engine	2017
7.	Study of Erosion Behaviour of HVOF Coated Carbon Steel	2017
8.	A Theoretical Study of Flow Boiling In Straight And Tapered Microchannels And Micro gaps	2017
9.	Hydraulic Solar Tracker	2016
10.	Comparative Study of Mars Rover Suspension	2016
11.	Vibration Of Non-Uniform Continues Railway Bridge Under Moving Load	2016
12.	Design of a Conveyor System For Loading And Unloading	2015

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13.	Oxidation Resistance of HVOF Ni-Cr-Tio <sub>2</sub> Coating on Alloy Steel (T22) At 900c	2015
14.	Study of Storing and Packaging Processes of Agricultural Product in India	2015
15.	Design and Fabrication of A Parallel Manipulator and Optimization of Its Path Planning	2015
16.	CFD Analysis of Heat Transfer and Fluid Flow In Weld Pool During Tig Welding Of 304L Stainless Steel	2014
17.	Effect of Ethanol Gasoline Blend in 4 Stroke Spark Ignition Engine	2013
18.	A-Tig Welding of 304 L Using Single Component Flux	2013
19.	Simulation and Analysis of Fluid Flow During the Laser Beam Welding of Aisi 304 Stainless Steel	2010
20.	Analysis Of Heat Transfer Characteristics of Active and Passive Heat Sinks Used in Integrated Circuits	2009
21.	Effect Of Preheated Waste Cooking Oil on the Performance and Emissions in Di Diesel Engine	2009

**(iv) Other contribution(s) - Outreach activities**

1.	Name of the Activity: Year: Role: Given by:	IGCAR Sponsored Safety Training Programme, Kalpakkam 2016 Safety Trainer IGCAR, Kalpakam, Chennai
2.	Name of the Activity: Year: Role: Given by:	IGCAR Sponsored Safety Training Programme, Kalpakkam 2015 Safety Trainer IGCAR, Kalpakam, Chennai
3.	Name of the Activity: Year: Role: Given by:	IGCAR Sponsored Safety Training Programme, Kalpakkam 2014 Safety Trainer IGCAR, Kalpakam, Chennai
4.	Name of the Activity: Year: Role: Given by:	IGCAR Sponsored Safety Training Programme, Kalpakkam 2013 Safety Trainer IGCAR, Kalpakam, Chennai

**14. Details of Major R&D Projects**

<b>Agency/ Organization</b>	<b>Short title or Area</b>	<b>Value in Lakhs</b>	<b>PI or Co-PI</b>	<b>Period (MM/YY- MM/YY)</b>	<b>Remarks</b>
ISRO	Conducting safety studies at ISRO Propulsion Complex	20 Lakhs	Co-PI	Dec,2021	Completed
DRDO	Experimental Investigation of Impact Initiation of Sound /	Rs.34.67 Lakhs	Co-PI	2016-2019	Completed

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	Light Emitting Pyrotechnic Compositions				
UGC-DAE-CSR -	Modeling of A-TIG welding of austenitic stainless steels and prediction of residual stresses	Rs. 11.07	PI	2011 – 2015	Completed
BHEL – Trichy	Design of Experimental Matrix for heat transfer studies at Supercritical Test Facility	Rs.6.13 Lakhs	Co-PI	2012	Completed
Shri Saravana Industries Pvt Ltd, Madurai.	Runner blade repair welding and stress relieving	Rs.1.1 Lakhs	PI	March, 2012	Completed
Shri Saravana Industries Pvt Ltd, Madurai.	Pelton wheel turbine runner blade repair welding and stress relieving	Rs.1.4 Lakhs	PI	June, 2012	Completed
DST - New Delhi -	Process Modeling and Online Monitoring of Laser Beam Welding	Rs 18.48 Lakhs	Co-PI	2007 – 2009	Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
P. Dinesh Babu	Experimental Studies and Numerical Simulation of Laser Transformation Hardening of Low Alloy Steel	Guide	2013
T. Suthakar	Experimental Investigation and Numerical Analysis of Laser Beam Welding of Austenitic Stainless Steel	Co-guide	2013
Nanda Naik Korra	Optimization and Characterization Studies on Activated Tungsten Inert Gas (A-TIG) Welded Duplex Stainless Steel 2205 and Super Duplex Stainless Steel 2507 Alloys	Guide	2016
K. C. Ganesh	Numerical Modelling and Experimental investigation on TIG and Activated TIG Welding of Austenitic Stainless Steel	Guide	2016
R. Ajith Krishnan.	Experimental Investigation on the Effect of Gravitational Orientation on Flow Boiling Performance in Different Configurations of Micro/mini Channels	Guide	2019

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K. Premkumar	Experimental Investigation on Oxidation, Erosion and Hot Corrosion Behaviour of HVOF Coating	Guide	2020
G. Sankar	Numerical and experimental investigations of the performance of tangentially fired utility boiler furnace firing high ash Indian coal	Guide	2020
M. Senthil kumar	Experimental Investigation on Thermal Management of Phase Change Material based Solar Photovoltaic Passive Cooling	Guide	2021
R. Shankar	Studies On The Development Of Nanostructured Thermal Spray Coating For High Temperature Applications	Thesis Submitted	2021
Jinshah B S	Performance investigation of an natural circulation loop based dual mode parabolic through collector for low temperature and saturated steam applications	Thesis Submitted	2022

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Sl. No.	Details
1.	K. Premkumar and <b>K. R. Balasubramanian</b> , "Oxidation Resistance of HVOF Ni-Cr-TiO <sub>2</sub> Powder Coating on Steel at Higher Temperature", International Conference on Recent Innovations in Production Engineering (RIPE 2017), held at Anna University (MIT campus), Chennai, 24 -25 March, 2017.
2.	K. Premkumar and <b>K. R. Balasubramanian</b> , "High Temperature Cyclic Oxidation Behavior of HVOF Sprayed Cr <sub>3</sub> C <sub>2</sub> -20%TiO <sub>2</sub> Coatings on Boiler Steel", International Conference on Recent Innovations in Production Engineering (RIPE 2017), held at Anna University (MIT campus), Chennai, 24 -25 March, 2017.
3.	Ajith Krishnan. R, <b>K. R. Balasubramanian</b> , S. Suresh. Transient flow boiling performance of Al <sub>2</sub> O <sub>3</sub> -Water nanofluid in parallel microchannels." International conference on Nano for Energy and Water, NEW 2017, University of Petroleum and Energy studies, Dehradun, Feb 2017- ISBN: 978-81-928068-4-6 (Conference)
4.	International Conference on Energy, Material & Nanotechnology Meeting on Microfluidics and Nanofluidics – 2016, Dubai –UAE, 03-10 April, 2016
5.	K.C.Ganesh, M.Vasudevan, <b>K.R.Balasubramanian</b> , P.Vasantharaja, Conductive mode heat transfer analysis of TIG and activated-TIG welding process for various depth-to-width ratio of weld bead profile in type 316LN stainless steel, International Conference on Advances in Materials, Manufacturing and Applications, April 9-11, 2015 - NIT, Trichy.
6.	Ganesh, K. C., M. Vasudevan, <b>K. R. Balasubramanian</b> , N. Chandrasekhar, S. Mahadevan, P. Vasantharaja and T. Jayakumar (2014) Modeling, Prediction and Validation of Thermal Cycles, Residual Stresses and Distortion in type 316 LN Stainless Steel Weld Joint made by TIG Welding Process. International Conference on Structural Integrity, IGCAR, Kalpakkam, India.

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7.	<b>K. R. Balasubramanian</b> , attended one week coordinator's workshop on Fluid Mechanics conducted by IIT Kharagpur during 11 <sup>th</sup> March to 15 <sup>th</sup> March, 2014.
8.	Participated in the 28th Indian Engineering Congress, Organized by Institution of Engineers (India) at Chennai during 20 <sup>th</sup> to 22 <sup>nd</sup> December 2013.
9.	<b>K. R. Balasubramanian</b> , S. Suresh and S. P. Sivapirakasam, Heat Transfer Enhancement Using Nanofluid In A Serpentine Passage, International Conference on Advance Research in Mechanical, Aeronautical And Civil, Sep 7, 2013 Pattaya, Thailand. pp. 65-69.
10.	S. P. Sivapirakasam, Sreejith Mohan, <b>K. R. Balasubramanian</b> , M. Surianarayanan, Respirable fume analysis during the flux cored arc welding of 316L(N) Austenitic stainless steel, International Conference on Advance Research in Mechanical, Aeronautical And Civil, Sep 7, 2013 Pattaya, Thailand. pp.70-74.
11.	S. P. Sivapirakasam, R. Anand, G. R. Kannan and <b>K. R. Balasubramanian</b> , Optimization of Biodiesel Production Using RSM and Study of Combustion Characteristics on DI Diesel Engine, ASME 2012 International Mechanical Engineering Congress and Exposition Volume 6: Energy, Parts A and B, Houston, Texas, USA, November 9–15, 2012
12.	T. Suthakar, <b>K. R. Balasubramanian</b> and K. Sankaranarayananasamy, Multi Objective Optimization of Laser Welding Process Parameters by Desirability Approach of Design of Experiments, ASME 2012 International Mechanical Engineering Congress and Exposition, Volume 3: Design, Materials and Manufacturing, Parts A, B, and C, Houston, Texas, USA, November 9–15, 2012.
13.	<b>K. R. Balasubramanian</b> , R. Anand, B. Venkatesh, G. R. Kannan, and S. P. Sivapirakasam, Study on Performance and Emission Characteristics of DI Diesel Engine Fuelled With Deccan Hemp Methyl Ester, ASME 2012 International Mechanical Engineering Congress and Exposition Volume 6: Energy, Parts A and B, Houston, Texas, USA, November 9–15, 2012
14.	<b>K. R. Balasubramanian</b> , G. R. Kannan and R. Anand ‘Effect of Preheated Waste Cooking Oil on the Performance and Emissions in a DI Diesel Engine’, Paper Id.20100438. PetroTech-2010, 9 <sup>th</sup> International Oil and Gas Conference and Exhibition, New Delhi. October 31 – November 3, 2010.
15.	<b>K. R. Balasubramanian</b> , T. Suthakar, K. Sankaranarayananasamy, G. Buvanashakaran, S.P. Sivapirakasam and Dileep Reddy K, ‘Analysis of Heat Transfer During the Laser beam welding of AISI 304 Stainless Steel using CFD’, International Welding Symposium (IWS 2k10), pp 391-399, Bombay Exhibition Centre –Mumbai, 10-12 February 2010.
16.	S. P. Sivapirakasam, R. Naga Lakshmi, <b>K. R. Balasubramanian</b> and P.V. N. Maheswara Rao, ‘Assessment of welding fumes using ventilation parameters during GMAW welding Process’, International Welding Symposium (IWS 2k10), pp 463-471, Bombay Exhibition Centre –Mumbai, 10-12 February 2010.
17.	Jose Mathew, S.P. Sivapirakasam, <b>K. R. Balasubramanian</b> and K. Renjith, ‘Analysis of Total Aerosal Emission from electrical Discharge Machining Process’, pp 1024-1028, Proceedings of the International Conference on Advances in Mechanical Engineering, August 3-5, 2009, S.V. National Institute of Technology, Surat, Gujarat, India.
18.	<b>K. R. Balasubramanian</b> , N. Siva Shanmugam, G. Buvanashakaran and K. Sankaranarayananasamy, ‘Finite element simulation for Laser Beam Welding of Austenitic

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	Stainless Steel Sheet’, International Welding Symposium (IWS 2k8), paper no. 58, pp 1-10, Pragati Maidan, New Delhi, 13 <sup>th</sup> -15 <sup>th</sup> , February 2008.
19.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy 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, 8 <sup>th</sup> & 9 <sup>th</sup> February 2007.
20.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy 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 <sup>th</sup> & 19 <sup>th</sup> January 2007.
21.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy, 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 <sup>th</sup> -16 <sup>th</sup> December 2006.
22.	K. Sankaranarayananasamy, <b>K. R. Balasubramanian</b> , 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.
23.	<b>K. R. Balasubramanian</b> , G. Buvanashakaran and K. Sankaranarayananasamy, ‘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 <sup>rd</sup> -5 <sup>th</sup> April 2006.

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

**International Conference**

Organised 2<sup>nd</sup> International Conference "**International Mechanical Engineering Congress - 2019**" sponsored by TEQIP from 29<sup>th</sup> November 2019 to 01<sup>st</sup> December 2019 at NIT, Trichy.

Organized an 1<sup>st</sup> International Conference "**International Mechanical Engineering Congress**" sponsored by TEQIP during June 13-15, 2014 at NIT, Trichy. Over 650 delegates from India and Abroad participated and presented the papers in the conference.

**Workshop**

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<b>Sl. No.</b>	<b>Title</b>	<b>Place</b>	<b>Sponsor</b>	<b>Duration</b>
1.	One week Faculty Development Programme on “Advanced Tools and Techniques for Research in Engineering Problems” (ATTRE-2019)	NIT, Trichy	AICTE MARGD ARSHAN Scheme	18.11.2019 to 23.11.2019
2.	Two week short term course on “Recent Advances in Solar Energy Technologies for Sustainable Development”.	NIT, Trichy	Self Financed	29.04.2019 to 11.05.2019
3.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	19.12.2016 to 22.12.2016
4.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	18.10.2016 to 21.10.2016
5.	Recent Trends in Industrial Safety Engineering	NIT, Trichy	TEQIP-II NIT, Trichy	12.09.2016 to 17.09.2016
6.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	22.08.2016 to 25.08.2016
7.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	15.12.2015 to 18.12.2015
8.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	28.09.2015 to 01.10.2015
9.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	27.10.2014 to 30.10.2014
10.	Short term course on "Advancement in Industrial Safety Engineering"	NIT, Trichy	Self Financed	29.09.2014 - 30.09.2014
11.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	01.09.2014 to 04.09.2014
12.	Fluid Mechanics	NIT, Trichy	NMEICT, MHRD	20.05.2014 to 30.05.2014
13.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	10.03.2014 to 16.03.2014
14.	Training programme on OSHAS 180001:2007 organized by Bureau VERITAS Certification, India pvt Ltd, Mumbai	NIT, Trichy	TEQIP-II NIT, Trichy	04.02.2014 to 08.02.2014
15.	In house Occupational Health and Safety Training programme for M.Tech students	NIT, Trichy	TEQIP-II NIT, Trichy	05.12.2013 to 17.12.2013
16.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	21.08.2013 to 23.08.2013
17.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	02.07.2013 to 05.07.2013
18.	Short term course on “Quantitative Research Techniques for Engineers and Researchers” under Self Financing Category.	NIT, Trichy	Self Financed	10.06.2013 to - 14.06.2013

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19.	TEQIP -II Sponsored short term course on “Recent Advances in Modeling and Simulation of Joining of Materials”	NIT, Trichy	TEQIP-II NIT, Trichy	23.05.2013 to 25.05.2013
20.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	11.09.2012 to 14.09.2012
21.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	19.06.2012 to 22.06.2012
22.	Safety Training Programme	IGCAR, Kalpakkam	IGCAR	20.12.2011 to 23.12.2011
23.	AICTE-MHRD sponsored Staff Development Programme on “Quantitative Research Techniques for Engineers and Researchers”	NIT, Trichy	AICTE- MHRD	21.12.2009 to 02.01.2010

18. Invited Talks delivered

Sl. No.	Event & Place	Date
1.	Acted as Chairperson in the International Conference on Advances in Mechanical Engineering (ICAME-2015) organized by University college of Engineering, Villupuram.	15-16 October 2015
2.	Chief Guest for the symposium "ATROZ-2K14" organized by Kings College of Engineering, Punalkulam, Pudukkottai.	01.10.2014
3.	Delivered guest lecture on "Fluid Mechanics & Machinery" in the RVS school of Engineering and Technology, Dindigul	25.09.2014
4.	Delivered guest lecture on "Engineering Materials" organized by MIET Engineering college, Trichy.	11.10.2013
5.	Delivered guest lecture on "Renewable Energy Sources" organized by Syed Ammal Engineering College, Ramanathapuram.	07.10.2013
6.	Delivered guest lecture on ‘Advances in heat Transfer’ organized by R.V.S. College of Engineering and Technology, Dindigul	11.10.2011
7.	Delivered guest lecture on ‘Response surface methodology’ in a two day workshop organized by Jayaram College of Engineering and Technology, Tiruchirappalli	11.03.2011
8.	Delivered keynote address on ‘Recent advancements in Mechanical Engineering’ in the National level Technical Symposium organized by Sudharsan Engineering College, Pudukkottai	05.01.2010
9.	Delivered guest lecture on ‘Introduction – RSM’ in the AICTE-MHRD sponsored Staff Development Programme on “Quantitative Research Techniques for Engineers and Researchers” organized by Dept. of Mechanical Engineering, NIT, Trichy.	23.12.2009
10.	Delivered guest lecture on ‘Response Surface Methodology’ in the AICTE-MHRD Sponsored Faculty Development Programme on	11.07.2009

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	‘Applied Mechanical Measurements’, organized by Dept. of Mechanical Engineering, NIT, Trichy.	
11.	Delivered guest lecture on ‘Response Surface Methodology in Engg’ in the AICTE Sponsored Staff Development Programme on ‘Recent Trends in Manufacturing Sciences and Technology’ organized by M.A.M. College of Engineering, Trichy.	06.06.2009
12.	Delivered guest lecture on ‘Design of Experiments’ in the AICTE sponsored STTP programme organized by Bharathiyar College of Engineering and Technology, Thiruvettakudy, Karaikal.	05.03.2009
13.	Delivered guest lecture on ‘Hands on training on DOE’ in the AICTE-MHRD sponsored Faculty Development Programme on “Recent Advances in Modeling and Simulation of Joining of Materials”	02.01.2009

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member )	Organization	Level
Fellow	The Institution of Engineers (India)	National
Life Member	The Indian Society for Technical Education	National
Life Member	Indian Welding Society	National

20. Academic Foreign Visits

Country	Duration of Visit	Programme
Dubai, United Arab Emirates	April 05-08,2016	EMN Meeting on Membranes

21. Publications

(A) Refereed Research Journals:

Sl. No.	Details
1.	Kottala Ravi Kumar, K.R. Balasubramanian, G Pramod Kumar, Chigilipalli Bharat Kumar, Murali Mohan Cheepu “Experimental investigation of nano encapsulated molten salt for medium temperature thermal storage systems and modeling of neural networks.” <b>International Journal of Thermophysics.</b>
2.	Balasubramanian, Karuppudayar Ramaraj, Kottala Ravi Kumar, Sakthivel Puvaneswaran Sathiya Prabhakaran, Basheer Sheeba Jinshah, and Nalluri Abhishek.

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	"Thermal degradation studies and hybrid neural network modelling of eutectic phase change material composites." <b>International Journal of Energy Research</b> .
3.	Balasubramanian, K. R., et al. "Thermal and hydraulic characteristics of a parabolic trough collector based on an open natural circulation loop: The effect of fluctuations in solar irradiance." <b>Sustainable Energy Technologies and Assessments</b> 52 (2022): 102290.
4.	Ravi Kumar Kottala; Balasubramanian Karupudayar Ramaraj; Jinshah B S; Muthya Goud Vempally; Maheswari Lakshmanan, Experimental investigation and neural network modeling of binary eutectic/ expanded graphite composites for medium temperature thermal energy storage, <b>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</b> , (2022), DOI: 10.1080/15567036.2022.2043490
5.	Ravi Kumar, Kottala, K. R. Balasubramanian, B. S. Jinshah, and Nalluri Abhishek. "Experimental analysis and neural network model of MWCNTs enhanced phase change materials." <b>International Journal of Thermophysics</b> 43, no. 1 (2022): 1-31.
6.	Jinshah B S; Balasubramanian Karupudayar Ramaraj; Ravi Kumar Kottala; Sivapirakasam S P, A complete numerical model for low temperature composite form-stable phase change material slab based on dynamically simplified temperature transforming method, <b>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</b> , (2022), DOI: 10.1080/15567036.2021.1944403
7.	B.S.Jinshah, K.R.Balasubramanian, Ravikumar Kottala, S.Divakar, Influence of power step on the behavior of an Open Natural Circulation Loop as applied to a Parabolic Trough Collector, <b>Renewable Energy</b> , Volume 181, January 2022, Pages 1046-1061
8.	Sathyamurthy, Vikesh, Sankar Gopalan, Sivan Suresh, <b>Balasubramanian Karupudayar Ramaraj</b> , and Santhosh Kumar Deenadayalan. "Comparative Study of Various Approaches in Analysis of TGA Data of Devolatilization of High Ash Indian Coal, <b>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</b> (2021): 1-15. doi.org/10.1080/15567036.2020.1871447
9.	Gopalan, Sankar, <b>Balasubramanian Karupudayar Ramaraj</b> , Sivaram Pramod Boppudi, and Santhosh Kumar Deenadayalan. "Performance prediction of the tangentially fired pulverised-Coal boiler furnace using a mathematical model and its validation." <b>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</b> , (2021): 1-21. doi.org/10.1080/15567036.2020.1859016
10.	S.Marimuthu, <b>K. R. Balasubramanian</b> , T.T.M.Kannan, Mechanical and surface morphology study of Monel – Copper joint by rotary friction welding, <b>Materials Today: Proceedings</b> , Volume 37, Part 2, 2021, Pages 419-424, <a href="https://doi.org/10.1016/j.matpr.2020.05.401">https://doi.org/10.1016/j.matpr.2020.05.401</a>
11.	G Sankar, CS Dhannina, <b>K. R. Balasubramanian</b> , Numerical simulation of the heat transfer and NO <sub>x</sub> emissions in a 660 MW tangentially fired pulverised-coal supercritical boiler. <b>Heat Mass Transfer</b> , (2020). <a href="https://doi.org/10.1007/s00231-020-02884-z">https://doi.org/10.1007/s00231-020-02884-z</a> .
12.	R Anandakumar, <b>K. R. Balasubramanian</b> , S P Sivapirakasam and Kuruva Gopanna, Postural discomfort analysis of EOT crane operators, <b>IOP Conf. Series: Materials Science and Engineering</b> , 912 (2020) 062019, IOP Publishing doi:10.1088/1757-899X/912/6/062019
13.	Senthil Kumar Marudaipillai, <b>Balasubramanian Karupudayar Ramaraj</b> , Ravi Kumar Kottala & Maheswari Lakshmanan (2020) Experimental study on thermal management and performance improvement of solar PV panel cooling using form

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	stable phase change material, <b>Energy Sources, Part A: Recovery, Utilization, and Environmental Effects</b> , DOI: 10.1080/15567036.2020.1806409
14.	Aravind S.L, S.P.Sivapirakasam, <b>K.R.Balasubramanian</b> , M.Surianarayanan, Thermo-kinetic studies on azodicarbonamide/potassium periodate airbag gas generants, <b>Process Safety and Environmental Protection</b> , Volume 144, December 2020, Pages 15-22, <a href="https://doi.org/10.1016/j.psep.2020.06.050">https://doi.org/10.1016/j.psep.2020.06.050</a>
15.	Aravind Surendran Lathika, Sivapirakasam Suthangathan Paramashivan, <b>Balasubramanian Karuppudaiyar Ramaraj</b> , Surianarayanan Mahadevan, Impact of fuel/oxidizer ratio of NaN <sub>3</sub> and KNO <sub>3</sub> airbag gas generants on toxic emission and performance, <b>Process Safety and Environmental Protection</b> , Volume 133, January 2020, Pages 348-357, <a href="https://doi.org/10.1016/j.psep.2019.11.015">https://doi.org/10.1016/j.psep.2019.11.015</a>
16.	M Senthilkumar, <b>K. R. Balasubramanian</b> , Ravi Kumar Kottala, SP Sivapirakasam, L Maheswari, Characterization of form-stable phase-change material for solar photovoltaic cooling, <b>Journal of Thermal Analysis and Calorimetry</b> , (2020). DOI: <a href="https://doi.org/10.1007/s10973-020-09521-1">https://doi.org/10.1007/s10973-020-09521-1</a> .
17.	L Maheswari, N Sivakumaran, <b>K. R. Balasubramanian</b> , G Saravana Ilango, A unique control strategy to improve the life cycle of the battery and to reduce the thermal runaway for electric vehicle applications. <b>Journal of Thermal Analysis and Calorimetry (2020)</b> . <a href="https://doi.org/10.1007/s10973-020-09673-0">https://doi.org/10.1007/s10973-020-09673-0</a> .
18.	BS Jinshah, <b>K. R. Balasubramanian</b> , Thermo-mathematical model for parabolic trough collector using a complete radiation heat transfer model–A new approach, <b>Solar Energy</b> , (2020) 197, 58-72
19.	<b>K. R. Balasubramanian</b> , R. Ajith Krishnan, S. Suresh, An experimental investigation on the effect of gravitational orientation on flow boiling performance in different channel sizes ranges from minichannels to microchannels, <b>Heat and Mass Transfer</b> , (2020). <b>56</b> , pages1391–1420.
20.	Dinakaran D, <b>Balasubramanian K. R.</b> , Sivapirakasam S. P., and Kuruva Gopanna, Behavior Based Safety Approach to Improving Workplace Safety in Heavy Equipment Manufacturing Industry, <b>International Journal of Human Factors and Engineering</b> , (2019) Vol.6 No.3, pp.249 – 272.
21.	Dinakaran D, <b>Balasubramanian K. R.</b> , Sivapirakasam S. P., and Gopanna, K, (2019) ‘Discomfort and Postural Analysis of Flux Cored Arc Welding Machine Operators’, <b>Journal of Ergonomics Studies and Research</b> , Vol. 1, p.103
22.	Anand S. Senthil Kumar M. <b>Balasubramanian K. R.</b> Ajith Krishnan R. Maheswari L. An Experimental Study on Thermal Management of Concentrated Photovoltaic Cell Using Loop Heat Pipe and Heat Sink", <b>Heat Transfer - Asian Research</b> , Volume 48, Issue 6, pp. 2456-2477, 2019.
23.	S.P. Sivapirakasam, K. Harisivasri Phanindra, Mahadevan Surianarayanan, <b>K.R. Balasubramanian</b> , Influence of Different In-Process and Building Materials with Varying Hardness on Impact Sensitivity of the Matchhead Composition, <b>Materials Science Forum</b> , Vol. 969, pp. 41-47, 2019.
24.	R. Shankar, <b>K.R. Balasubramanian</b> , S.P. Sivapirakasam, Experimental Study of High Velocity Oxygen Fuel Sprayed Cr <sub>3</sub> C <sub>2</sub> - Ni-Cr-B-Si Coatings on Inconel 718 Using Design of Experiments, <b>Materials Science Forum</b> , Vol. 969, pp. 48-54, 2019.
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26.	K. Harisivasri Phanindra, S.P. Sivapirakasham, <b>K.R. Balasubramanian</b> , Mahadevan Surianarayanan, "Thermal and Impact Sensitivity of Pyrotechnic Compositions Containing the Potassium Perchlorate, Aluminium and Graphite", <b>Materials Science Forum</b> , Vol. 969, pp. 146-151, 2019
27.	Harisivasri Phanindra K, Sivapirakasam S P, Pramod Soni, Surianarayanan M, <b>Balasubramanian K R</b> , Thermal reaction studies and prediction of stoichiometry of pyrotechnic compositions using DSC and XRD methods, <b>Thermochemica Acta</b> , Volume 675, May 2019, Pages 100-106.
28.	N. Korra, V. Maduraimuthu, M. Vasudevan, and <b>K. R. Balasubramanian</b> , "Effect of Welding Processes on the Microstructure and Mechanical Properties of Duplex Stainless Steel Weld Joints," <b>Materials Performance and Characterization</b> , 8, no. 4 (2019): 690-706. <a href="https://doi.org/10.1520/MPC20180069">https://doi.org/10.1520/MPC20180069</a>
29.	K. Premkumar and <b>K. R. Balasubramanian</b> , Evaluation of cyclic oxidation behavior and mechanical properties of nanocrystalline composite HVOF coatings on SA 210 grade C material, <b>Engineering Failure Analysis</b> , Volume 97, March 2019, Pages 635-644.
30.	G. Sankar, D. Santhosh Kumar, <b>K. R. Balasubramanian</b> , COMPUTATIONAL MODELING OF PULVERIZED COAL FIRED BOILERS - A REVIEW ON THE CURRENT POSITION, <b>FUEL</b> , Volume 236, January 2019, Pages 643-665.
31.	<b>K. R. Balasubramanian</b> , R. Ajith Krishnan, S. Suresh, "Spatial orientation effects on flow boiling performances in open microchannels heat sink configuration under a wide range of mass fluxes" <b>Experimental Thermal and Fluid Science</b> , Volume 99, December 2018, Pages 392-406.
32.	<b>Balasubramanian. K. R</b> , Krishnan, R. Ajith and Suresh. S "Transient Flow Boiling Performance and Critical Heat Flux Evaluation of Al <sub>2</sub> O <sub>3</sub> -Water Nano fluid in Parallel Microchannels" <b>Journal of Nano fluids</b> , Vol 7, No. 6, Dec 2018, 1035-1044 (10).
33.	<b>K. R. Balasubramanian</b> , S. P. Sivapirakasham and Vamshi Krishna, Fatigue Evaluation in Manual Handling Using Surface EMG and Ergonomic Design of Trolley, <b>Ergonomics International Journal</b> , 2018, 2(3): 000145.
34.	K. C. Ganesh, M. Vasudevan, <b>K. R. Balasubramanian</b> , P. Vasantharaja, and N. Chandrasekhar, Thermo-Mechanical Analysis of Activated Tungsten Inert Gas Welding (A-TIG) of Type 316LN Stainless Steel Thin Plates, <b>Materials Performance and Characterization</b> , Vol. 7, No. 1, 2018, pp. 160-177.
35.	K. Premkumar and <b>K. R. Balasubramanian</b> , Investigation of Erosion Behaviour on Nanocrystalline Composite Thermal Spray Coating under Hot Air Jet Condition, " <b>Journal of Adv Research in Dynamical &amp; Control Systems</b> , Vol. 10, Issue 04, 2018, pp 1061-1071.
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42.	Ganesh, K. C., <b>K. R. Balasubramanian</b> , M. Vasudevan, P. Vasantharaja and N. Chandrasekhar. Effect of multipass TIG and activated TIG welding process on the thermo-mechanical behavior of 316LN stainless steel weld joints. <b>Metallurgical and Materials Transactions B</b> , 2016, 47(2), pp. 1347-1362.
43.	Nanda Naik Korra, M. Vasudevan and <b>K. R. Balasubramanian</b> , Optimization of A-TIG welding of Duplex Stainless Steel Alloy 2205 based on Response Surface Methodology and Experimental Validation, <b>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</b> , Volume: 230 issue: 4, pages: 837-846, August 2016. DOI: 10.1177/1464420715585878
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45.	K.C. Ganesh, M. Vasudevan, <b>K.R. Balasubramanian</b> , N. Chandrasekhar, S. Mahadevan, P. Vasantharaja, T. Jayakumar, Modeling, Prediction and Validation of Thermal Cycles, Residual Stresses and Distortion in type 316 LN Stainless Steel Weld Joint made by TIG Welding Process, <b>Procedia Engineering</b> , 2014, Volume 86, pp 767–774.
46.	Nanda Naik Korra, M. Vasudevan and <b>K. R. Balasubramanian</b> , Multi-objective optimization of activated tungsten inert gas welding of duplex stainless steel using response surface methodology, <b>International Journal of Advanced Manufacturing Technology</b> , 2015, Volume 77, Issue 1-4, pp 67-81.
47.	<b>K. R. Balasubramanian</b> , S. P. Sivapirakasam, J. Mathew, Analysis of chemical degradative effects on low voltage PVC insulation using DSC , <b>Applied Mechanics and Materials</b> , 2014 , Vol. 592-594, pp. 2475 -2480.
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75.	<b>K.R. Balasubramanian</b> , N. Siva Shanmugam, G. Buvanashakaran and K. Sankaranarayananasamy, 'Numerical and Experimental Investigation of Laser Beam Welding of AISI 304 Stainless Steel Sheet' <i>Advances in Production Engineering &amp; Management Journal</i> , Vol 3, No. 2, pp 93-105, (2008).
76.	<b>K.R. Balasubramanian</b> , G. Buvanashakaran, K. Sankaranarayananasamy, 'Mathematical and ANN modeling of Nd:YAG laser welding of thin SS sheets' <i>Journal on Manufacturing Engineering</i> , Issue 2, pp 56-60, (2007).
77.	<b>K.R. Balasubramanian</b> , K. Sankaranarayananasamy, G. Buvanashakaran 'Analysis of Laser welding parameters using artificial neural network' <i>International Journal for the Joining of Materials</i> , Volume 18 No. 3/4, pp 99-104, (2006).
78.	G. Buvanashakaran, <b>K.R. Balasubramanian</b> , and K. Sankaranarayananasamy 'Characterization of process parameters for Laser welding of stainless steel' <i>WRI JOURNAL</i> , Volume 27 No.2, pp 14-21, (2006).

(B) Conferences/Workshops/Symposia Proceedings

Sl. No.	Details
1.	K. Premkumar and <b>K. R. Balasubramanian</b> , "Oxidation Resistance Of HVOF Ni-Cr-TiO <sub>2</sub> Powder Coating on Steel at Higher Temperature", International Conference on Recent Innovations in Production Engineering (RIPE 2017), held at Anna University (MIT campus), Chennai, 24 -25 March, 2017.
2.	K. Premkumar and <b>K. R. Balasubramanian</b> , "High Temperature Cyclic Oxidation Behavior of HVOF Sprayed Cr <sub>3</sub> C <sub>2</sub> -20%TiO <sub>2</sub> Coatings on Boiler Steel", International Conference on Recent Innovations in Production Engineering (RIPE 2017), held at Anna University (MIT campus), Chennai, 24 -25 March, 2017.
3.	Ajith Krishnan. R, <b>K. R. Balasubramanian</b> , S. Suresh. Transient flow boiling performance of Al <sub>2</sub> O <sub>3</sub> -Water nanofluid in parallel microchannels." International conference on Nano for Energy and Water, NEW 2017, University of Petroleum and Energy studies, Dehradun, Feb 2017- ISBN: 978-81-928068-4-6 (Conference)
4.	International Conference on Energy, Material & Nanotechnology Meeting on Microfluidics and Nanofluidics – 2016, Dubai –UAE, 03-10 April, 2016
5.	K.C.Ganesh, M.Vasudevan, <b>K.R.Balasubramanian</b> , P.Vasantharaja, Conductive mode heat transfer analysis of TIG and activated-TIG welding process for various depth-to-width ratio of weld bead profile in type 316LN stainless steel, International Conference on Advances in Materials, Manufacturing and Applications, April 9-11, 2015 - NIT, Trichy.
6.	Ganesh, K. C., M. Vasudevan, <b>K. R. Balasubramanian</b> , N. Chandrasekhar, S. Mahadevan, P. Vasantharaja and T. Jayakumar (2014) Modeling, Prediction and Validation of Thermal Cycles, Residual Stresses and Distortion in type 316 LN Stainless Steel Weld Joint made by TIG Welding Process. International Conference on Structural Integrity, IGCAR, Kalpakkam, India.
7.	<b>K. R. Balasubramanian</b> , attended one week coordinator's workshop on Fluid Mechanics conducted by IIT Kharagpur during 11 <sup>th</sup> March to 15 <sup>th</sup> March, 2014.

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8.	Participated in the 28th Indian Engineering Congress, Organized by Institution of Engineers (India) at Chennai during 20 <sup>th</sup> to 22 <sup>nd</sup> December 2013.
9.	<b>K. R. Balasubramanian</b> , S. Suresh and S. P. Sivapirakasam, Heat Transfer Enhancement Using Nanofluid In A Serpentine Passage, International Conference on Advance Research in Mechanical, Aeronautical And Civil, Sep 7, 2013 Pattaya, Thailand. pp. 65-69.
10.	S. P. Sivapirakasam, Sreejith Mohan, <b>K. R. Balasubramanian</b> , M. Surianarayanan, Respirable fume analysis during the flux cored arc welding of 316L(N) Austenitic stainless steel, International Conference on Advance Research in Mechanical, Aeronautical And Civil, Sep 7, 2013 Pattaya, Thailand. pp.70-74.
11.	S. P. Sivapirakasam, R. Anand, G. R. Kannan and <b>K. R. Balasubramanian</b> , Optimization of Biodiesel Production Using RSM and Study of Combustion Characteristics on DI Diesel Engine, ASME 2012 International Mechanical Engineering Congress and Exposition Volume 6: Energy, Parts A and B, Houston, Texas, USA, November 9–15, 2012
12.	T. Suthakar, <b>K. R. Balasubramanian</b> and K. Sankaranarayanan, Multi Objective Optimization of Laser Welding Process Parameters by Desirability Approach of Design of Experiments, ASME 2012 International Mechanical Engineering Congress and Exposition, Volume 3: Design, Materials and Manufacturing, Parts A, B, and C, Houston, Texas, USA, November 9–15, 2012.
13.	<b>K. R. Balasubramanian</b> , R. Anand, B. Venkatesh, G. R. Kannan, and S. P. Sivapirakasam, Study on Performance and Emission Characteristics of DI Diesel Engine Fuelled With Deccan Hemp Methyl Ester, ASME 2012 International Mechanical Engineering Congress and Exposition Volume 6: Energy, Parts A and B, Houston, Texas, USA, November 9–15, 2012
14.	<b>K. R. Balasubramanian</b> , G. R. Kannan and R. Anand ‘Effect of Preheated Waste Cooking Oil on the Performance and Emissions in a DI Diesel Engine’, Paper Id.20100438. PetroTech-2010, 9 <sup>th</sup> International Oil and Gas Conference and Exhibition, New Delhi. October 31 – November 3, 2010.
15.	<b>K. R. Balasubramanian</b> , T. Suthakar, K. Sankaranarayanan, G. Buvanashakaran, S.P. Sivapirakasam and Dileep Reddy K, ‘Analysis of Heat Transfer During the Laser beam welding of AISI 304 Stainless Steel using CFD’, International Welding Symposium (IWS 2k10), pp 391-399, Bombay Exhibition Centre –Mumbai, 10-12 February 2010.
16.	S. P. Sivapirakasam, R. Naga Lakshmi, <b>K. R. Balasubramanian</b> and P.V. N. Maheswara Rao, ‘Assessment of welding fumes using ventilation parameters during GMAW welding Process’, International Welding Symposium (IWS 2k10), pp 463-471, Bombay Exhibition Centre –Mumbai, 10-12 February 2010.
17.	Jose Mathew, S.P. Sivapirakasam, <b>K. R. Balasubramanian</b> and K. Renjith, ‘Analysis of Total Aerosal Emission from electrical Discharge Machining Process’, pp 1024-1028, Proceedings of the International Conference on Advances in Mechanical Engineering, August 3-5, 2009, S.V. National Institute of Technology, Surat, Gujarat, India.
18.	<b>K. R. Balasubramanian</b> , 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, Pragati Maidan, New Delhi, 13 <sup>th</sup> -15 <sup>th</sup> , February 2008.

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19.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy 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, 8 <sup>th</sup> & 9 <sup>th</sup> February 2007.
20.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy 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 <sup>th</sup> & 19 <sup>th</sup> January 2007.
21.	<b>K. R. Balasubramanian</b> , K. Sankaranarayananasamy, 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 <sup>th</sup> -16 <sup>th</sup> December 2006.
22.	K. Sankaranarayananasamy, <b>K. R. Balasubramanian</b> , 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.
23.	<b>K. R. Balasubramanian</b> , G. Buvanashakaran and K. Sankaranarayananasamy, ‘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 <sup>rd</sup> -5 <sup>th</sup> April 2006.

(C) Books & Monographs

Edited a book on “**Additive manufacturing applications for metals and composites**” (2020) published by IGI Global, USA, ISBN: 9781799840541.

Guest Editor of "Dynamics of Machines and Mechanisms, Industrial Research" published in the Journal "Applied Mechanics and Materials" ISBN-13: 978-3-03835-163-4, The Proceedings of International Mechanical Engineering Congress (IMEC) 2014.

Editor of the Proceedings of International Mechanical Engineering Congress (IMEC) 2014, "Advances in Mechanical Engineering", Published by Knowledge Curve, Chennai, ISBN 978-93-84389-01-7.

**Chapter Contributions**

1. Tamil Chandran, A., Suthakar, T., **Balasubramanian, K.R.**, Rammohan, S., Chandapillai, J., Modal Analysis of Pipe Line Under Fluid-Structure Interaction by Simulation and Experiment, Lecture Notes in Mechanical Engineering, 2021, pp. 599–624.

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2. Tamil Chandran, A., Suthakar, T., **Balasubramanian, K.R.**, Rammohan, S., Chandapillai, J., Flow Estimation Using Cross-Flow-Induced Vibration, Lecture Notes in Mechanical Engineering, 2021, pp. 625–651.
3. Marimuthu S., **Balasubramanian K.R.**, Kannan T.T.M. (2021) Evaluation of Tensile Strength of Friction Welded Monel and ETP Copper Dissimilar Joints. In: Arockiarajan A., Duraiselvam M., Raju R. (eds) Advances in Industrial Automation and Smart Manufacturing. Lecture Notes in Mechanical Engineering. Springer, Singapore. [https://doi.org/10.1007/978-981-15-4739-3\\_45](https://doi.org/10.1007/978-981-15-4739-3_45)
4. Authored a chapter “Introduction to Additive Manufacturing” in the book “**Additive manufacturing applications for metals and composites**” (2020) published by IGI Global, USA, edited by K. R. Balasubramanian and V. Senthilkumar, pp.1-24.
5. Authored a chapter “Additive Manufacturing of Multi-Material and Composite Parts” in the book “**Additive manufacturing applications for metals and composites**” (2020) published by IGI Global, USA, edited by K. R. Balasubramanian and V. Senthilkumar, pp.127-146.
6. Dinakaran D., **Balasubramanian K.R.**, Sivapirakasam S.P., Gopanna K. (2020) Workplace Safety Improvement Through Quality Control Circle Approach in Heavy Engineering Industry. In: Kumar H., Jain P. (eds) Recent Advances in Mechanical Engineering. Lecture Notes in Mechanical Engineering. Springer, Singapore. [https://doi.org/10.1007/978-981-15-1071-7\\_16](https://doi.org/10.1007/978-981-15-1071-7_16)
7. Authored a chapter "**Laser Transformation Hardening of Steel**" in the book "Manufacturing Engineering" published by Nova Science Publishers, Inc, edited by Prof. J. Paulo Davim, University of Aveiro, Portugal (2015) ISBN: 9781634633789, pp.213-240.
8. Authored a chapter “**Modeling and Simulation of Laser Welding**” in the book ‘Lasers in manufacturing’ published by ISTE-Wiley, U.K edited by Prof. J. Paulo Davim, University of Aveiro, Portugal. ISBN: 9781848213692. pp. 203-246.