B. V. V. Sangha's
Basaveshwar Engineering College (Autonomous), Bagalkot
Department of Mechanical Engineering

RESEARCH CENTRE DETAILS

I. About Research Centre:

● Year of Establishment	**: 2000**
● Major Research Areas (5 Nos.)	**: 1. Machine Design** **2. Thermal Engineering** **3. Production Technology** **4. Material Science and Metallurgy** **5.**
● No. of research guides enrolled at our research centre	: **17**
● No. of internal faculty guiding the candidates	: **13**
● Faculty with Ph. D.	: **12**
● Our Faculty pursuing Ph. D.	: **05**
● Total number of registered candidates at the research centre	: **84**

II. Research Guides at the Research Centre

Sl.No.	Name of the Guide	Area of Specialization
1.	Dr. P. B. Gangavati	Thermal Engineering
2.	Dr. S. A. Kori	Materials Science and Metallurgy
3.	Dr. G. B. Rudrakshi	Production Technology
4.	Dr. S. S. Balli	Machine Design
5.	Dr. V. V. Kuppast	Machine Design and Computer AiE
6.	Dr. H. M. Kadlimatti	Thermal Engineering
7.	Dr. S. G. Sarganachari	Machine Design
8.	Dr. R. V. Kurahatti	Material Science
9.	Dr. S. M. Jigajinni	Material Science and Manufacturing Technology
10.	Dr. A. N. Sonnad	Material Science
11.	Dr. Shravankumar B. Kerur	Applied Machines
12.	Dr. M. S. Hebbal	Machine Design
13.	Dr. Umesh Bhushi	Total Quality Management
14.	Dr. V. S. Puranik	Industrial Engineering and Management
15.	Dr. Shivayogi S. Hiremath	Internal Combustion Engine
16.	Dr. B. K. Venkanna	Thermal Engineering
17.	Dr. M. C. Goudar	Industrial Engineering and Management

III. Research Scholars pursuing Ph. D program

Sl.No.	Name of the Student	Name of the Guide	Year of Registration	Research Topic
1.	Patil Abhijit Aravind	**Dr. P. B. Gangavati**	2012	Augmentation of Laminar flow Heat Transfer in tubes with Equispaced tape Inserts and its scope Investigation for sugar Industry.
2.	S.B.Wadawadagi		2016	Performance, combustion and emission characteristics of single cylinder direct injection CI engine operated on diesel fuel, oxygen compound and vegetable oil – An experimental investigation.
3.	Virupaxappa	**Dr. S. N. Kurbet**	2014	Composite vibrations.
4.	R.M.Patted	**Dr. S. A. Kori**	2012	Studies on Nano Material Synthesis of Aluminium Alloys using High Pressure Torsion Process for Aerospace Applications.
5.	S.C.Biradar		2011	Development of Ultrafine Grained Al-Mg-Sc alloy by Repetitive Corrugation and Straightening.
6.	Mahendra K. Hallur		2013	Synthesis & characterization of Al-TiB_2 in situ metal matrix composites and their study on tribological & mechanical properties.
7.	Dhanal Shailandra Vilasrao		2015	Studies on Ni Mn Ga ferromagnetic Shape memory alloys and their characterization.
8.	Srikanth Badi		2013	Studies on tribological wear behaviour of nanostructure aluminium alloys for industrial application.
9.	Gurangouda S Patil		2017	Development of ultrafine grained of Al-Mg-Sc by using repetitive corrugation and straightening
10.	H. M. Naveen	**Dr. S. S. Balli**	2016	Kinematic Synthesis of Mechanisms with variable Topology
11.	Anilkumar Balavani		2016	Kinematic Synthesis of VT Mechanisms with Lower and Higher Pairs
12.	Prashant B. Tadalagi		2017	Kinematic Synthesis of Mechanism with Variable Topology
13.	Umeshkumar H. D	**Dr. V. V. Kuppast**	2017	Design of Micro Heat Exchanger and Heat Pipe for Photovoltaic Panel cooling under south Indian Condition
14.	Vijaykumar Chalwa		2017	NVH Analysis of Acoustic Materials for the Design of Quieter Automotive Cabin.
15.	Nataraj Kuntoji		2019	Simulation and wind tunnel experiment of subsonic aircraft wing for Drag and Flutter.
16.	Shashank Hebbal		2017	Optimization of Spur Gear Transmission System by Noise and Vibration Spectrum Analysis.
17.	S. C. Dhaduti		2012	An investigation on behavior of composite asymmetric Spur gear under fatigue loading.

18.	B. R. Endigeri	**Dr. S. G. Saraganchari**	2014	Optimization of stress concentration factor in a plate with different cut-outs and different loading.
19.	Praveen Kolur		2017	The study of static and dynamic behavior of composite leaf springs and optimization.
20.	Anand C. Mattikalli	**Dr. R. V. Kurahatti**	2014	Development characterization and abrasive wear behavior of thermoplastic blend hybrid composites.
21.	K. H. Pulikeshi		2014	Fabrication characterization and wear behavior of hybrid thermoset composites.
22.	Suresh Bujari		2013	Mechanical tribological and thermal characterization of aluminum metal matrix composite material with SiC and fly ash particulate.
23.	Vijayakumar Chavan		2017	Preparation, Characterization and Tribo performance of Thermoplastic Hybrid composite
24.	Niranjan Ukkali		2019	Impact Toughness and Tribological behaviour of Austempered AISI 9255 Steel.
27.	Balachandra Bingi	**Dr. S. M. Jigajinni**	2016	Studies on Mechanical and dapping properties of natural fiber reinforced with CNT Polymer Composite
25.	B. S. Vivekanand		2017	Scratch Wear Resistance of AlCr TiAlCrN and AlTin
26.	Mahesh. S. Kori	**Dr. A. N. Sonnad**	2015	Preparation Characterization and Tribo performance of Thermoplastic Hybrid Polymer Composites
27.	Zaheerabbas B. Kandagal		2016	Studies on Mechanical & Tribological Properties of Microwave Welded Metal Matrix Composites.
28.	Nagaraj Kantli	**Dr. Shravankumar B. Kerur**	2014	Experimental and Numerical Investigation of Static and Dynamic Behavior of Fiber Reinforced Polymer Composite Spur Gear
29.	Bharat Manvi		2014	“Momentum, Heat & Mass Transfer for MHD Boundary Layer Flow of a Non-Newtonian Fluids Over Stretching Sheet”
30.	Shivanand Swamy		2016	Delimitation Study of Composite Structures
31.	Basayya Belleri		2013	Dynamic Analysis of Six-bar and Eight-bar planar Mechanism with Variable Topology.
32.	Ashish Anilrao Deshmukh	**Dr. M. S. Hebbal**	2017	Investigation of Machining parameters on GFRP Composites using different cutting tool tips
33.	Manojkumar Ambalagi		2018	Vibration & Noise analysis of dynamic spur gear during friction & surface contact fatigue failure using Lubricant film thickness.
34.	Iranna. Hanapur	**Dr. Shivayogi S. Hiremath**	2019	Design Optimization of 25 mm Diameter Strain Gauge Balance for Wind Tunnel Application.
35.	Shailesh. M. Golabannavar	**Dr. B. K. Venkanna**	2019	Study on CRDI Diesel Engine Using Bio Diesel Nanoparticals and oxygenated compounds.
36.	Pratik Vijayakumar Swami		2019	Investigation on the Effect of Biodiesel, Oxygenated compound and Nozzle Geometry on CRDI Engine.

IV. Ph. D`s awarded from Research Centre:

Sl.No.	Name of the Student	Name of the Guide	Title of Thesis	Year of Degree Awarded
1.	R.R. Tikotkar	**Dr. V. R. Kabadi**	Wear behavior of Had Field Steel.	2011
2.	S. M. Ganachari		Studies on Dry Sliding High Temperature Wear Resistance of Three Low Alloy Steels.	2011
3.	R. R. Burbure		Dual Phase Steel.	2016
4.	P. B. Kovalli		Experimental Investigation on Effect of Temperature on Wear Behaviour of Hadfield Steel.	2019
5.	Sharanabasappa		Wear on Hyper eutectoid steel.	2017
6.	Veerabhadrappa Algur		Wear on ZA alloy.	2019
7.	Chandrashekhar Ambiger		Wear behavior of TiN, TiAIN and AlCr N Coatings on different Steel Substrate.	2018
8.	S. C. Kamate	**Dr. P. B. Gangavati**	Thermal, Exegetic and Efficiency Evaluation of 2500 TCD sugar mills.	2010
9.	P. Rushiprasad		Experimental analysis of a flat plate collector with solar tracking for various applications.	2014
10.	S.N.Topannavar		Study on fluid flow and heat transfer characteristics in fluidized bed.	2018
11.	K.M.Akkoli		Design, Development and Modeling of downdraft gasifies for agricultural residues	2020
12.	S.L. Nadaf		Experimental investigation on waste heat recovery from engine exhaust for preheating biodiesel and their blends and engine performance study.	2017
13.	V. V Kuppast	**Dr. S. N. Kurbet**	Engine Noise	2014
14.	S. V. Gorbal		Design and Development of the Hydro-Pneumatic friction damper.	2013
15.	R. R. Malagi		Finite Element Modeling and Analysis of Piston and Piston Ring Dynamics to Study Frictional Power Loss and Lubrication in Internal / Combustion /Engine.	2011
16.	I. G. Bhavi		Determination of Fatigue Life of Spiral Bevel Gears Used in Differential Gear Box.	2018
17.	A. M. Yadawad		Feasibility study of biomass FBC-plant.	2013
18.	Basavaraj Talikoti		Crankshaft design for low noise.	2018

19.	Venkata Sundar Rao		Redesign of IC engine Parts for Alternate fuels.	2020
20.	Rajesh Gurani		Experimental Investigation on fuel flow system of an IC Engine for Material Compatibility with waste cooked oil Biodiesel.	2020
21.	Mallesh G	**Dr. V. B. Math**	The Study of Genetic parameters on the induced stress in asymmetric spur gear tooth.	2013
22.	Mallappa S Hebbal		A Study on reduction of root fillet stress in spur gears using stress relief features.	2014
23.	Shivanand G Sarganachari		Optimal synthesis of planer mechanism for specified output.	2012
24.	Veerendrakumar C. M.		A Investigation on shell and tube heat-Exchangers," A parametric Study".	2019
25.	Devanand D Chillal		Performance, Combustion and emission characteristic of a homogeneous charge combustion ignition engine fuelled with different fuels.	2019
26.	Shivayogi. S. Hiremath		The numerical simulation of bolted flange joints with gaskets – A parametric study.	2018
27.	Virupaxi Auradi	**Dr. S. A. Kori**	Grain refinement of Al-Si alloys.	2009
28.	T.M.Chandrashekariah		Tribology of Al-Si alloys.	2009
29.	V. G. Akkimardi		Studies on Microstructure, Mechanical and tribological properties of some Al-Mg and Al-Mg-Sc Alloys.	2012
30.	S. M. Jigajinni		Development of Al-Ti-B-Sr master alloys.	2013
31.	Anand Sonnad		Characterization of Graphite-Metal Brazed Joints.	2014
32.	Mohan Vanarotti		Al-Si Composites.	2015
33.	Prabhudev. M. S		High Temperature wear behaviour of A356 alloy.	2012
34.	H.R.Manohar		High temperature wear behaviour of 413 alloys.	2016
35.	G. Jagannathreddy	**Dr. G. B. Rudrakshi**	Spray deposition processing and characterization of Aluminium Alloys.	2009
36.	D.M.Goudar		Characterization of spray deposition ternary aluminium alloys.	2016
37.	R. M. Kulkarni		Application of intrusion for processing Nano composites.	2017
38.	U. M. Daivagna	**Dr. S. S. Balli**	Analytical stoicism some variable topology	2014

			mechanisms with prismatic pairs.	
39.	I. G. Bhavi	**Dr. V.V. Kuppast**	Determination of Fatigue Life of Spiral Bevel Gears Used in Differential Gear Box.	2018
40.	Basavaraj Talikoti		Crankshaft design for low noise.	2018
41.	C. S. Wadageri	**Dr. R. V. Kurahatti**	Tensile and Fatigue Behavior of Austempered Ductile Iron Subjected to Conventional and Two Steps Austempering Process	2020
42.	Shaila D. Hosmani		Investigations on wear resistance of ultra-high carbon steels	2018
43.	Shreedhar Kolekar		Synthesis and characterization of Magnetorheological fluid using different carrier oils by varying the concentration of iron particles using rheometer	2021
44.	Vishalgouda S Patil		The Design Optimization of Truck Cabin to Reduce Interior Noise by Virtual and Experimental Testing.	2021
45.	Shivaprasad Dandagi	**Dr. Umesh Bhushi**	Strategic Management of Technical Universities in India - A Systems Perspective	2014
46.	C. M. Javalagi		Design Tools for Productivity Management in Indian Sugar Industries - A Systemic View	2014
47.	S. M. Pharisiyavar		Productivity Management of Apparel Industry in India – A Systems Perspective.	2019
48.	Smt. G. S. Yarnal	**Dr. V. S. Puranik**	Energy Management Studies in Sugar Industries	2010

V. Research Projects carried out in the Department:

Sl. No.	Title	Funding Agency	Amount in Rs.	Year
1.	Smart Composite Structures Research Centre (SCSRC)	VGST K-FIST LEVEL-I	20,00,000	2015
2.	Comprehensive Experimental Investigation, Performance, and Emission Characteristics of Biodiesel/Oxygen Compounds/Diesel Fuel in a Compression Ignition Engine	AICTE – RPS	10,72,941	2017
3.	Comprehensive Experimental Investigation, Performance, and Emission Characteristics of Biodiesel/Oxygen Compounds/Diesel Fuel in a Compression Ignition Engine	AICTE – RPS	42.48 lacks	2013
4.	Studies on Nano material Synthesis of Aluminium Alloys Using High Pressure Torsion Process for Aerospace Applications.	AICTE, New Delhi (RPS)	19.95 lacks	2012
5.	Aluminium Alloy A356 Reinforced with Silicon Carbide and Graphite.	Board of Research in Fusion Science & Technology (BRFST), Institute of Plasma Research, Gandhinagar, Gujarat	23.15 lacks	2011
6.	Effect of grain refinement and influence of Ti, B, Cu, Mg and Sr on the microstructure, mechanical and tribological properties of A356-a Naval alloy	Naval Research Board, Govt. of India, New Delhi. (NRB)	35.14 lacks	2006
7.	Microstructural characterization and Mechanical Property Evaluation of Graphite - Metal Brazed Joints	Council of Scientific and Industrial Research (CSIR), Ministry of HRD, Govt. of India, New Delhi.	10.00 lacks	2006

8.		Min. of Defence, Govt. of India (DRDO), New Delhi	15.00 lacks	2005
9.	Development of grain refiners and modifiers for aluminium and its alloys	AICTE, New Delhi	16.00 lacks	2004
10.	DST fund for improvement in S and T Infrastructure (FIST 2000)	Ministry of Science and Technology DST-FIST), Govt. of India, New Delhi	20.00 lacks	2003
11.	A New Combination of Grain Refiner/Modifier for Al-Si Alloys and Evaluation by Computer Aided Cooling Curve Analysis	Ministry of Science and Technology (DST), Govt. of India, New Delhi	16.24lacks	2003
12.	Development and Evaluation of an Efficient Grain Refiners for Hypoeutectic Al-Si Alloys	Min. of Defence, Govt. of India (DRDO), New Delhi	24.00 lacks	2001