

Dear all, please furnish the CoPI information and please specify the funding Agency like which DRDO, which scheme of DST. The information will help us to update our department website.

**Ongoing Projects**

*Funded by External CoPI agency*

S. No.	Project Title	Project Investigator (s)	Funding Agency	Sanctioned Amount (Lakhs)	Period
24	Process and hybrid tool design for higher productivity in FSW butt-joints of thick Al-alloy 2219 plates	Prof. Jeevan Jaidi	DRDO-ARDB	33.116	2021-24
24	Investigation on dynamic deformation behaviour of Tungsten Heavy Alloys (WHAs) for defence applications	Dr. Nitin Kotkunde	ARMERB DRDO?	40.74	2021-24
23	Development of mesoporous materials with enhanced hydrogen uptake for fuel cell vehicles	Prof. Sujith R	DST SERB CRG	29.13 <del>25.67</del>	2021-24
22	IoT enabled wearable nasal cap for air filter, viral guard and sensors for early detection of Covid-19 symptoms	Dr. SK Dubey	DST - BDTD	20.15	2021-24
21	Enhancement of Mechanical Properties and Forming Behavior of AZ31 Alloy using Shear Deformation Techniques for Automotive and Aerospace Applications	Dr. Nitin R Kotkunde	DST SERB CRG	26.66	2021-24
20	Comparison of external and internal pressures in tornado-like flow obtained using different simulators world-wide	Prof. Sabareesh G R	TPU Wind Engineering	24.75	2021-23
19	Enhanced Strength-to-weight Ratio INCONEL-718 Alloy Structures Made by Additive Manufacturing for Aerospace Applications	Prof. SP Regalla	DST SERB CRG	25.34 <del>24.76</del>	2021-23
18	Real time Investigation of various analyses using droplet microfluidics integrated with high-speed vision	PI Dr. Arshad Javed	NSM and HPC	21.22	2021-23
17	Simulation and analysis of cellular materials against blast loading	Prof. NSK Reddy	DRDO	9.77	2021-22
16	Development of heterogeneous MPI-CUDA based parallel 3D fluid-structure solver	Dr. Pardha S Gurugubelli	Nvidia	16	2021-22
15	Machine Vision based Adaptive Quality Assurance System for Aerospace Vehicle Assembly Unit	Prof. SS Deshmukh	DRDO ARMERB	39.07	2020-23
14	Theoretical and simulation based approaches to determine the forming limit diagrams of Ti-6Al-4V at elevated temperatures	Dr. Kurra Suresh	DRDO - ARDB	15.5	2020-23
13	3D printing of graphene nanocomposites for energy storage applications	Dr. Pavan Kumar P	DST SERB-ECR	24	2019-21
12	Experimental Investigation on an Energy Efficient Thermal Management Technique for Hybrid Electric Vehicles (HEV)	Dr. SP Datta	SERB-ECR	27.94	2019-21
11	A Solar Assisted Combined Cooling, Heating and Power Plant: An Alternate Rural Energy Source	Dr. SP Datta	DST	38.5	2019-21
10	Harvesting energy from underwater ocean currents through coupled vortex-induced vibration, flapping dynamics, electromagnetic induction and piezoelectric effects	Dr. Pardha S Gurugubelli	SERB-SRG	27.36	2019-21

Co-PI: Dr. Sujith R  
Prof. Nax In  
Dr. SK Singh  
Co-PI -  
Dr. Sudha Radhika.

Dr. K. Suresh  
(Co-PI)  
Dr. Sanket Goud  
Dr. Satish K. Dubey

2021-2023  
Co-PI  
Chandru (in)  
Pavani  
Tathagata  
(CS)

2019-22



9	Fully Integrated Smartphone and IoT enabled Microfluidic Sensor for Real-time Quantification of Soil Macronutrients	Dr. SK Dubey	DST	19.78 27.98	2019-21	X (Comp) (PI) Dr. Sanket Goel Dr. Arshad Javid (COPI)
8	Cardiac-Organ-on-Chip: Integrated Microfluidic Cardiac Platform for Drug Screening and Toxicity Detection.	(COPI) Dr. SK Dubey	BDTD -DST	47.36	2019-21	Dr. Arshad Javid (COPI) Dr. C. P. Kiron (CO-PI)
7	Machinability assessment and material characterization of Tungsten Heavy Alloy used in defense applications as KE penetrators	Prof. Amrita Priyadarshini	ARMREB (DRDO)	16.80 17.17	2019-22	
6	Solid state electrolytes for Lithium-Ion batteries	Prof. Sujith R	HBL Power Systems Ltd	14.75 12	2019-21	
5	Automation of Sample Preparation Process for Pharmaceutical Application	(PI) Prof. YVD Rao	Pharma Industry, Hyderabad	15.48	2019-21	Dr. Arshad Javid (COPI)
4	Benchmark Studies On Tornado Induced Wind Loads Between Different Tornado Simulators Worldwide	Prof. Sabareesh G R	TPU-JURC	27	2019-21	
3	Sustainable technology solutions for energy efficiency in the japery industry	Prof. M. Srinivas	Royal Academy UK	48	2018-21	→ Complete CO-PI Dr. KRC Murthy Dr. Rahul Negam
2	Studies on wind resistant design for proposed LIGO INDIA OBSERVATORY	Prof. Sabareesh GR	IUCAA	45.02 44.81	2018-21	
1	Development of image processing based portable device to measure surface strains in sheet metal forming	Dr. Kurra Suresh	DST- DDP	17.24 18.137	2018-21	
X	Development Studies on evaluation of Paint for composite substrate	Dr. Kurra Suresh (CO-PI)	DRDO-CARS	16.24	2021-22	Prof. Ramesh Babu. A (PI)

**Completed Projects**

S. No	Project Title	Project Investigator (s)	Funding Agency	Sanctioned Amount (Lakhs)	Period
35	Design and development of an automated flow calibration system for fuel and oxidizer injectors reaction control system.	<del>Prof. Deshmukh</del> Prof. Sabareesh GR <del>Suprudeva Rao</del>	DRDO, CAS_CARS	<del>9.32</del> 10.00	<del>2018-2020</del>
34	*Design and development of an automated flow calibration system for fuel and oxidizer injectors reaction control system	Prof. SS Deshmukh	DRDO, CAS	10	2018-20
33	Automated Ultraviolet-C Sterilization Robot	Dr. Arshad Javed	DBT ? BIRAC -SoC	15	2018 (6 Month)
32	Cryogenically-conditioned micro and Nano encapsulated phase change material slurries for cool thermal energy storage applications	Prof. R. Parameshwaran	DST-SERB ECR	27.76	2017-20
31	Formability study of Inconel 625 alloy at elevated temperatures for aerospace applications	Dr. Nitin R. Kotkunde	DST-SERB ECR	31.43	2017-20
30	Application of topology optimization to enhance energy efficiency and performance of industrial manipulator	Dr. Arshad Javed	DST-SERB ECR	30.80 29	2017-20

Heat Transfer Enhancement Study of Li-ion Battery pack	M. Scam	HDL Pvt Ltd	5.31 Coke	6/2019 <del>2019</del> 2019
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✓ 29	Novel casting approach to improve quality of aluminum alloy casting	Prof. NSK Reddy	DRDL, DRDO	9.85	2017-20	
28	Study of lubrication method for enhanced surface finish and reduced draw load on cold draw steel tubes	Prof. A. K. Gupta (Co-PI), Prof. S. P. Regalla (Co-PI)	Tubes Investment India Ltd.	27.5	2017-2020	✓
✓ 27	Development of meta material base support for isolating vibration	Prof. Sabareesh GR	DMDE, DRDO	13.8	2017-18	Co-PI Prof. Y. V. D. Rao
✓ 26	Modelling and simulation of quartz accelerometer for navigation system	Dr. SK Dubey	RCI, DRDO	5.3	2017-18	Dr. Sanket Goshal Dr. Arshad Jome Prof. AK. Gupta
✓ 25	Development of portal for power curve guarantee test	Dr. Sabareesh G. R	Mytrah Energy limited	2.97	2017 Jan-April	Co-PI: Dr. Aruna Malapane
✓ 24	Development of portal for re-analysis data and long term correlation with wind data	Dr. Sabareesh G. R (Co PI)	Mytrah Energy limited	2.97	2017 Jan-April	PI: Dr. Aruna Malapane
23	Enhancement of mechanical properties of Ti-6Al-4V using constrained groove pressing and heat treatment	Prof. AK Gupta	ARMREB (DRDO)	<del>45.6</del> 48.22	2016-19	✓
✓ 22	Hydrogen storage in mesoporous polymer derived ceramics for automotive application	Dr. Sujith R.	DST	42.38	2016-19	Co-PI Prof. R. Parameshwara
✓ 21	Studies on remaining useful life prediction considering multi-component failures in a wind turbine using prognostic health monitoring techniques	Prof. Sabareesh G. R.	DST	26.04	2016-19	
✓ 20	Simulation and modelling to minimize porosity level in Aluminium castings by using ultrasonic stir casting	Prof. NSK Reddy	Land N Structural Engineers (P) LTD	8.03	2016-19	✓
19	Understanding forming behaviour of Ti6Al-4V material between 400-850 C in deep drawing set up	Prof. AK Gupta (Co-PI)	ARDB (DRDO)	9.85	2016-18	
18	Design and thermal analysis of electronic controller	Prof. Jeevan Jaidi	HBL Power Systems	2.5	April 2016 - June 2016	
17	Characteristics and modeling of tornado induced wind loading on low-rise buildings	Dr. Sabareesh G. R.	NSFC, China	***	2015-2018	
X 16	Heat transfer modeling of cold water mist at the cutting zone using FSI model in machining of turbine blade materials	Dr. Phaneendra Kiran C.	ACRG (BITS)	9	2015-2017	Experimental Building, International stage.
X 15	Development of an integrated approach for modeling and management of micro grid operations	Prof. S. S. Deshmukh	ACRG (BITS)	9	2015-2017	
X 14	Structural health monitoring of wind turbines using a comprehensive condition monitoring scheme.	Dr. Sabareesh G. R	ACRG (BITS)	8.5	2015-2017	
✓ 13	Characterization of fibre/ matrix interface in advanced composites	Dr. N Jalaiah (Co PI)	ASL (DRDO)	9.96	2015-2016	



12	Anaerobic co-digestion of food waste and organic fraction of municipal solid waste for the production of biogas and concomitant use of biogas as fuel for cooking and spent slurry as fertilizer	Prof. S .S. Deshmukh (Co PI)	BITS Pilani	62	2014-2017	
11	Develop and test certain 3D printing technologies to produce innovative limbs at affordable costs for the disabled in India.	Prof. S. P. Regalla	BIRAC, DBT	47.65	2015-2017	✓
10	Formability study on constrained groove pressed extra deep drawn (EDD) steel sheets	Prof. A. K. Gupta	UGC	34.2	2014-2016	✓
9	Design and development of an interactive decision support system for regional energy management	Prof. S .S. Deshmukh	UGC	6	2014-2016	✓
8	CFD based process optimization of BQR15 flotation cell and scale-up for larger cells (Phase-2)	Prof. Jeevan Jaidi	TenovaDelk or, India	33.16 18.2 ✓	2014-2015	33.16 ✓
7	Process modeling and validation of flotation cell: development of 3-D multiphase turbulent model (Phase-1)	Prof. Jeevan Jaidi	TenovaDelk or, India	7.83 ✓	2014 June-Sept.	✓
6	Novel minimal-solid lubricant mixture application method for performance improvement in turning	Prof. N. S. K. Reddy	SERC, DST	40.88	2013-2017	✓
5	Solid lubricant coated tools for sustainable machining	Prof. N. S. K. Reddy	CSIR	18.52	2012 - 2015	✓
4	Understanding material properties and possible forming behavior (using FEM) of Titanium grade - 5 material at elevated temperatures	Prof. A. K. Gupta	<u>DST</u>	10.15	2012-2015	✓
3	Rapid incremental forming of extra deep drawing (EDD) steel sheet metal parts with asymmetric geometry	Prof. S. P. Regalla	UGC	9.73	2011-2014	✓
2	Development of electrostatic micro-solid lubricant coated tools for green machining	Prof. N. S. K. Reddy	ABG Research seed grant	11.8	2011-2013	✓
1	Dynamic strain ageing behaviour in Austenitic stainless steel (304 & 316 Grades)	Prof. A. K. Gupta	BRNS DAE	11.64	2009-2012	✓