

**SEED GRANT - RGEMS (Research Grant in Engineering, Management and Science)**
**FY 2017-18**

RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. A Sourav Kanti	SCOPE	A Novel Cloud federation with efficient live migration technique	50000
2	Dr. N. Purnachand	SENSE	High Speed VLSI Architecture for Fast Motion Detection and Estimation in Smart Surveillance Systems	65000
3	Dr. B. Pankaj Tambe	SMEC	Neural Rubber Toughened Poly (Latic Acid)/ Polycarbonate Blend and its Nanocomposites for Automotive Interior Applications	50000
4	Dr. S. Srinivas	SAS	Mathematical Modelling of some Non-Newtonian Fluid Flows over a Stretching Sheet	55000
5	Dr. M. Venkatrajam	SAS	Analysis of Structural Attacks on Code-Based Cryptosystems	60000
6	Dr. M. Phani Kumar	SAS	Non-Newtonian Fluid Past a Drop with Slip Condition	40000
7	Dr. P.S.Rama Sreekanth	SMEC	Investigation of the Role of Multidimensional Carbon Based Nano fillers and ceramic Nano fillers in Restricting Radiation Damage and Thermal Cycling Effects of Epoxy Carbon Fibre Reinforced Composites for Space Application	66000
8	Dr. M.Sudhakar	SAS	Modeling of electromagnetic rectangular waveguide for high power applications	50000
9	Dr. Santhanu Mandal	SAS	Memristor based neuromorphic architecture for image processing	50000
10	Dr. Soubhagya Sankar Barpanda	SCOPE	Hyperspectral image Analysis using Filter Banks	50000
11	Dr. J. Sudagar	SAS	Extended Life of Components through High Entropy Alloy Coating for Engineering Applications.	55000
12	Dr. S.K. Khadeer Pasha	SAS	Synthesis and Characterization of Graphene Quantum Dots (GQD) Based Polymer Nanocomposites for Sensor Applications	80000

**FY 2018-19**

RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Ajith Jublison	SCOPE	Honeytrap to mitigate ransomware attacks	55000
2	Dr. Saroj Kumar Panigrahy	SCOPE	Anonymous user authentication scheme in wireless healthcare sensor	60000
3	Dr. Balu Laxman Parne	SENSE	Authentication and key agreement protocols for security and privacy preservation of IoT based applications in M2M communication network	50000
4	Dr. Sudha Ellison Mathe	SENSE	Universal Controller for Electrical and Electronic Appliances	49900
5	Dr. Nandeesh Kumar	SENSE	Automatic Bike Blazer Using a STM32F746NG Microcontroller and a Liner Motor	60000
6	Dr. Ganesh Laxman Kumar	SENSE	Blink Restoration System fro Unilateral Patients	53000

7	Dr. Anoop Kumar Misra	SENSE	Impact of RF impairments and imperfect channel estimates in cooperative communication	60000
8	Dr. Umakanta Nanda	SENSE	Smart Power Theft Detection System	50000
9	Dr. Deepak. Ch	SENSE	Internet of Things (IoT) in the future of smart machine condition monitoring	60000
10	Dr. Rajesh Saha	SENSE	Impact of Temperature on RF/ Analog and Linearity Parameters in Ge DMG Fin Fet	50000
11	Dr. Deepak Kumar Panda	SENSE	Development of highly linear Enhancement - mode Ferroelectric GaN MOS-HEMT for Wireless and RADAR application	50000
12	Dr. Jayendra Kumar	SENSE	Frequency and pattern diversity micro strip antenna for mobile communication systems	50000
13	Dr.V. Sunnydayal	SENSE	Mechine-learning based Audio source separaion	41300
14	Dr. John Pradeep	SENSE	Reinforcement Learning based Brushless dc motor control for Quadcopter applications	30108
15	Dr. Manikanta Ravindra Kumar V	SMEC	Experimental Investigation of Ultrasonic Welding on Non-metallic Materials	45000
16	Dr. Amit Kumar	SMEC	Microstructure and texture development during cold rolling in two phase UNS S32760 stainless steel	50000
17	Dr.Vivek R	SCOPE	Conductive aerogels for EMI applications	50000
18	Dr. Satyanarayana Badeti	SAS	Investigation of hydro magnetic boundary layers in rotating flows with injection and suction	60000
19	Dr. Nikunja Bihari Barik	SAS	Multilevel compact integrated radial basis function methods for Navier-Stokes equations in curvilinear geometry with unbonded flows	60000
20	Dr. Manoj Kumar Mishra	SAS	Bio nano fluid convection within a Channel	50000
21	Dr. Bhupesh Dutt Sharma	SAS	Study of Blood through porous Arterial Wall in presence of Magnetic field	60000
22	Dr. Karthika V.K.	VISH	Developing Bilingual audio stories for developing listening and speaking skills of visually challenged study	60000
23	Dr. Susmitha Shyamsundar	VISH	An EAP Needs Analysis for Engineering Students Pursuing Integrated Programmes	30000
24	Dr. Chandreie Mukherjee	VISH	The Science in Science Fiction: An interface between the sublime and grotesque	60000
25	Dr. Karthikeyan S	SCOPE	Health DRONE - A Drone Assisted Healthcare Service	55000
26	Dr. Sibi Chakkaravarthy	SCOPE	Pen testing Healthcare Wearables using Drones	60000
27	Dr. Anupama Namburu	SCOPE	Automatic Forest Fire detection using autonomous flying hovers	60000
28	Dr. Arun Kumar Sinha	SENSE	Design and development of a Low Power Energy Harvesting Integrated Circuit and System	60000
29	Sameeulla Khan Md.	SENSE	Stereo Matching Using Deep learning Methods with Application to Vehicular Navigation System	60000
30	Dr. M. Kalyan Chakravarthi	SENSE	Development of Closed Loop Control System for Converter Control in Micro grids	60000
31	Dr. Y.V.Pavan Kumar	SENSE	Design of Power Conversion Loop for Micro Grids Research	60000
32	Dr. Debajit Goswami	SAS	Role of molecular motors, passive cross linkers and filaments in the cellular cytoskeleton	60000
33	Dr. Anita Sagadevan Ethiraj	SAS	Metal oxide nanoparticles from bio-waste's for Clean Energy Applications	60000

34	Dr. N. Madhusudhana Rao	SAS	Growth and characterization of CuInO <sub>2</sub> thin films for Optoelectronic applications	59000
35	Dr. Manmadharao Banki	SAS	Photocatalytic Conversion of Carbon Dioxide into Renewable Hydrocarbon Fuels using ZnFe <sub>2</sub> O <sub>4</sub> Nano arrays	59500
36	Dr. Roopas Kiran Sirugudu	SAS	Analysis of Anisotropic Nano-Composites for Vibration Energy Harvester Applications	60000
37	Dr. Tannistha Dasgupta	VISH	Creation of AI based Tools for Assessment of Speaking	42331
38	Dr. Thahiya Afzal	VISH	Assessing the Common Errors in English Language made by late second language learners: A corpus based study	54000
39	Dr. B. Srinivasa Rao	SAS	Hyperspectral Imaging Cancer detection using Innovative filters and Machine Learning Techniques	44000
40	Dr. Anubendu Adhikary	SAS	Reduction of N <sub>2</sub> with Transition Metal Hydrides	70000

#### FY 2019-20

RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Karri Ganesh Reddy	SCOPE	Optimal Routing in Zigbee wireless mess networks	35400
2	Dr. S. Gopikrishnan	SCOPE	Architecture for Hybrid IoT node with Solar Energy Harvesting	49321
3	Dr. Nandha Kumar.R	SCOPE	Offloading Agglomerative Co-operative with minimum intensity in fog computing	50000
4	Dr.S.Sudhakar Ilango	SCOPE	IoT Based Borewell Rescue Robot System Using Computer Vision and Imitation Learning	50000
5	Dr.D.Sumathi	SCOPE	Drinking glass for elderly patients with tremors	40000
6	Dr. Tufan Ghosh	SAS	Investigation of electron-phonon coupling in two-dimensional lead halide perovskites	60000
7	Dr. Dilip Kumar Mohanty	SMEC	Performance and Emission Analysis of CI Engines with various biodiesel blends	65000

#### FY 2020-21

RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Sabeel M Basheer	SAS	Development of chemosensors by structurally modified thiosemicarbazones	78000
2	Dr. Sunkesula Moulana Abdul Kalam Azad	SENSE	An investigation of an ad-hoc network on Industrial Internet of Things	43740
3	Dr. Hari Kishan Kondaveeti	SCOPE	Analysis of Electrical Nerve Impulses in Humans And Plants	60000
4	Dr. Chandu DS	SENSE	Investigations on Miniaturized Antenna Configurations for Asymmetric Heating Patterns in Tumor Destruction.	48970
5	Dr. Ambuj Sharma	SENSE	Investigation of mechanical properties of modified epoxy matrix composites with coated carbon fiber reinforcement for Advanced Structural Applications.	80000
6	Dr. Rohit Lorenzo	SENSE	Leakage power minimization techniques in SRAM circuit and System	50000
7	Dr.Bappadittya Roy	SENSE	Design, Fabrication and Characterization of slotted Antenna for 5G Application	63000

8	Dr.J.Harikiran	SCOPE	Human Detection and Motion Analysis from a Unmanned Aerial Vehicle (UAV) using Machine Learning Techniques	68000
9	Dr. Madhulika Sahoo	VISH	Life beyond boundaries: A cross sectional study on indigenous healing and coping among the displaced and non-displaced tribals during COVID-19 pandemic in India	60000
10	Dr. NANDAM ASHOK	SAS	Large Mode Area Optical Fibers For High Power Fiber Laser Applications	66000
11	Dr. LAKHAN DEV SHARMA	SENSE	Analysis Of Electrocardiogram Signal Response To Music as a Stimulus.	70800

FY 2021-22				
RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Debarati B. Chakraborty	SCOPE	Watch, Feel, Smell: Multi-modal Quality Assessment in High-valued Crops Harvesting	198000
2	Dr. S. Divya Meena	SCOPE	Thermal imaging-based animal intrusion detection system (TI-AIDS)	31266
3	Dr. K. Ganesh Reddy	SCOPE	Establishing the Trust and Transparency in Supply Chain Management using Blockchain Technology	115300
4	Dr. Deepak Kumar Panda	SENSE	Design, Modelling and Performance Analysis of negative capacitance MoS <sub>2</sub> FET based next generation low cost biosensor	240000
5	Dr. Khairnar Vikas Vishnu	SENSE	Multifunctional Pattern and Polarization Reconfigurable Antennas for Wireless Applications	154279
6	Dr. Samineni Peddakrishna Mr. M. Sri Sessa Sai Manoj (18BEC7034) Mr. Apata Dhana Sai Teja (18BEC7078) Mr. Chinthamaneni Neelesh (18BES7009)	SENSE	Green Campus Autonomous Smart Electric Vehicle using Internet of Vehicle Technology	216000
7	Dr. Manmadharao Banki	SAS	Oxygenation of Human Blood by Photocatalytic Action: A Way to Photocatalytic Lung Assisted Device	199207
8	Dr. S. K. Khadheer Pasha	SAS	Design of super capacitor and gas detection sensor low dimensional tapes and upgrade the performance from the device characteristics	549320
9	Dr. Anubendu Adhikary	SAS	Converting Polyethylene Degraded Alkanes into Valuable Chemicals Through Transition Metal Catalysis	215468
10	Dr. J. Sudagar	SAS	Corrosion Behavior of Ceramic Materials under Extreme Environment Conditions	45000
11	Dr. Lakshmi Sowjanya Pali	SAS	Investigating the effect of morphology on the performance of ZnO based composite metal oxides gas sensors	200000
12	Dr. Manas Kumar Pal	SMEC	Enhancement of Nox Conversion Efficiency in UREA-SCR system by Ultrasonic Dosing	130000
13	Dr. Pragya Sengupta	VISH	Community and Translation: A Case Study of Bengali Migrant Workers	37000
14	Dr. Anupama Namburu	SCOPE	VBOT, A one stop solution-Automated chatbot	55000

15	Dr. S. Karthikeyan Mr. Datta Adithya (19BCE7119) Mr. Arun Bala (19BCE7453) Mr. Likhith (19BCD7245) Mr. Vineeth Tiwari (19MIS7058) Mr. G. Varun (18BCD7111) Ms. Rishitha (20BCE7112)	SCOPE	VISP (A complete VIT-AP University Interaction Student Portal)	20000
16	Dr. Asish Kumar Dalai	SCOPE	Development of Club Application for VITAP University	5000
17	Dr. Agam Das Goswami (PI) Dr. Prateek Jain (Co-PI) Dr. Mohan Bansal (Co-PI) Mr. B. Gowtham (18BCE7143)	SENSE	Predict the stress level due to COVID-19 among University students, and mitigate their stress with relaxation techniques.	228300
18	Dr. Sabeel M Basheer	SAS	vLAB: Chemistry Laboratory Experiments Simulations	60000
19	Dr. Deepjoy Katuwal	VISH	Conducting Fair and Effective Assessment in the Online Mode: A Critical Study of the Challenges and Opportunities	20000
20	Dr. Mangalraj	SCOPE	Change Detection in VIT-AP using Remote Sensing Images for sustainable development of environmental hazard free campus	80860
21	Dr. Sudha Ellison Mathe	SENSE	Design and Implementation of Women Protection and tracking system	60440
22	Dr. Nupur Nirola	VSB	Assessing the impact of income inequality on occurrence of crime rates across Indian states using nightlight imagery	61000

#### FY 2022-23

RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Siva Kumar Reddy	SAS	Mechanical characterization of MXene based Nanocomposites	256178
2	Dr. Soumyakanta Prusty	SAS	Development of Light-Induced Supramolecular Polymers Emerged from Coordination Cages	258895
3	Dr. Rajesh Chalasani	SAS	Physical Properties and Catalytic Studies of Metal Nanoparticles / Polymers Supported on Layered Materials	258077
4	Dr. Debakanta Tripathy	SAS	Design and development of metal complexes as small molecule DNA intercalator	259698
5	Dr. Santanu Mandal Ms. N. Pratyusha (18PHD7026)	SAS	New image encryption method for satellite/ geographical images using memristor based hyper-chaotic system for secure communication and protection of data	103438
6	Dr. Rajarshi Sarkar	SAS	Design and synthesis of novel, multi-component, supramolecular machinery and its application in organic catalysis.	260000
7	Dr. M V V Sreenivasu	SAS	Ion and Molecular Recognition by using Supramolecular Scaffolds	255827
8	Dr. Selvakumar K Mr. Sachidananda Nayak (21PHD7073)	SAS	Electro - and photoelectrocatalytic reduction of CO <sub>2</sub> using selenium tethered copper phthalocyanine nanoaggregates	250141
9	Dr. Nallamuthu S	SAS	Synthesis and characterizations of rare-earth-based pyrochlore A <sub>2</sub> B <sub>2</sub> O <sub>7</sub> , where A <sup>3+</sup> (La-Lu ) and B <sup>4+</sup> (Sb, Ga, Bi, Al) for spintronic applications	252850

10	Dr. K SENTHIL	SAS	Synthesis of Bio-waste derived Highly Porous Activated Carbon (HPAC) and MXene / HPAC Composites as Electrode Materials for Supercapacitor Applications	259633
11	Dr. Ganesh Kotnana	SAS	Tuning the optical and magnetic properties of RFeO <sub>3</sub> compounds for multifunctional applications	238659
12	Dr. Madhusudhana Rao N	SAS	A Systematic Study of Magnetic and Optical properties of Transition metal / Rare earth metal doped CuS, SnS <sub>2</sub> , Ga <sub>2</sub> O <sub>3</sub> Semiconducting Nanoparticles for Spintronic and Optoelectronic Applications	259956
13	Dr. Ganesh Kotagiri	SAS	Magnetoimpedance studies on nanocrystalline melt-spun ribbons for biomedical applications	233649
14	Dr. Illa Ramakanth	SAS	Synthesis of photo-active nanoparticles via green chemistry approach to enhance crop production for sustainable agriculture: Mechanism and structural investigation	239181
15	Dr. Dripta De Joarder	SAS	Synthesis of novel, water-soluble transition metal terpyridine complexes and study of their catalytic activity in synthesis of bioactive natural products	260000
16	Dr. Nagarjuna Neella	SAS	MXene based Functional Nanocomposite Nasal Sensor for the Identification of Possible Diseases/Abnormalities	260000
17	Dr. Roopas Kiran Sirugudu Ms. Helga Mary (21PHD7021) Ms. Navya Abraham (21PHD7060)	SAS	Enhanced Piezoelectricity in Lead-free Piezoceramics by Texture Engineering	243100
18	Dr. Boleem Sai Chandana Mr. S. B. Rajendra Prasad (21PHD7150)	SCOPE	Development of a Security System Using Thermal Face Bio-metrics	228938
19	Dr. Rajesh Duvvuru (PI) Dr. Eswariah Rayachoti (Co-PI)	SCOPE	A Geospatial Risk Investigating Study between geomorphology, erosion and flood risk at Chinna Gollapalem Island, India using IoT and Machine Learning Algorithms.	257400
20	Dr. Karthika Natarajan	SCOPE	Development of a Smart crop prediction and Monitoring System	186635
21	Dr. D. Sumathi	SCOPE	Early detection of Gastric Cancer through DL Models	159900
22	Dr. Sanket Mishra (PI) Dr. Vikash Kumar Singh (Co-PI)	SCOPE	THEMIS: A Cognitive IoT framework for calibrated water quality monitoring in Strategic Setting	106116
23	Dr. Sunil Kumar Singh	SCOPE	Electricity consumption Optimization for Smart Campus using Internet of Things (IoT)	250452
24	Dr. Jaiverdhan	SENSE	Design and Development of Multifunctional Dual Polarized Compact Antenna at Ku-band for Satellite Application	228566
25	Dr. Santosh Kumar Sahu	SMEC	Fabrication of graphene reinforced shape memory polymer nanocomposite for smart actuation-based soft robotic hand using 4D printing	182442
26	Dr. Priyanka Ghosh	VISH	Impact of tourism development on the coastal environment of Mandarmani, West Bengal	184500
27	Dr. V. Sudharshan	SAS	High TCR nanofabricated metal oxide nanomaterials for microbolometer application	258801
28	Dr. Ramana Tamminana	SAS	Copper-catalyzed synthesis of fused Triazoles via Click and CDC (crossdehydrogenative coupling) approach	256134

29	Dr. Triveni Rajashekhar Mandlimath	SAS	Design and development of novel heterojunction nanophotocatalysts for water purification under visible light irradiation	260000
30	Dr. S. Dasaradha Ramarao	SAS	Layered Transition Metal Dichalcogenides based hybrid nano-heterostructures for Energy conversion applications	259553
31	Dr. Tufan Ghosh	SAS	Perovskite Nanocrystals: Synthesis and Optoelectronic Applications	281719
32	Dr. Sandhya Sadanandan	SAS	Design and Synthesis of Stimuli-Responsive Novel Peptide Dendrimers as Potential Chemotherapeutics	259423
33	Dr. Ritambhara Sharma	SAS	The Pyrene Chromophore for the use of Photosensitizer	261212
34	Dr. S. Pratheep Kumar	SAS	Photoluminescence Investigation of Novel Rare Earth Activated Langbeinites for White Light Emitting Diode Applications	260000
35	Dr. Sabeel M Basheer	SAS	Investigation on photophysical properties of lanthanide metal complexes	255028
36	Dr. Paramasivam R	SAS	Effects of chemical lubricants / glidants on bulk solids flow properties of fine powdered food materials	259246
37	Dr. M. Muneeswaran	SAS	High efficiency electric - energy storage properties of BFO – BT ferroelectric ceramics	258632
38	Dr. Naga Prasad Puvvada	SAS	The potential role of fluorescent carbon dots response against bacteria	260000
39	Dr. Sachil Sharma	SAS	Synthesis, Characterization and Functionalization of Atomically and Structurally-Precise Ligand-Protected Noble Metal Nanoclusters and Their Alloys for Various Applications	257712
40	Dr. S. Muthu Prabhu	SAS	Development of 3D carbon-sponges for effective sequestration of endocrine disrupting chemicals (EDCs) from waters	259854
41	Dr. Prashanth Ragam (PI) Dr. E. Ajith Jubilson (Co-PI)	SCOPE	MineSense: Sensing and Analysis of Long Range Wireless Area Network (LoRa WAN) link behaviour in Underground Mines using Machine Learning Techniques	192000
42	Mrs. Ponnaganti Chandana (20PHD7036) Dr. Ameet Chavan	SENSE	Smart Battery Management System integrated with Cell Swapping Technology for E-Vehicles	265140
43	Dr. Atul S M Tripathi	SENSE	Orientation in Semiconducting thin film for high-performance Electronics devices	260000
44	Dr. Chillu Naresh	SENSE	Investigating the efficient machine learning algorithms assisted with Laser Induced Breakdown Spectroscopy for classifying the polymeric insulating material degradation	257517
45	Dr. V M Ravindra Kumar	SMEC	Effect of hybrid reinforcements on shape recovery and mechanical properties of 4D printed shape memory nanocomposites	279500
46	Dr. P S Rama Sreekanth	SMEC	Fabrication of Teflon fabric-reinforced Nafion based Wearable Exoskeleton Actuator for rehabilitation training	337705
47	Dr. Mohd Abdul Muqet Maaz	VSBS	Agripreneurship: Prospects and Challenges	184500
48	Dr. Satyanarayana Moru	SAS	Development of a Miniaturized Potentiometric Sensors for Monitoring of Soil Macronutrients	259706

49	Dr. Jayendra Kumar (PI) Dr. Samineni Pedda Krishna (Co-PI) Mr. Satish Kumar Duddu (20PHD7110)	SENSE	Design and development of 5G MIMO antenna array prototype for hand-held wireless devices	249600
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FY 2023-24				
RGEMS				
S. No	Principal Investigator	School	Project Title	Sanctioned Budget in INR
1	Dr. Suyog Jhavar	SMEC	Development of Slurry based Additive Manufacturing Setup	305500
2	Dr. Y.V.Pavan Kumar Mr.M.Srikanth (20PHD7032)	SENSE	Virtual Inertia Controller for Voltage Source Inverter Based Microgrids	247000
3	Dr. Nandam Ashok	SAS	Optical waveguides for supercontinuum generation application	295442
4	Dr. Venkatrajam Marka Sunil Kshirsagar (20PHD7174) Rohini Baliram More (19PHD7013)	SAS	Quantum codes from linear code over certain rings: Construction and Properties	120000
5	Dr. D. John Pradeep (PI) Dr. Y. V. Pavankumar (Co-PI) Kamalesh Kumar K (20BEC7031) Manikyam Modhaliyar Thanuja (20BEC7005)	SENSE	Study of Lithium Ferro Phosphate Battery Bank for Household Inverters	168707
6	Dr. Sibi Chakkaravarthy S	SCOPE	VISU-NG	650602
7	Dr. Tufan Ghosh	SAS	Investigation of charge carrier recombination dynamics in two-dimensional Ruddlesden-Popper perovskites	268545
8	Dr. U.M.Gopal Krishna, (PI) Dr Suhail Ahmed Bhat (Co-PI)	VSU	Applications of Green Banking Practices and Environmental Sustainability – A Study with reference to Guntur Region	126700
9	Dr. Sambhudutta Nanda K Dinesh (21BCE7230) Niruban R (21BCE7668) Allen Febi M A (21BCE7470) Rion Sebastian (21BCE8083) Nayan Verma (21BCE8833) Muthu Arun V (23BCE8350) Hashir Sibtain (21BCE8110) Anup Kumar (21BCE7885) Zayed Ur Rehman (22MIS7073)	SENSE	Design and Development of Rover for IROc-2024 ( ISRO Robotics Challenge-URSC 2024)	192020
10	Dr. Sudagar J (PI) Dr. Muneeswaran M (Co-PI) Dr. Ramarao D (Co-PI)	SAS	Development of High/ Medium-entropy materials through novel and low-cost electrochemical route for energy storage applications	249154