

Scheme: Research & Development Support (SERC)
Programme: Science & Engineering Research Council (Engineering Sciences)
Projects Sanctioned during 2004-05

Sl. No.	Sanction No. Date of Sanction (D/M/Y)	Project Title	Project Investigator & Address
1.	SR/S3/MECE/19/20 03-serc-Engg. 21.04.2004	Development of a Nondestructive Method for Measurement of Crack Growth and Detection of Crack in pipes	Prof. S.K. Maitri Deptt. Of Mechanical, Indian Institute of Technology Powai Mumbai - 400036
2.	SR/S3/MECE/35/20 03-SERC-Engg. 22.04.2004	Optimal Reservoir Operation Rules for Pilvakkal Scheme (Vaipparbasin-Tamil Nadu) using Artificial Intelligence based techniques	Dr. C. Sivapragasam Deptt. Of Civil Engg., Mepco Schlenk Engineering College Virudunagar Sivakasi - 626005
3.	SR/S3/MECE/25/20 02-SERC-Engg. 22.04.2004	Correlation and Artificial Neural Network techniques for Ablation Problems	Dr. Subrahmanya S. Katte Deptt. Of Mechanical Engg., Shanmugha Arts, Science, Technology & Research Academy (SASTRA) Thanjavur - 631402
4.	SR/S3/MECE/29/20 03-SERC-Engg. 22.04.2004	Development of a Low-cost Indigenous Adsorbent Using Agro-Wastes for Dephenolation of Aqueous Industrial Waste Water	Dr. Ashutosh Das School of Civil engg., Shanmugha Arts, Science, Technology & Research Academy (SASTRA) Thanjavur - 631402
5.	SR/S3/MECE/18/20 03-SERC-Engg. 28.04.2004	Short Terms and Long Terms Performance of Repaired Fire Damaged Concrete Structures	Dr. M. Potha Raju Deptt. Of Civil Engg., GITAM Engineering College Visakhapatnam - 530045
6.	SR/S3/MECE/16/20 03 29.04.2004	Development and Investigations of Pulse Tube Nitrogen Liquefier of around 1 Litre/ Hours Capacity	Dr. H.B. Naik Deptt. Of Mechanical Engg., Sardar Vallabhnbhai National Institute of Technology Ichhanath Surat - 395007
7.	SR/S3/MECE/19/20 02-SERC-Engg. 29.04.2004	DAM-BREACH FLOD ANALYSIS	Dr. S. Surya Rao Deptt. Of Civil Engg., GITAM Engineering College Visakhapatnam - 530045
8.	SR/S3/MECE/26/20 03-SERC-Engg 29.04.2004	Development of Ceramic Coatings and Study of its Potential to improve Performance of Diesel Engine	Dr. P. Martin Jebaraj Deptt. Of Mechanical Engg., Dr. Ambedkar Institute of Technology Mallathahally Bangalore - 560056
9.	SR/S3/MCE/15/2004 12.07.2004	Studies on Low Pressure Distillation for Desalination in Thermal Power Stations Using Waste Heat Energy	Dr. A.E. Muthunayagam , Karunya Institute of Technology & Science Karunya Nagar Coimbatore - 641114

10.	SR/S3/MECE/08/20 04-SERC-Engg. 15.07.2004	Hydrodynamic Performance Characteristics of Vertical Wave Screens with Circular Horizontal Intercepting Elements	Prof. V. Sunder Deptt. Of Ocean Engineering, Indian Institute of Technology Chennai - 600036
11.	SR/S3/MECE/35/20 02-SERC-Engg. 15.07.2004	Oscillatory Combustor Gasifier for Low Grade Fuel	Prof. T.S. Seshadri Deptt. Of Aerospace Engg., Indian Institute of Science Bangalore - 560012
12.	SR/S3/MECE/54/20 03-SERC-Engg. 10.08.2004	Modeling and Simulation of Momentum, Heat and Mass Transfer in Laser Surface alloying	Dr. Suman Chakraborty Deptt. Of Mechanical Engg., Indian Institute of Technology Kharagpur - 721302
13.	SR/S3/MECE/02/20 04 10.08.2004	Reliability Analysis of Buried Pipes	Dr. G.L. Sivakumar Babu Deptt. Of Civil Engg., Indian Institute of Science Bangalore - 560012
14.	SR/S3/MECE/53/20 03-SERC-Engg. 19.08.2004	Study of Energy Dissipation Mechanisms in MEMS Microstructures	Dr. Rudra Pratap Deptt. Of Mechanical Engg., Indian Institute of Science Bangalore - 560012
15.	SR/S3/MECE/65/20 03-SERC-Engg 19.08.2004	Testing and constitutive modeling of rocks	Prof. K.G. Sharma Deptt. Of Civil Engg., Indian Institute of Technology Hauz Khas New Delhi - 110016
16.	SR/S3/MECE/60/20 03 02.09.2004	Development of Stratified charge injection concept genset engines and other investigations of an exploratory nature on a new concept internal combustion engine	Prof. M.V. Narsimhan Deptt. Of Mechanical Engg., Indian Institute of Science Bangalore - 560012
17.	III.5(42)/2000-ET 16.09.2004	Study of coal pulverizer in power plans	Prof. S.K. Biswas Deptt. Of Mechanical Engg., Indian Institute of Science Bangalore - 560012
18.	SR/S3/CE/057/2003 -SERC-Engg 07.07.2004	Understanding film formation mechanism in latex Dispersions	Prof. Mahesh S. Tirumkudulu Deptt. Of Chemical Engg., Indian Institute of Technology Powai Mumbai - 400076
19.	SR/S3/CE/62/2003 07.07.2004	Development of fibres based on Nylon-clay Nano Composit and Studying the Structure and Properties of those fibres	Dr. C. Ramesh , National Chemical Laboratory Pune - 411008
20.	SR/S3/CE/08/2004- SERC-Engg 12.07.2004	Processing of Advanced Polymeric Materials	Dr. Anup K. Ghosh Centre for Polymer Science & Technology, Indian Institute of Technology Hauz Khas New Delhi - 110016
21.	SR/S3/CE/09/2004- SERC-Engg 14.07.2004	Computational Fluid Dynamics & Its Engineering Applications	Dr. Sajeer Sanghiv , Indian Institute of Technology Hauz Khas New Delhi - 110016

22.	SR/S3/CE/023/2004 -SERC-Engg 18.10.2004	Engineering Analysis of Pichia Pastoris fermentations	Dr. Jayant M Modak Deptt. Of Chemical Engg., Indian Institute of Science Bangalore - 560012
23.	SR/S3/CE/025/2004 -SERC-Engg 03.11.2004	Advanced application of reactive distillation (High Pressure reactions and reactions involving non condensable	Dr. S.M. Mahajani Deptt. Of Chemical Engg., Indian Institute of Technology Powai Mumbai - 400076
24.	SR/S3/CE/017/2004 -SERC-Engg 04.11.2004	Turbulent Particle Suspensions	Dr. V. Kumaran Deptt. Of Chemical Engg., Indian Institute of Science Bangalore - 560012
25.	SR/S3/ME/014/2003 -SERC-EnGG 12.05.2004	Super Capacitor based on conducting polymers an energy storage device	Dr. S. Palaniappan , Indian Institute of Chemical Technology Hyderabad - 500007
26.	SR/S3/ME/040/2002 -SERC-Engg 26.04.2004	Development of radiation silicon zed cyan tester Bismaleimide hybrid matrices for advanced nano composites	Dr. M. Algar Deptt. Of Chemical Engg., Anna University Chennai - 600025
27.	SR/S3/ME/05/2003 26.04.2004	Modelling the effects of feed characteristics of coal in Dense medium cyclone performance	Dr. A.K. Mazumdar , Regional Research Laboratory Bhopal - 462026
28.	SR/S3/ME/039/2002 26.04.2004	Preparation of Pigment and catalyst grade titania by an alternate titanium dioxide process	Dr. Pratima Mishra , Regional Research Laboratory Bhubaneswar - 751013
29.	SR/S3/ME/013/2003 -SERC-Engg 07.07.2004	Thermal Plasma Graphitization of Calcined petroleum coke	Dr. J.L. Gusmoste Deptt. Of Advanced Material Technology, Regional Research Laboratory Bhubaneswar - 751013
30.	SR/S3/ME/038/2003 -SERC-Engg 09.08.2004	Development of temperature compensated high permittivity polymer ceramic laminates for micro wave substrate applications	Dr. R. Ratheesh , Centre for Materials for Electronics Technology (C-MET) PO Athani, Sharanur Road Thrissur - 680771
31.	SR/S3/ME/023/2003 -SERC-Engg 19.08.2004	Development of Epoxy resin from soybean oil and fabrication of epoxy/glass fiber composites	Dr. M. Saroja Devi Deptt. Of Chemistry, Anna University Chennai - 600025
32.	SR/S3/ME/34/2003- SERC-Engg 13.10.2004	Life enhancement of hydroturbine components by surface coatings	Dr. M. Kamaraj Deptt. Of Metallurgical & Materials Engg., Indian Institute of Technology Chennai - 600036
33.	SR/S3/ME/20/2003- SERC-Engg 29.10.2004	Cellular silicon carbide ceramics from pant precursor for engineering applications	Dr. O.P. Chakrabarti Central Glass & Ceramic Research Institute (CGCRI) 196, Raja S.C. Mullick Road Kolkata - 700032
34.	SR/S3/ME/41/2003- SERC-Engg	Asbestos: Free Brake Material for Automobiles: Tailoring	Dr. Jayashree Bijwe , Indian Institute of Technology

	02.11.2004	characterization and evaluation-Phase II	Hauz Khas New Delhi - 110016
35.	SR/S3/EECE/11/2002-SERC-Engg 21.04.2004	Computing Power Grids on Middleware	Dr. D. Janaki Ram Deptt. Of Computer Science & Technology, Indian Institute of Technology Chennai - 600036
36.	SR/S3/EE/43/2002-SERC-Engg 27.04.2004	Control of Communication Networks	Dr. Shalabh Bhatnagar Deptt. Of Computer Science & Automation, Indian Institute of Science Bangalore - 560012
37.	SR/S3/EECE/32/2003-SERC-Engg 27.04.2004	Extending the Frontiers of Design Validation of Digital VLSI Circuits using Symbolic Simulation and Formal Property Verification	Dr. Pallab Dasgupta Deptt. Of Computer Science & Engg., Indian Institute of Technology Kharagpur - 721302
38.	SR/S3/EECE/19/2003-SERC-Engg 05.05.2004	Efficient Testing for System-on-Chip Design-a new VLSI Manufacturing Paradigm	Dr. Santanu Chattopadhyay Deptt. Of Computer Science & Engg., Indian Institute of Technology Guwahati - 781039
39.	SR/S3/EECE/022/2003 05.05.2004	Study on Learning and Memory Mechanisms in Cardiac Activity	Dr. V. Srinivasa Chakravarthy Deptt. Of Electrical Engg., Indian Institute of Technology Madras Chennai - 600036
40.	SR/S3/EE/027/2002 05.05.2004	Development of Hybrid Quality Conditioner with UPS Function	Mr. Rahul Varma Industrial Electrical electronics Group, Central Electronics Engineering Research Institute Pilani - 333031
41.	SR/S3/EECE/04/2003-SERC-Engg 11.05.2004	UV and Near-UV light emitting Diodes using polysilanes	Dr. Deepak Gupta Deptt. Of Materials and Metallurgical Engg., Indian Institute of Technology Kanpur - 208016
42.	SR/S3/EECE/029/2003-SERC-Engg 11.05.2004	A Multi-Level Inverter Scheme with Common Mode Voltage suppression for Inverter Fed Induction Motor Drives for High Power Application	Dr. Gopal Kumar Centre for Electronics Design and Technology, Indian Institute of Science Bangalore - 560012
43.	SR/S3/EECE/14/2003-SERC-Engg 11.05.2004	Integrated fuzzy neural network approach for voltage security assessment of Madhya Pradesh Electricity board System	Dr. Manjaree Pandit Deptt. Of Electrical Engg., Madhav Institute of Technology and Science Gwalior - 474005
44.	SR/S3/EECE/17/2003-SERC-Engg 26.05.2004	E-Video: Video Information Processing with enhanced functionality	Dr. Santanu Chaudhury Deptt. Of Electrical Engg., Indian Institute of Technology Hauz Khas New Delhi - 110016
45.	SR/S3/EECE/07/2004-SERC-Engg	Sub100nm CMOS Device & Characterization for mixed	Dr. V. Ramgopal Rao Deptt. Of Electrical Engg., Indian

	06.08.2004	Signal application	Institute of Technology Powai Mumbai - 400076
46.	SR/S3/EECE/024/20 03-SERC-Engg 09.08.2004	Modelling and Management of Dynamic Multimedia Objects	Prof. A.K. Majumder Deptt. Of Computer Science & Engg., Indian Institute of Technology Kharagpur - 721302
47.	SR/S3/EECE/08/200 4-SERC-Engg 21.09.2004	Handwritten Hindi Text Recognition System	Dr. M. Hanmandhu Deptt. Of Electrical Engg., Indian Institute of Technology Hauz Khas New Delhi - 110016
48.	SR/S3/EECE/22/200 4 29.11.2004	New Efficient Geometric Algorithms and Data Structures for Very Large VLSI Layouts	Prof. Prosenjit Gupta VLSI and Embedded System Research Centre, International Institute of Information Technology Gachibowli Hyderabad - 500019
49.	SR/S3/MECE/03/20 04-SERC-Engg. 14.12.2004	Solar Thermal Energy Storage Using PCM Capsules Assembled as a Packed Bed	Dr. S.C. Solanki Deptt. Of Mechanical & Industrial Engg., Indian Institute of Technology Roorkee - 247667
50.	SR/S3/MECE/16/20 04-SERC-Engg. 21.12.2004	Estimation of Unsaturated soil parameters	Dr. K.S. Hari Prasad Deptt. Of Civil Engg., Indian Institute of Technology Roorkee - 247667
51.	SR/S3/MERC/48/20 04-SERC-Engg. 21.02.2005	A Novel Coupled Efficient Layer wise theory and a smeared third order theory for Thermo-Electro Mechanical Analysis of Smart Piezoelectric Hybrid Plates	Dr. Santosh Kapuria Deptt. Of Applied Mechanics, Indian Institute of Technology New Delhi - 110016
52.	SR/S3/MECE/20/20 04-SERC-Engg. 02.03.2005	Development of a model and design curves for thickness of compacted clay liners below municipal solid waste land files	Dr. Shashi Mathur Deptt. Of Civil Engg., Indian Institute of Technology New Delhi - 110016
53.	SR/S3/MERC/83/20 04-SERC-Engg 02.03.2005	Development of Centrifugal Pump to work as Turbine and Integrate it with load controller	Dr. S.H. Chetwani Deptt. Of Low Voltage Products, Electrical Research and Development Association Vadodara - 390010
54.	SR/S3/MECE/11/20 03-SERC-Engg 11.03.2005	SERC School in Natural Diaster Management	Dr. P. Basak , Amal Jyoti College of Engineering Koovapally Kottayam - 686518
55.	SR/S3/MERC/65/20 04-SERC-Engg 14.03.2005	Development of CAD model for Custom fit Artificial Human Limbs Using Reverse Engineering Method	Dr. A.N. Sinha Deptt. Of Mechanical Engineering, Birla Institute of Technology Ranchi - 835215
56.	SR/S3/MERC/46/20	Cascaded Multi-Temperature	Dr. B.R. Ramesh Babu

	04 21.03.2005	Latent Heat Solar Thermal Storage Device	Deptt. Of Production Engineering, Satyabama Institute of Science and Technology Deemed Univ., Jeppiar Nagar, Old Mamallapuram Road Chennai - 600119
57.	SR/S3/MERC/55/2004-SERC-Engg 21.03.2005	In-filling of Gaps in Wave Height Time Series using Soft Computing Tools	Prof. M.C. Deo Deptt. Of Civil Engg., Indian Institute of Technology Mumbai - 400076
58.	SR/S3/CE/052/2004-SERC-Engg. 10.01.2005	Novel associating Polymers: design, development and applications	Dr. M.V. Badiger National Chemical Laboratory Pune - 411008
59.	SR/S3/CE/041/2004-SERC-Engg 10.01.2005	Multiphase flow and mixing in micro reactors	Dr. V.V. Ranade National Chemical Laboratory Pune - 411008
60.	SR/S3/CE/033/2004-SERC-Engg 10.01.2005	Inertial effects on forced particles in Unsteady flow at low reynolds numbers	Dr. T.R. Ramamohan CSIR Centre for Mathematical Modeling & Computer Simulation NAL Celur Campus Bangalore - 560037
61.	SR/S3/CE/034/2004-SERC-Engg 11.01.2005	Liquid Phase Oxidation of Substituted Phenols: Catalysis Kinetics and reactor Performance studies	Dr. C.V Rode National Chemical Laboratory Pune - 411008
62.	SR/S3/CE/038/2004-SERC-Engg 11.01.2005	Decolorisation & Biodegradation of 4-ABS containing azo dyes under microaerophilic-aerobic conditions	Dr. Leela Iyengar Indian Institute of Technology Kanpur - 208016
63.	SR/S3/CE/49/2004-SERC-Engg 25.01.2005	Process Engineering of Food Foams	Prof. Anurag Mehra Indian Institute of Technology Mumbai - 400076
64.	SR/S3/CE/048/2004-SERC-Engg 25.01.2005	Self Propagating Free Radical Frontal Polymerization: Synthesis, Modeling and Analysis of Dynamic Instabilities	Dr. S. Ponrathnam , National Chemical Laboratory Pune - 411008
65.	SR/S3/EECE/12/2004-Engg 14.03.2005	A Multimodal Interface Office Suite	Prof. C.S. Ramalingam Deptt. Of Electrical Engg., Indian Institute of Technology Chennai - 600036
66.	SR/S3/ME/033/2003-SERC-Engg 01.12.2004	Wear behaviour of diamond reinforced composite	Dr. K. Venkateswarlu National Metallurgical Laboratory Jamshedpur - 831007
67.	SR/S3/ME/04/2004-SERC-Engg 28.12.2004	Environmental Biotechnology of Heavy Metal Speciation and Remediation of Mine Wastes	Prof. K.A. Natarajan Indian Institute of Science Bangalore - 560012
68.	SR/S3/ME/19/2003-SERC-Engg	Novel purification technique for electronic materials by distillation through oxide phase	Dr. N.R. Munirathnam Centre for Materials for Electronics Technology (C-MET)

	05.01.2005		Hyderabad - 500051
69.	SR/S3/ME/25/2004-SERC-Engg 10.02.2005	Development of Niobium powder for capacitor application as an alternative to tantalum	Dr. T.L. Prakash Centre for Materials for Electronics Technology (C-MET) Hyderabad - 50051
70.	SR/S3/EECE/62/2004-SERC-Engg 25.01.2005	Study of High Dielectric Gate Material for Scales MOS Devices	Dr. R.K. Nahar Deptt. Of Microelectronics, Central Electronics Engineering Research Institute Pilani - 333031
71.	SR/S3/EECE/58/2004-SERC-Engg 25.01.2005	An Integrated Frame Work for Testing Concurrent Object Oriented Programs	Dr. Rajib Mall Deptt. Of Computer Science & Engg., Indian Institute of Technology Kharagpur - 721302
72.	SR/S3/EECE/09/2004-SERC-Engg 01.02.2005	Techniques for Secure Communication in Emerging Wireless Ubiquitous Networks	Dr. P.V. Rangan Amrita Vishwa Vidyapeetham Ettimadal PO Coimbatore - 641105
73.	SR/S3/EECE/53/2004-SERC-Engg 08.02.2005	Assessment and Analysis of Electric Power Quality Problems using Artificial Intelligence and Advanced Digital Signal Processing Techniques	Dr. S.N. Singh Deptt. Of Electrical Engg., Indian Institute of Technology Kanpur - 208016
74.	SR/S3/EECE/48/2003-SERC-Engg 21.02.2005	Design and Development of Microwave Bootlace Lens for Multiple Beam forming	Dr. Pramod Kumar Singhal Deptt. Of Electronics, Madhav Institute of Technology and Science Gwalior - 474005
75.	SR/S3/EECE/52/2004-SERC-Engg 21.02.2005	Multiple Intelligent Agent Systems for Effective Operation of Large Scale Power Systems	Prof. V.V.S. Sharma Deptt. Of Computer Science & Automation, Indian Institute of Science Bangalore - 560012
76.	SR/S3/EECE/20/2004 04.03.2005	Design & Development of a high-speed Ultra Wideband Communication system	Dr. Ranjan Bose Deptt. Of Electrical Engg., Indian Institute of Technology New Delhi - 110016
77.	SR/S3/MERC-033/2004 09.12.2004	To develop computer model to predict weld induced residual distortion of large plate panels	Dr. N.R. Mandal Deptt. Of Ocean Engg. & Naval Architecture, Indian Institute of Technology Kharagpur - 721302
78.	SR/S3/MERC-043/2004 01.02.2005	Development of a robust weld pool simulation model by integrating heat transfer analysis and multivariate optimization	Dr. Amitava De Deptt. Of Mechanical Engg., Indian Institute of Technology Mumbai - 400076
79.	SR/S3/CE/026/2004-SERC-Engg 29.10.2004	Modeling & Optimization of Chemical Reactors	Prof. Anurag Mehra Deptt. Of Chemical Engg., Indian Institute of Technology Powai Mumbai - 400076