



अंतरिक्ष प्रौद्योगिकी कक्ष (अं प्रौ क) परियोजनाओं की वार्षिक समीक्षा

Annual Review of Space Technology Cell (STC) Projects

अंतरिक्ष उपयोग केंद्र (अं उ कें), अहमदाबाद Space Applications Centre (SAC), Ahmedabad



IIT Kharagpur



IIT Kanpur



IIT Bombay



IIT Madras



IISc Bangalore



University of Pune



Annual Review of Space Technology Cell (STC) Projects was organized for the first time at SAC during October 30-31, 2017. 28 ongoing STC projects were reviewed. 34 PIs and Team members participated from STC at IIT-Kharagpur, IIT-Kanpur, IIT-Bombay, IIT-Madras, IISc-Bangalore and University of Pune.





Welcome by Shri D K Das, Associate Director, SAC



Opening Remarks by Shri Tapan Misra, Director, SAC



Presentations on Research Areas of SAC





Lab visit





Project Presentations



Project Presentations



Project Presentations





Project Presentations





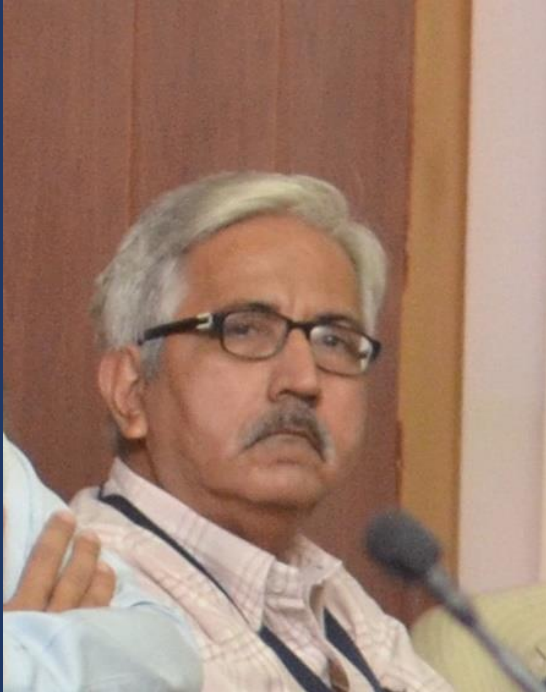
Project Presentations



Interactions



Interactions



Interactions



Interactions



Vote of Thanks by Dr Parul Patel, Co-ordinator, RESPOND, SAC

Ongoing STC projects reviewed

1.	STC_ID:	STC0013	 Prof. Dipanwita Roy Chowdhury
	Research Title:	Design and Implementation of Scalable Parameterized Stream Cipher Well Suited for Both Software and Hardware (DCW)	
	Organisation:	Department of Computer Science and Engineering, IIT Kharagpur	
2.	STC_ID:	STC0024	 Prof. Raja Datta  Ms. Sangita Dhara, JRF
	Research Title:	Protocol Development for Interplanetary Delay Tolerant Network	
	Organisation:	Department of Electronics and Electrical Communication Engineering, IIT Kharagpur	
3.	STC_ID:	STC0025	 Dr. Abhijit Das
	Research Title:	Design and Efficient Implementation of Advanced Encryption and Decryption Techniques for Use in Spacecraft Communications	
	Organisation:	Department of Computer Science and Engineering, IIT Kharagpur	
4.	STC_ID:	STC0026	 Prof. Anindya Sundar Dhar
	Research Title:	Design of Fault-Tolerant VLSI Systems for Applications in Satellite Communication	
	Organisation:	Department of Electronics and Electrical Communication Engineering, IIT Kharagpur	

5.	STC_ID:	STC0037	 <p>Prof. Bishakh Bhattacharya</p>
	Research Title:	Design of a smart inflated torus and antenna membrane	
	Organisation:	Department of Mechanical Engineering, IIT Kanpur	
6.	STC_ID:	STC0051	 <p>Mr. Swarnadip Mukherjee, Student</p>
	Research Title:	A Self Consistent Predictive Quantum Transport Simulator for Quantum Dot IR Photo Detectors	
	Organisation:	Department of Electrical Engineering, IIT Bombay	
7.	STC_ID:	STC0053	 <p>Dr. Sudip Ghosh</p>
	Research Title:	HEMT Modeling for Broad Temperature and Frequency Ranges	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	
8.	STC_ID:	STC0056	 <p>Prof. Debabrata Goswami</p>
	Research Title:	Ultrasensitive Thermal Spectrometer with Molecular Size and Mass Sensitivity	
	Organisation:	Department of Chemistry, IIT Kanpur	
9.	STC_ID:	STC0057	 <p>Dr. Tanmoy Maiti</p>
	Research Title:	Development of Novel Plasmonic Devices For Next Generation Chip-Scale Technology Based On Nano Photonics	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	

10.	STC_ID:	STC0061	 <p>Mr. Anirban Santara, Student</p>
	Research Title:	Deep Learning for Automated Feature Discovery in Hyperspectral Images	
	Organisation:	Department of Computer Science and Engineering ,IIT Kharagpur	
11.	STC_ID:	STC0063	 <p>Dr. K.Ramesh</p>
	Research Title:	New Synthesis Route to Prepare Infrared Transmitting Bulk Chalcogenide Glasses and Glass Ceramics	
	Organisation:	Department of Physics, IISc Bangalore	
12.	STC_ID:	STC0066	 <p>Dr. Chandra Sekhar Seelamantula</p>
	Research Title:	Development of A 3-D Riesz Scanner	
	Organisation:	Department of Electrical Engineering, IISc Bangalore	
13.	STC_ID:	STC0067	 <p>Mr. Suyog Hawal, JRF</p>
	Research Title:	Visible-NIR Electromagnetic Wave Concentration Using Metallic Aperture for Photodetectors	
	Organisation:	Department of Metallurgical Engineering and Materials Science, IIT Bombay	

14.	STC_ID:	STC0071	 <p>Dr. Manikandan Mathur</p>
	Research Title:	Identification of Mesoscale Eddies in the Bay of Bengal using Lagrangian Coherent Structures	
	Organisation:	Department of Aerospace Engineering, IIT Madras	
15.	STC_ID:	STC0072	 <p>Dr. Nagendra Krishnapura</p>
	Research Title:	16 Bit 5MS/S Analog to Digital Converter	
	Organisation:	Department of Electrical Engineering, IIT Madras	
16.	STC_ID:	STC0074	 <p>Dr. Dipankar Saha</p>
	Research Title:	Development of Ohmic and Schottky Contacts on GaN HEMT	
	Organisation:	Department of Electrical Engineering, IIT Bombay	
17.	STC_ID:	STC0077	 <p>Dr. Mrinal Kanti Mandal</p>
	Research Title:	Studies on Retro-Directive Array for Space Applications	
	Organisation:	Department of Electronics and Electrical Communication Engineering, IIT Kharagpur	

18.	STC_ID:	STC0083	 <p>Dr. Amitabha Bhattacharya</p>
	Research Title:	Development of Earth Simulator for Time Domain Gpr Applications	
	Organisation:	Department of Electronics and Electrical Communication Engineering, IIT Kharagpur	
19.	STC_ID:	STC0119	 <p>Dr. B. Ghosh</p>
	Research Title:	Design of Dual/Tri-Band Circularly-Polarized Antennas with Reduced Ground Plane Size	
	Organisation:	Department of Electronics and Electrical Communication Engineering, IIT Kharagpur	
20.	STC_ID:	STC0143	 <p>Dr. Neelima Deshpande</p>
	Research Title:	Studies on Biodiversity of Poly-Extremophilic Bacteria for their Probable Use as test organisms in Space Research	
	Organisation:	Abasaheb Garware College, Pune, University of Pune	
21.	STC_ID:	STC0144	 <p>Dr. Debashish Chakravarty</p>
	Research Title:	Assessment and Implementation of Complex Image Co-Registration and Phase Unwrapping Algorithms for Interferometric SAR Processing	
	Organisation:	Department of Mining Engineering & Department of Industrial and Systems Engineering, IIT Kharagpur	

22.	STC_ID:	STC0145	
	Research Title:	Characterization and Modeling of Radiation Hardened CMOS Transistors for Space Applications	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	
			Dr. Sudip Ghosh
23.	STC_ID:	STC0146	
	Research Title:	High Throughput Surface Characterization Using Coherentoptical Imaging	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	
			Dr. Gannavarpu Rajshekhar
24.	STC_ID:	STC0147	
	Research Title:	Aware Image Quality Evaluation	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	
			Mr. Anurendra Kumar, Student
25.	STC_ID:	STC0149	
	Research Title:	RTE-Tomography based Cloud and Ocean Monitoring	
	Organisation:	Department of Electrical Engineering, IIT Kanpur	
			Dr. Naren Naik

26.	STC_ID:	STC0161	 <p>Dr. Kantesh Balani</p>
	Research Title:	Fabricating of Porous Copper with Carbon Nanotube Reinforcement for Loop Heat Pipe Application	
	Organisation:	Department of Materials Science & Engineering & Department of Mechanical Engineering, IIT Kanpur	
27.	STC_ID:	STC0162	 <p>Prof. Damayanti C. Gharpure</p>  <p>Prof. Ananthakrishnan</p>
	Research Title:	Development of Pre Qual Engineering Model of “SEAPS” (300 KHz To 30 MHz) RF Front-End Electronics and Data Acquisition System for Low Frequency Space Science Studies	
	Organisation:	Department of Electronic Sciences, University of Pune	
28.	STC_ID:	STC0169	 <p>Prof. Bishakh Bhattacharya</p>
	Research Title:	Design Validation of Active Flexible and Reconfigurable Parabolic Antenna Using SMA based Smart Actuator	
	Organisation:	Department of Mechanical Engineering, IIT Kanpur	