

**Report of the**  
**First National Research Symposium**  
**on**  
**“Recent Advances and Challenges in**  
**Engineering and Management” (RACEM -**  
**2015)**

**21<sup>st</sup> December 2015**



**Organised by**

**Vidyalankar Institute of Technology, Mumbai**

**in collaboration with**

**University of Mumbai**



**Co-sponsored by:**

**TATA CONSULTANCY SERVICES**

**Convenor**

**Dr. Sangeeta Joshi**  
**Professor and**  
**Technical Advisor**

**Co-convenor**

**Dr. Anjali Deshpande**  
**Professor and**  
**Head, Electronics Engineering**

**Organizing Secretary**

**Prof. Shrikant Velankar**  
**Professor and**  
**Chief Academic Officer**

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## University of Mumbai

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**SANJAY DESHMUKH** PhD  
VICE-CHANCELLOR

No.VC/ECD/2015-16/617

December 14, 2015

### MESSAGE

I am glad to know that Vidyalankar Institute of Technology for organizing a National Research Symposium on Recent Advances and Challenges in Engineering and Management (RACEM- 2015) on December 21, 2015. I am certain that supported by an astute selection of quality research papers and presentations, such an initiative will reap rich dividends for the world of academic research and technological development.

To be in step with our international counterparts, educational institutes need to focus on application-based pedagogy as well as encourage research activities among faculty and students. Promoting research and fostering strong industry- institute bonds will aid in networking for optimum resource utilization and in sharing best practices. Conferences and research symposia like this provide intellectual nourishment in engineering professional circles and thereby contribute to creating an environment conducive to research.

I wish the Symposium a grand success.

**SANJAY DESHMUKH**

4 DEC 2015

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In the words of Kofi Annan, “Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family.” The faculty of thought and reason in mankind is what carries the legacy of progress and development ahead. We, at Vidyalankar, have always believed in assigning the highest priority to the promotion of a research culture amongst our students and faculty, so that we can do our bit towards making the world a better place to live in.

I extend my very best wishes to all the participants and organizers of Vidyalankar Institute of Technology’s National Level Research Symposium on Recent Advances and Challenges in Engineering and Management: RACEM-2015. I sincerely hope that such an initiative will contribute to furthering our vision of ultimately blossoming into ‘a research institute that also teaches’.

**Dr. Sanjeewani Deshpande,  
Chairperson,  
Vidyalankar Dnyanapeeth Trust**



It is said that “Research is to see what everybody else has seen, and to think what nobody else has thought.” Vidyalkar Institute of Technology’s First National Research Symposium on Recent Advances and Challenges in Engineering and Management: RACEM-2015 aims to facilitate a forum to encourage research among participants and enables them to enrich their corpus of knowledge. Being a part of an engineering and management institute, it is imperative for us to share our ideas with others to increase the visibility of our technological research findings and in turn to learn more about the advancements in our disciplines. VIT has always encouraged its faculty and students to not just excel in the dissemination of current knowledge, but to also reach out to newer horizons and explore technology in a broader context.

RACEM-2015 is designed to give participants a platform to effectively present their ideas and research and to encourage interaction and intellectual exchange of ideas with academia, industry and research personnel and help them to chisel and hone their talents to become better professionals. This initiative will take the Institute one more step forward in realizing the dream of being an innovative research-based educational centre. I am certain that this Research Symposium RACEM-2015 will set a new benchmark and prove to be a worthy precursor to many more research symposia at VIT. Good luck to all the participants for an enriching learning experience!

**Dr. Sangeeta Joshi, Convener, RACEM-2015**



## Organising Committee



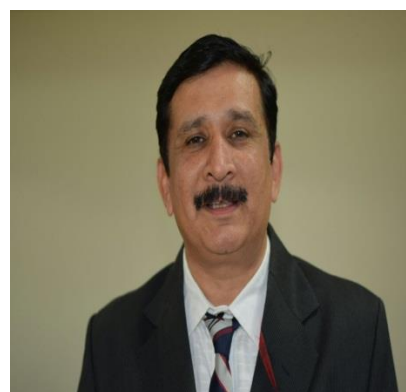
**Convener**

Dr. Sangeeta Joshi, Professor  
& Technical Advisor



**Co-convener**

Dr. Anjali Deshpande,  
Professor, Head of Electronics  
Engineering



**Organizing Secretary**

Prof. Shrikant Velankar,  
Professor & Chief Academic  
Officer



**Organizing Team**

Dr. Ankush Sharma, Ajitkumar Khachane, Sachin Deshpande, Dr. Gajanan Nagare, Dr. Saurabh Mehta, Ameya Nyayadhish, Geetha Narayanan, Girish Gidaye, Dr. Varsha Turkar, Dr. Saurav Mitra, Sachin Bojewar, Vidya Chitre, Deepali Vora, Uma Jaishankar, Kavita Shirsat, Satendra Mane, Avila Naik, Sonaali Borkar, Poonam Shah, Ruchi awani, Smriti Vishwanath, Suvarna Bhat, Anuja Gote, Swati Sharma, Mohit Gujar, Prajakta Tambe, Rajashree Soman, Namita Moris, Sunil Thube, Shailesh Mapuskar

University of Mumbai



No.APD/301/ 306 of 2015  
Mumbai-400 032  
29<sup>th</sup> October, 2015

To,  
The Principal,  
Vidyalankar Institute of Technology,  
Vidyalankar Educational Campus,  
Vidyalankar Marg,  
Wadala (E),  
Mumbai – 400 037

Sir/Madam,

This has reference to your letter Ref. No. VIT/RACEM/1221/2015, dated 09<sup>th</sup> October, 2015, for organize one day Research Symposium – 2015 on "Recent Advances and Challenges in Engineering and Management (RACEM)" in Collaboration with University of Mumbai on 21<sup>st</sup> December, 2015.

In this connection, I am directed to inform you that your request to conduct one day Research Symposium – 2015 on "Recent Advances and Challenges in Engineering and Management (RACEM)" in Collaboration with University of Mumbai on 21<sup>st</sup> December, 2015 has been granted, subject to the condition that there shall not be any financial liability on University and that if they use University "Logo", it shall not be misused.

Yours faithfully

for Registrar



**Date : Monday, 21 December 2015**

Time	Outline of Events	Venue
08.30 to 09.15	Registration and Refreshments	M Block Lobby and V Lounge
09.30 to 10.30	Inaugural Function	Auditorium
10.30 to 11.15	Modelling and Optimisation in Science and Engineering Prof. R K Shevgaonkar, IIT Bombay, Ex-Director, IIT Delhi, Ex-VC, Pune University	
11.15 to 12.00	e-Waste Management Prof. B. K. Soni, Chairman and MD, Eco Recycling Ltd. Mumbai	
12.00 to 13.00	Judges Round – Poster presentation	Plaza
13.00 to 13.45	<b>Lunch</b>	V Lounge
13.45 to 14.00	A Novel TM01 to TE11 Mode Converter for High Power - Microwave Applications Ashish Chittora, Research Scholar, IIT Bombay	M-101
14.00 to 14.15	Satellite and GIS Spatial Data Security Dipak Choksi, Project Staff, IIT Bombay	
14.15 to 14.30	Design and Analysis of CMOS Inverter Circuit with N-InGaAs and P-SiGe Vertical Nanowire Transistors Subha Subramaniam, Research Scholar, VJTI, Mumbai	
14.30 to 14.45	New Wideband Dielectric Resonator Antenna with Rectangular Cross-section Pragati Patel, Research Scholar, IIT Bombay	
14.45 to 15.00	Los Based Attitude Alignment of Two Spacecraft in Formation R. Warier, Research Scholar, IIT Bombay	
15.00 to 15.15	Study of Nonlinear Behavior of DC Motor Using Modeling and Simulation Nayana P. Mahajan, Research Scholar, VIT Mumbai	
15.15 to 15.30	<b>Tea Break</b>	V Lounge
15.30 to 16.15	Application of Remote Sensing and Data Mining in Agricultural Dinesh Kumar Singh, Group Leader, TCS Innovation Lab, Mumbai	M-101
16.15 to 17.00	<b>Valedictory</b>	

## Introduction:

Presently the Technical Education in the State of Maharashtra is sufficiently grown. It ranks quite high in the country. Quality of Education is indeed a matter of concern for University and Govt. of Maharashtra. Research in Engineering & Technology plays a pivotal role in our knowledge-driven society for economic development and also for improving quality of life. It not only lays the foundation for the advances in technology but also generates the bank of knowledge.

In order to strengthen the research and development, it is very essential to provide appropriate platform for the PhD aspirants. University of Mumbai has taken initiative in introducing PhD programmes in various Engineering Colleges. This will certainly facilitate our State to produce reasonable number of PhDs in near future.

The roles of research, science and technology are important for overall prosperity of any developing economy. Symposia and conferences fosters healthy interaction among a diverse range of professionals. In order to facilitate Ph.D. aspirants and Post graduate Students for understanding present research work carried out at National Institutes like IITs, Deemed Universities, Autonomous Engineering colleges and at research centers approved by University of Mumbai, the First National Research Symposium on 2015 on “Recent Advances and Challenges in Engineering and Management (RACEM)” is conducted in collaboration with University of Mumbai on 21st December 2015 at our Institute. A multi-track event, covering theoretical and practical aspects on Technology and Management related topics, the Symposium aims to provide a platform where new paradigms may emerge and some additions may be made to the existing corpus of knowledge.

Eminent personalities in the respective fields were invited for Keynote speeches. Research scholars from IITs and other autonomous Institutes exhibited their work through POSTER presentation. Selective scholars also presented their work. Total of 105 posters were exhibited 44 in Electronics & Telecommunications, 50 in Computer Science & IT and 11 in Management, Biomedical and Humanities. All posters are evaluated by a Panel of Judges. Experts from various Institutes were invited to evaluate the posters. Best posters were awarded with Cash Prize and certificates.

### **Aims and Objectives:**

This Research Symposium aims to facilitate a forum to encourage research among participants and enable them to enrich their corpus of knowledge. It is designed to give participants a dais to effectively present their ideas and research and to encourage interaction and intellectual exchange of ideas with academia, industry and research personnel and help them to chisel and hone their talents to become better professionals.

The objective of this Research Symposium is to provide a platform for participants to share ideas, present their research findings in engineering, technology and management and to provide opportunities to Ph.D. aspirants to understand research trends in technology. The event includes keynote speeches by eminent personalities and poster presentations in various tracks such as Electronics and Communication, Computers and Computation, Technology Management and Humanities, Biomedical, and Bioengineering.

### **Expected outcome:**

To be in step with our international counterparts, institutes need to focus on application-based learning as well as encourage research activities among faculty and students. Following is the list of certain expected outcomes of this symposium:

- This research Symposium aspires to be a destination for not just budding engineers who can be at par with their global counterparts, but also for research scholars who can push the limits of knowledge beyond existing boundaries.
- This Symposium will provide a forum for engineering professionals to showcase their research ideas and talents and expose them to the use of contemporary tools and the developments in various fields of Engineering.
- Participation in such events helps to create a research culture in academia and inculcates a habit of expressing ideas in a rational and convincing manner.

Hon. Chairperson Dr. Sanjeewani Deshpande has always been a source of inspiration for us for promoting research at our campus and we are sure that this symposium will set a new benchmark and prove to be a worthy precursor to many more research symposia at our Institute. This initiative takes the Institute one more step ahead in realizing the dream of being an innovative research-based educational centre, envisaged by its visionary founder Prof. Chandshekar Deshpande.

**Sponsorer:** Hon. Management trustee Mr. Vishwas Deshpande, who is known for his commitment to student fraternity and research oriented activities, has offered VIT fellowships to 85 participants.

**Co-sponsorer:** This event is co-sponsored by Tata Consultancy services. This co-sponsorship helped us to award TCS fellowships to 20 participants for registering this Symposium and also for awarding best posters.

**Tracks:**

- Electronics and Telecommunication
  - VLSI Design & Embedded Systems
  - Robotics, Automation and Control
  - Signal, speech and Image Processing
  - Optical and Wireless Communication
  - RF and Microwave
  - MEMS and Nanotechnology
  - Power Electronics and Renewable Energy
- Computer Science & Information Technology
  - Soft Computing & Computer Vision
  - Artificial Intelligence & Expert Systems
  - Computer Graphics & Virtual Reality
  - Data Mining & Data Warehousing
  - Distributed Systems & Parallel Computing
  - Cloud Computing & Computer Networks
  - Geographic Information System & Remote Sensing
- Management
  - Retail, Financial & HR Management
  - Ethnographic Research
  - E – Commerce & E – Governance
  - Services & Behavioural Aspects of Marketing
  - Security Analysis and Portfolio Management
- Bio Medical Engineering
  - Biomedical Instrumentation
  - Bio – Sensors & Healthcare
  - Biomedical Signal Processing
  - Nuclear Medicine & Hospital Management

### Event details:

### Inaugural Function:

The event was inaugurated by the Chief Guest Hon. Prof. R. K. Shevgaonkar, an eminent professor, IIT Bombay, former Director IIT Delhi, Ex-Vice Chancellor, University of Pune. He delivered an insightful keynote address on “Modelling and Optimization in Science and Technology. He emphasised on the importance of modelling by taking interesting examples like modelling solar radiation. He also discussed modelling of photonic crystal devices.



### Inaugural Function:

Mr. B.K. Soni, Chairman and Managing Director, Eco-recycling Ltd, Mumbai presided the Inaugural function as the Guest of Honour. He delivered a very informative talk on “E-waste Management”. He suggested a way to the “problem of E3 (Electrical Electronic Equipment) resolve with T3 (Training, Transport and Technology) to achieve E3” (Environment, Ecology and Economy).





### TCS session:

Mr.Dineshkumar Singh, Group Leader, TCS Innovation Lab and Mr. Gaurav Gandhi, Academic Relationship Manager, TCS were present for this event. Mr.Dineshkumar Singh delivered a talk on “Application of Remote Sensing and Data Mining in Agriculture”. He discussed the idea of M-Krishi based on remote sensing.





## Research Scholars Presentations:

Prof. Jayanta Mukherji, IITB was invited as session chair for this session. Following Research scholars presented their work.

S.No.	Title of the Research	Speaker	Designation
1.	A Novel TM <sub>01</sub> to TE <sub>11</sub> mode converter for high power microwave application	Ashish Chittora	Research Scholar, IIT Bombay
2.	Satellite and GIS Spatial Data Security	by Deepak Choksy	Project Staff, IIT Bombay
3.	Loss Based Altitude Alignment of Two Space Craft in Formation	R. Warier	Research Scholar, IIT Bombay
4.	Design and Analysis of CMOS inverter Circuit	Shubha Subramaniam	Research Scholar VJTI, Mumbai
5.	Validation of Macov Routing Model in Wireless Sensor Network	by Shilpa Lambor	Research Scholar, VIT Pune
6.	Study of Non-linear behaviour of DC motor using modelling and Simulation	Nayana Mahajan	Research Scholar, VIT, Mumbai



### Poster Presentation:

Following faculties were invited as experts for Judges panel

S.No.	Name of the Expert	Designation	Institute
1.	Prof. Narayankhedkar	Principal	MGM College of Engineering, Mumbai
2.	Prof. Devane	Professor & Head	Datta Meghe College of Engineering, Airoli
3.	Mr. Anand Paralkar	Consultant	Vidyalankar Institute of Technology, Mumbai
4.	Mr. Gaurav Gandhi	Group Leader, TCS Innovation Lab	TCS, Mumbai

### Evaluation Criteria:

Contents	Poster presentation	Total Out of 40
(New Technology, Innovation, Actual work or Review poster ) (20)	(Citation , References, Overall planning for display of poster) (20)	



**TCS Awards:**

S.No.	Title	Name	Poster Title	Category	Poster No	Organization
1.	Best Poster	Ashish Chittora Sandeep Singh Archana Sharma Jayanta Mukherjee	A Novel TM01 to TE11 Mode Converter for High Power Microwave Applications	Research Scholar	E1	Indian Institute of Technology Bombay
2.	Consolation	N.R. Chowdhury S. Srikant	Consensus Analysis Of Double Integrator Agents With Persistent Interaction Graph	Research Scholar	E5	Indian Institute of Technology Bombay
3.	Best Poster	Menka Singh Prof.Shraddha Panbude Prof. Rama Rao.	Design Of Compact Dual Band Antenna Loaded With EBG Metamaterial.	Post Graduate	E39	Vidyalankar Institute Of Technology
4.	Best Poster	Rugved V Deolekar Amit K Nerurkar Swapnil S Sonawane	Solving N Queens Problem using Genetic Algorithms	Post Graduate	C30	Vidyalankar Institute Of Technology
5.	Consolation	Arunima Ratankumar	Internet of Things for Smart Things: Smart Water Conservation	Post Graduate	C35	Vidyalankar Institute Of Technology
6.	Consolation	Samrin Ansari Sangeeta Joshi	Nanowire: An Innovative Approach For 22nm Technology Node	Post Graduate	E27	Vidyalankar Institute Of Technology
7.	Best Poster	Amit Dhanwani Nikunj Singh Rishikesh Walawalkar	Trip-On-Go: Trip Planner	Under Graduate	C4	Vidyalankar Institute Of Technology





## List of Posters

Poster No	Internal/ External	Name of Author	Institute	Poster Title
B1	Internal	Komal Lawand Smriti Viswanath	Vidyalankar Institute of Technology	Infrared LED Based Non Invasive Blood Glucometer
B2	Internal	Dattaraj Sansgiri Suvarna Udgire	Vidyalankar Institute of Technology	Natural Vision Restoration by Normalising the Extraocular Muscles
B3	Internal	Arunkumar Ram Jyothi Warriar	Vidyalankar Institute of Technology	Noninvasive system for monitoring cerebral oxygenation using LABVIEW
B4	Internal	Dr. Smruti Tekale Geetanjali Abhay Dhotre	Vidyalankar Institute of Technology	Analytical methods used for Chemical Analysis
C1	IIT	Dipak Choksi	Indian Institute of Technology Bombay	Satellite and GIS Spatial Data Security
C2	Internal	Prof. Sachin Deshpande Mrs. Samidha Chavan	Vidyalankar Institute of Technology	Role of CoAP Protocol in Internet of Things(IoT)
C3	Internal	Prof. Neha Chankhore	Vidyalankar Institute of Technology	FTP over Multihoming : A Simulative Approach
C4	Internal	Amit Dhanwani Nikunj Singh Rishikesh Walawalkar	Vidyalankar Institute of Technology	Trip-On-Go: Trip Planner
C5	Internal	Yogesh Doulatramani	Vidyalankar Institute of Technology	Ensuring Security For Cloud Computing Environment
C6	Internal	Swati Sharma Ajitkumar Khachane Dilip Motwani	Vidyalankar Institute of Technology	Mobile Number Portability
C7	Internal	Ms Prajakta Tambe Prof. Deepali Vora	Vidyalankar Institute of Technology	Evolution of the Web and E-Learning Application
C8	Internal	Ajay Dhruv	Vidyalankar Institute of Technology	Density Based Traffic Controlling System using Fuzzy Logic and Artificial Neural Networks
C9	Internal	Vijal Jain	Vidyalankar Institute of Technology	Video Shot Detection – The First Move Towards Video Perusal
C10	Internal	Shivraj Sunil Marathe Prof. Kavita P. Shirsat	Vidyalankar Institute of Technology	Mining You Tube Videos Metadata for Cyber Bullying Detection
C11	Internal	Ms. Namita Tambe Ajitkumar Khachane	Vidyalankar Institute of Technology	Gigabit Wireless : An Emerging Technology For WLAN

Poster No	Internal/ External	Name of Author	Institute	Poster Title
C12	Internal	Ms. Vidyashree N. Alone	Vidyalankar Institute of Technology	Optimized Feature Subset Selection for High Dimensional Data
C13	Internal	Jigar Chauhan Sachin Bojewar	Vidyalankar Institute of Technology	Connecting Classrooms with IoT
C14	Internal	Bhagyashri Kulkarni Varsha Bhosale	Vidyalankar Institute of Technology	Efficient Storage Utilization Using Erasure Codes in Open Stack Cloud
C15	Internal	Debarati Ghosal	Vidyalankar Institute of Technology	Improving the performance of AODV by receive reply method and securing it from black hole attack
C16	Internal	Prof. Divya Racha Prof. Varunakshi Bhojane	Vidyalankar Institute of Technology	Online recommendation system based on WUM using NLP
C17	Internal	Mr. Sagar Shivaji Yadav Prof.Sachin Bojewar	Vidyalankar Institute of Technology	Clustering of Multiple Documents for Text Summarization Using Text Mining
C18	Internal	Sana Ansari Prof. Avinash Shrivastava	Vidyalankar Institute of Technology	Analyzing Different Models of Security & Privacy in IoT
C19	Internal	Mr. Sandeep J Kamble Prof. Sachin Deshpande Prof. Dilip Motwani	Vidyalankar Institute of Technology	Anomaly Extraction in Backbone Networks Using Mining Rules
C20	Internal	Shashank Dubey Prof. Vidya Chitre	Vidyalankar Institute of Technology	Migration Of Big Data On Cloud Environment
C21	Internal	Siddhesh Vaidya Varsha Bhosale	Vidyalankar Institute of Technology	Search Over Encrypted Data
C22	Internal	Sarah Shaikh, Prof. Deepali Vora	Vidyalankar Institute of Technology	YARN-Moving beyond Map Reduce
C23	Internal	Prathamesh S Tugaonkar Prof. Vidya Chitre	Vidyalankar Institute of Technology	Affective Interaction Models
C24	Internal	Amit K. Nerurkar Rugved Deolekar Swapnil Sonawane Harish Ojha	Vidyalankar Institute of Technology	Secured Information Storage Media
C25	Internal	Chetashri Bhusari Prof. Umesh Kulkarni	Vidyalankar Institute of Technology	Comparative Study of Various Mobile Cloud Computing Application Models



Poster No	Internal/ External	Name of Author	Institute	Poster Title
C26	Internal	Ekata Mishra Sachin Bojewar	Vidyalankar Institute of Technology	Product Configuration – CTO v/s CPQ
C27	Internal	Kashmira Nagwekar Prof. Kavita Shirsat	Vidyalankar Institute of Technology	Analysis of Recommender Systems
C28	Internal	Vimala Rani R Rugved V Deolekar	Vidyalankar Institute of Technology	UBIQUITOUS DATA ACCESSING METHOD IN IoT-BASED INFORMATION SYSTEM
C29	Internal	Ritu Talreja Prof. Dilip Motwani	Vidyalankar Institute of Technology	Big Data Analytics in HealthCare
C30	Internal	Rugved V Deolekar Amit K Nerurkar Swapnil S Sonawane	Vidyalankar Institute of Technology	Solving N Queens Problem using Genetic Algorithms
C31	Internal	Sayali Bhole	Vidyalankar Institute of Technology	Approaches for Network Intrusion Detection
C32	Internal	Sushama Pawar Pankaj Vanwari	Vidyalankar Institute of Technology	Sybil attack and their Defenses in Internet of Things
C33	Internal	Prof. Snehal Andhar Prof. Sachin Deshpande	Vidyalankar Institute of Technology	Object Tracking Using Wireless Sensor Network
C34	Internal	Yogesh Prabhu	Vidyalankar Institute of Technology	An Effective and Feasible Traceback Scheme in Mobile Internet Environment
C35	Internal	Arunima Ratankumar	Vidyalankar Institute of Technology	Internet of Things for Smart Things: Smart Water Conservation
C36	Internal	Kausar S. Attar Vipul Dalal	Vidyalankar Institute of Technology	Horizontal Aggregation In SQL to Prepare Data Set for Data Mining Analysis
C37	Internal	Pradnya Bhirud	Vidyalankar Institute of Technology	Defending Against Sybil Attacks via Social Networks
C38	Internal	Lakshmisampanna N Prof. Kavita P. Shirsat	Vidyalankar Institute of Technology	Analysis of Fine Grained Opinion Mining Techniques
C39	Internal	Sayali Kadam Dilip Motwani	Vidyalankar Institute of Technology	Big Data Analysis: Recommendation System Using Hadoop Framework
C40	Internal	Shantanu Deshmukh Rinku Shah	Vidyalankar Institute of Technology	Computation Offloading In Mobile Cloud Computing
C41	Internal	Shreya Bamne	Vidyalankar Institute of Technology	Predictive Analytics Using Divergent Sources – A Big Data Approach

Poster No	Internal/ External	Name of Author	Institute	Poster Title
C42	Internal	Amit Dhanwani Sanket Nawle Shruti Sadalge Abhijeet Gite	Vidyalankar Institute of Technology	What's Happening? : An Android application as event organizer and manager
C43	Internal	Amit Dhanwani Prasad Satpute Ritesh Tambe	Vidyalankar Institute of Technology	Agromate: The Web Based Application As Farmer's Friend
C44	Internal	Saurab Mehta Md.Humaun Kabir Mst.Najnin Sultana K.S.Kwak	Vidyalankar Institute of Technology	On Applicability of Current Network and System Simulation Tools to Next Generation Networks: A Case Study
C45	Internal	Akhila Joshi Dr Saurabh Mehta	Vidyalankar Institute of Technology	Performance Analysis and Comparison of Cluster Based Routing Protocols in WSN
C46	Internal	Amol Wani Vishal Chiluka Vismay Mane Prof. Pankaj Vanwari	Vidyalankar Institute of Technology	Amplifying Learning Through Electronic Textbooks
C47	Internal	Kavita Patil	Vidyalankar Institute of Technology	Ciphertext-Policy Attribute based Data-Sharing With Enhanced Productivity and Security
C48	Internal	Miss. Pranali Patil, Prof. Rugved Deolekar	Vidyalankar Institute of Technology	Best Product Selecting From Comparative Question Using Cosine Similarity And Weight Feature Analysis Method
C49	Internal	Tanaya Acharekar, Avinash Palghadmal	Vidyalankar School of Information Technology Pub Matic India Pvt Ltd.	Big data for managing human resources: The haves and the have nots.
C50	Internal	Ms.Maria Achary & Ms.Swapna Kadam	Vidyalankar School of Information Technology	Mobile Controlled Spybot
E1	IIT	Ashish Chittora Sandeep Singh Archana Sharma Jayanta Mukherjee	Indian Institute of Technology Bombay	A Novel TM01 to TE11 Mode Converter for High Power Microwave Applications
E2	IIT	G Shrikanth Reddy Jayanta Mukherjee	Indian Institute of Technology Bombay	Elliptical UWB antenna loaded with RLR and Semi – elliptical Slot for Multi band – Rejection
E3	IIT	R. Warier A. Sinha	Indian Institute of Technology Bombay	Los Based Attitude Alignment Of Two Spacecraft In Formation
E4	IIT	Pragati Patel Biswajeet Mukherjee Jayanta Mukherjee	Indian Institute of Technology Bombay	New Wideband Dielectric Resonator Antenna with Rectangular Cross-section
E5	IIT	N.R. Chowdhury S. Srikant	Indian Institute of Technology Bombay	Consensus Analysis Of Double Integrator Agents With Persistent Interaction Graph

Poster No	Internal/ External	Name of Author	Institute	Poster Title
E6	External	Sanket S. Ghate Sangeeta V. Kurundkar	Vishwakarma Institute Of Technology Pune	Smart Waste Management System
E7	External	Pankaj E. Ipar Shilpa M. Lambor Sangeeta M. Joshi	Vishwakarma Institute Of Technology Pune	Exploring the Various Techniques of Energy Harvesting
E8	External	Ms.Poorva Waingankar Dr.Ms.Sangeeta Joshi Mr.Ronik Doshi	TCET ,Kandivali	Video Decoding for Mobile using Android Application
E9	External	Anagha Narayanan Nayan Suryavanshi Aishwarya Tipnis Labdhi Kamdar Prof. Geeta Narayanan	K.J.Somaiya College of Engineering	Data Transfer through Human body as Red- Tacton
E10	Internal	Amey S. Revandkar Ajitkumar.R.Khachane Gajanan D.Nagare	Vidyalankar Institute of Technology	Optimization of RF MEMS Switch
E11	Internal	Prof. Pratik Tawde	Vidyalankar Institute of Technology	MATLAB Simulations In Electrical Technology
E12	Internal	Swapnil Ashtekar Snehal Chothe	Vidyalankar Institute of Technology	Performance analysis of planar Antenna using Defected ground structures
E13	Internal	Pranita P.Padhye	Vidyalankar Institute of Technology	Performance Enhancement of Microstrip BPF Using DGS
E14	Internal	Ms.Tanvi Chavan	Vidyalankar Institute of Technology	Design Of Random Image Slicer Using Implementation On Steganography
E15	Internal	Satish. K. Hatwar Prof. Vijay Purohit	Vidyalankar Institute of Technology	Recovery of Detected Node Failure in Wireless Sensor Network
E16	Internal	Prof. Sandhya Kumar Dr. Anjali Deshpande Prof. Ashish Ukidve	Vidyalankar Institute of Technology	Dual converter Based Bi-directional Speed control of DC Motor using DSP processor
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We congratulate all the participants for participating in this symposium. We are sure that participation in such events helps to create a research culture in academia and inculcates a habit of expressing ideas in a rational and convincing manner.

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