BHARATIYA VIDYA BHAVANS

SARDAR PATEL COLLEGE OF ENGINEERING

SPARK

SARDAR PATEL AUTOMATION AND ROBOTICS KLUB

NEWSLETTER

2014-15

About SPCE

Sardar Patel College Of Engineering (SPCE), under the management of Bhartiya Vidya Bhavan, was founded by Kulapati Dr. K.M. Munshi. The foundation stone of the college was laid on 17th September 1961 by Shri Y.B. Chavan(the then chief minister of Maharashtra).The college was inaugurated by Pandit Jawaharlal Nehru in 1962. The college is dedicated to Sardar Vallabhai Patel, an eminent nation builder of independent India. Over the last 50 years the college has gained an excellent reputation in the field of technical education and has earned grade 'A+' rating for its courses from the govt. of Maharashtra. The institute has set high standards for aspiring engineering students and also meets the need of quality education in the challenging world of business.

VISION

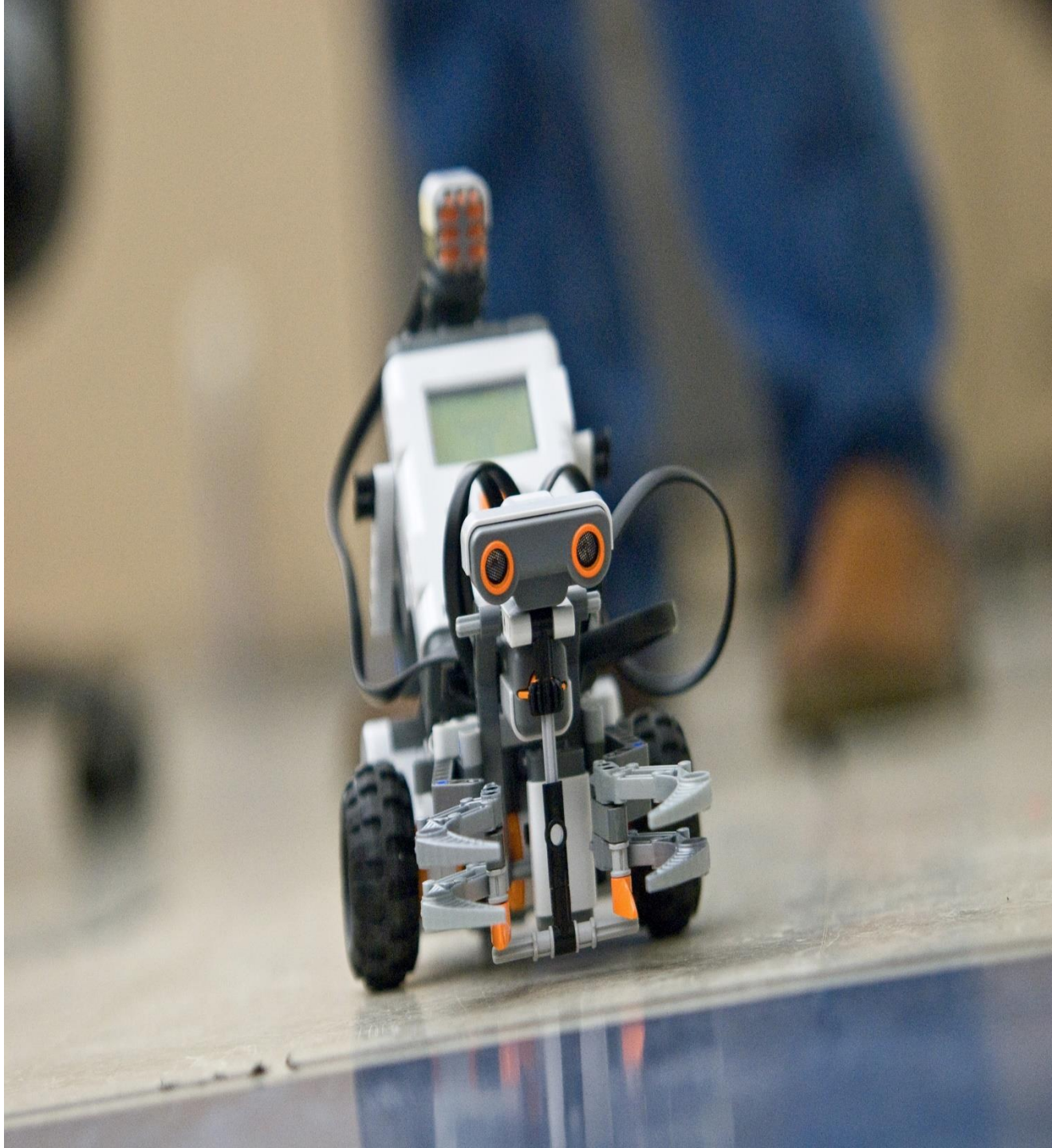
- TO BUILD A RENOWNED INSTITUTION WHICH WILL PRODUCE SKILLED GRADUATE ENGINEERS WITH GOOD WILL FOR HUMANITY.

MISSION

- TO IMPART QUALITY EDUCATION THROUGH NEED BASED CURRICULUM IN ACADEMIC PROGRAMMES.
- TO ENHANCE CAREER OPPORTUNITIES FOR STUDENTS THROUGH INDUSTRY INSTITUTE INTERACTION AND VALUE ADDED COURSES.
- TO INCULCATE RESPONSIBILITY TOWARDS SOCIETY.

OBJECTIVE

- TO ACHIEVE AND MAINTAIN EXCELLENCE IN EDUCATION AND RESEARCH.
- TO DEVELOP AND ENHANCE INDUSTRY INSTITUTE INTERACTION BOTH AT STUDENT AND FACULTY LEVEL.
- TO MODERNIZE LABORATORIESAND TO KEEP ABREAST WITH THE NEEDS OF THE CHANGING CURRICULUM AND RESEARCH ACTIVITIES.



OUR **INSPIRATIONS**

Dr P.H. Sawant (Principal and professor – Sardar Patel College of Engineering)

It gives me immense pleasure to announce that department of mechanical and electrical engineering has a determined and dedicated team participating in the national level ROBOCON. I congratulate the coordinator and head MED for extending unprecedented support to them which will enrich the knowledge of participants. In the area of robotics. This will empower the students of SPCE to conduct more such activities.

OUR **INSPIRATIONS**

Dr. R. B. Bhuktar (Head , Mechanical Engineering Department – SPCE)

As the head of mechanical engineering department I am very proud of the students of SPCE SPARK that they are conducting various workshops and training in the field of robotics. I congratulate the SPCE Robocon team for imparting practical knowledge to the students through the hands on training they provide.

Prof. D. N. Jadhav (Associate professor, Mechanical engineering department – SPCE)

In todays world practical knowledge and management skills are of paramount importance. The SPCE Robocon team is formed with the goal to empower students to use their management skills and improve their practical knowledge. This team will also act as a platform to discuss the advancement in the field of robotics.

PROGRAMME EDUCATIONAL **OBJECTIVES**

Programme Educational Objectives for B.Tech (Mechanical)

- **Graduates will apply knowledge gained in engineering to improve lives and subsistence through a successful career in mechanical engineering and other rudimentary fields.**
- **Graduates will become entrepreneurs, innovators and researchers to address social, technical and business challenges.**
- **Graduates will engage in lifelong learning such as higher studies, research and other continuous professional development activities.**

Programme Educational Objectives for M.Tech (M/C design)

- **Graduates will apply knowledge gained in engineering to improve lives and subsistence through a successful career in design engineering and other associated fields.**
- **Graduates will become academicians, researchers and consultants to address social, technical and business challenges.**
- **Graduates will engage in lifelong learning such as higher studies, research and other continuous professional development activities.**

PROGRAMME EDUCATIONAL **OBJECTIVES**

Programe Educational Objectives for M.Tech (M/C thermal engineering)

- **Graduates will apply knowledge gained in engineering to improve lives and subsistence through a successful career in thermal engineering and other associated fields.**
- **Graduates will become academicians, researchers and consultants to address social, technical and business challenges.**
- **Graduates will engage in lifelong learning such as higher studies, research and other continuous professional development activities.**

PROGRAMME **OUTCOMES**

After successful completion of B.Tech (Mechanical) programe, the graduate will have:

- **An ability to apply knowledge of mathematics, science and mechanical engineering**
- **An ability to identify, formulate, solve and draw appropriate conclusions of complex mechanical engineering problems.**
- **An ability to design and conduct experiments with given constraints analyse and interpret data for complex engineering problems having multiple possible solutions.**
- **An ability to use technical ad modern engineering tools such as CAD, analysis and imulation tools necessary for engineering practice.**
- **Responsiveness towards professionalism and ethics**
- **An ability to function on multi disciplinary teams.**
- **An ability to communicate effectively**
- **An ability to demonstrate the knowledge of engineering and management principles and apple these to manage the projects and its financial aspects.**
- **An ability to engage in lifelong learning.**

PROGRAMME **OUTCOMES**

After successful completion of M.Tech (machine design) programe, the graduate will have:

- **Extensive knowledge of machine design discipline with an ability to associate this learning to identify , assess, analyze, and integrate new knowledge areas and contribute towards enrichment of the disciplinary knowledge.**
- **An ability to perform investigatin of complex engineerin problems by applying both analytical and creative thinking and rrive at wide range of potential solutions and further evacuate them considering public health and safety, cultural, societal and environmental factors.**
- **A skill to undertake research by applying appropriate research methodologies such as literature survey, design conduct of experiments, analysis and interpretation of data and conceptualise solutions that leads to scientific technological development.**
- **An ability to create, apply and adapt techniques using modern engineering and IT tools for modelling and analysis of engineering systems.**
- **An ability to communicate effectively and to function in collaborative multidisciplinary team activities.**
- **To continuously do independent and reflective learning in order to improve upon one's skill and abilitiesand to engage in lifelong learning.**

PROGRAMME **OUTCOMES**

After successful completion of M.Tech (thermal engineering) program, the graduate will have:

- **Extensive knowledge of thermal engineering discipline with an ability to associate this learning to identify , assess, analyze, and integrate new knowledge areas and contribute towards enrichment of the disciplinary knowledge.**
- **An ability to perform investigating of complex engineering problems by applying both analytical and creative thinking and arrive at wide range of potential solutions and further evacuate them considering public health and safety, cultural, societal and environmental factors.**
- **A skill to undertake research by applying appropriate research methodologies such as literature survey, design conduct of experiments, analysis and interpretation of data and conceptualize solutions that leads to scientific technological development.**
- **An ability to create, apply and adapt techniques using modern engineering and IT tools for modelling and analysis of engineering systems.**
- **An ability to communicate effectively and to function in collaborative multidisciplinary team activities.**
- **To continuously do independent and reflective learning in order to improve upon one's skill and abilitiesand to engage in lifelong learning.**

WORKSHOPS

This year SPARK conducted a series of workshops for the first and second year engineering students. Workshops included making of a level 1 robot(light following robot), getting used to EAGLE software and making a hydraulic arm. The first workshop conducted was a two day workshop aimed at providing knowledge about robotics and automation particularly to the first year engineering students.

We saw participation of enthusiastic first year students, eager to learn and apply new concepts. The workshops were conducted successfully under the SPARK heads. Till date the feedback for the workshop has been astounding with the participants urging the spark club to come up with more such workshops.

STUDENTS ATTENDING WORKSHOP

SENIORS CONDUCTING WORKSHOPS FOR THEIR JUNIORS

About **ROBOCON**

Robocon(short for Robotics Contest) is organized by Asia-Pacific Broadcasting Union, a collection of over 20 countries of Asia Pacific region. NHK, Japan had already been organizing such contests at national level and also became the host of the first ABU-Robocon in 2002. Since then, every year one of the member broadcasters hosts this international event. The broadcasters of each participant country are responsible for conduct of their national contests to select the team which will represent their country in the International contest. Teams from engineering and technological colleges are eligible for participation. Participating teams are expected to design and fabricate their own robots and organize their teams including an instructor, team leader, manual robot operator and an automatic robot operator.

The **National** Level

The National ABU Robocon 2015 took place in the Badminton Hall of the Shree Shiv Chhatrapati Sports Complex, Balewadi, Pune on 7 March 2015. The theme for Robocon 2015 has been declared by Televisi Republic Indonesia (TVRI) as "Robomintion: Badminton Robo-Game".

(TEAM SPCE)

TEAM SPCE ROBOCON-2015

We, 'SPARK'(SARDAR PATEL AUTOMATION AND ROBOTICS K'LUB), a team of determined and focused young minds from SARDAR PATEL COLLEGE OF ENGINEERING (Andheri, Mumbai) have been participating in ROBOCON, India, the national level counterpart of the international competition that is held in the first week of March every year since the last five years.

Our ranking has shown consistent improvement, by being ALL INDIA RANK 13th previously(2nd in Mumbai) to 4th this year(1st in Maharashtra), defeating other colleges including the IIT's, NIT's and other reputed colleges.

TEAM SPCE ON RANKING THIRD

The competition has grown leaps and bounds as it has progressed throughout the years, 100 colleges from India participate every year. We strive to scale new heights of improvement and technical advancements this year.

ACHIEVEMENTS IN ROBOCON

- **In our third year in ROBOCON(2015), we were placed 4th amongst the 85 competing colleges all over India and 1st in Maharashtra.**
- **Building two robots was a major learning experience where our efforts were lauded by the judging panel for performing excellently.**
- **With this effort we plan to make it bigger and better this time!**

Rank	Name of College
1	Nirma university, Ahmedabad
2	KIET, Ghaziabad
3	LDCOE, , Ahmedabad
4	SPCE ,Mumbai
5	MJCOE, Hyderabad
6	IIT, Delhi

ROBOCON TROPHY

CERTIFICATE OF APPRECIATION

TEAM SPCE ROBOCON 2015

Sr. No.	Name of Team Member	Responsibility	Photo
1	Gaurav Anasane	Team Leader / Designing	
2	Vatsal Muchhala	Controller / Marketing head	
3	Krunal Chaudhari	Controller / Programming	
4	Dhruvin Gosar	Pit crew	
5	Rahul Kamath	Pit crew / Circuitry	
6	Nimesh Gohil	Circuitry	
7	Pratik Hirani	Circuitry	
8	Mittal Mewada	Designing	

9	Shishir Shah	Designing	
10	Ganesh Shete	Designing	
11	Sameer Acharya	Programming	
12	Suhas Gade	Programming	
13	Ankur Singanjude	Circuitry	
14	Atharva Nandanwar	Circuitry	

15	Abhilash Wakodikar	Circuitry	
16	Akshay Sonawane	Circuitry	
17	Mukul Mehta	Circuitry	
18	Vidhi Jain	Circuitry	
19	Sameer Khan	Marketing	
20	Neha Akode	Marketing	

21	Abhishek Upadhyay	Marketing	
22	Prathamesh Mokal	Designing	
23	Shivgovind Gupta	Designing	

TEAM SPCE ROBOCON 2014

TEAM SPCE ROBOCON 2013

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