Swami Keshvanand Institute of Technology,
Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2(f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

e-yantra Lab
(Embedded and Robotics Lab)

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

e-yantra Lab

(Embedded and Robotics Lab)

Coordinator:
Mr. Praveen Saraswat

Faculty Members:
Dr. Manoj Kumar Sain
Mr. Pallav Rawal

e-yantra Lab

(Embedded and Robotics Lab)

It is an initiative by IIT Bombay that aims to provide practical solutions to some of the real world problems. e-yantra is sponsored by MHRD under the National Mission on Education through ICT program.

There are four main functions under e-yantra program

e-Yantra Robotics Competition (eYRC): which is a unique annual competition for undergraduate students in science and engineering. Selected teams are given a robotic kit, complete with accessories and video tutorials to help them learn basic concepts in embedded systems and programming.

e-Yantra Lab Setup Initiative (eLSI) It is a college level program under which colleges are encouraged to setup robotics labs. Our e-yantra lab is also established under this initiative and SKIT is first college in Rajasthan in which e-yantra lab is established.

e-Yantra Symposium(eYS). It is an annual event at IIT-Bombay -- to bring together colleges which have set up robotics labs through the e-Yantra Lab Setup Initiative (eLSI).

e-Yantra Resource Development Center (eYRDC) is a portal designed exclusively for eLSI colleges through which they share resources for teachers to help them use their e-Yantra labs in an effective manner.

Swami Keshvanand Institute of Technology, M&G

Department of Mechanical Engineering

e-yantra Laboratory

Syllabus for Lab classes:

1. Introduction to Embedded C, digital logic and AVR Studio 4.17.
2. I/O interfacing on AVR based microcontrollers.
3. Interfacing LCD for debugging.
4. Introduction to timers and delay generation.
5. DC motor control and PWM generation for velocity control.
6. Analog –to- Digital conversion.
7. White line following.

Swami Keshvanand Institute of Technology,M & G, Jaipur, Rajasthan

College Information:

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the learnings of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced Learning. Today the institute is recognized as one of the centers of academic excellence in Northern India. The Institute is affiliated to **Rajasthan Technical University, Kota** for offering Postgraduate and Graduate Courses in Engineering and Management.SKIT is ranked no. 1 in Rajasthan by Rajasthan Technical University (RTU) Kota for academic session 2018-19.

Activities in e-Yantra lab

Number of teachers attended "Two-day workshop": 12
Number of e-Yantra "Two-day workshop" hosted: 1
Number of workshop for teachers:1
Number of workshop for student:3
Number of students trained through e-Yantra lab: 30
Participation in e-Yantra Robotics Teacher Competition (eYRTC) / Task Based Training (TBT) and TBT challenge: Got A class category in TBT

Inauguration date: 8 September,2016

Team members name: Mr. Praveen Saraswat,Mr. Manoj Kumar Sisn, Ms. Vinita Agrawal, Mr. Pallavi Rawat .

e-Yantra

e-Yantra Ideas Competition (eYIC)-2018

Two Project submitted

1. Smart metering system energy consumption and remot management with control to smart devices.
2. Net zero automatic solar panel cleaning robot

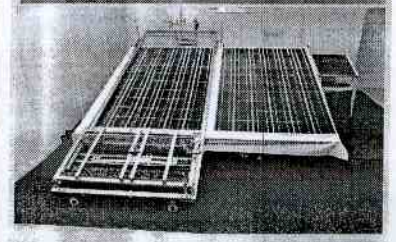
Project selected for regional finals: Net zero automatic solar panel cleaning robot

Project selected for finals: : Net zero automatic solar panel cleaning robot

Prize winning teams: Net zero automatic solar panel cleaning robot (Best demonstration and presentation category)

Team: Ayush Swami, Abhishek Sharma, Apoorv Ranjan, Anubhav Pandey

Mentor: Ankit Vijay



e-Yantra Robotics Competition (eYRC) participation statistics

Year	No of registration	Stage I
2015	3	0
2016	5	0
2017	16	3
2018	7	3

e-Yantra Summer Internship Program (eYSIP)

Year :2018

Name: Abhishek Sharma

Department: Electrical Engineering

Project: Machine learning and its application

Application of Firebird -V as Restaurant Assistant: Order Taking Robot

2017	16	3	0	0	0	0	0

eYIC Participation

Year	Registration	Proposal submitted	Video and code submitted	Regional finals attended	National finals shortlisted	National finals selected
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	3	2	0	0	0	0
2018	2	2	1	1	1	1

eYSIP Participation

eYSIP Year	Project Name	Student Name	Department
2018	Machine Learnir g and its Applications	Abhishek Sharma	EE

College Participation Details

eYRC Participation

Year	Number of Teams: Registered	Number of Teams: Selected Stage 1	Number of Teams: Selected Stage 2	Merit Certificate	Completion Certificate	Participation Certificate	Letter of Participation
2015	3	0	0	0	0	0	0
2016	5	0	0	0	0	0	0
2017	16	3	0	0	0	0	0

eYIC Participation

Year	Registration	Proposal submitted	Video and code submitted	Regional finals attended	National finals shortlisted	National finals selected
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0

Mr Praveen Saraswat-
M.E. Dept.

S. K. Swami
11/7/19

(12)
1117

LNMIIT
The LNM Institute of
Information Technology
(Deemed-to-be-University)
"A" Grade awarded by NAAC of UGC

To
The Principal
Swami Keshvanand Institute of Technology, Management & Gramothon

Subject: Invitation to attend the Two Day Workshop at LNM Institute of Information Technology, Jaipur, Rajasthan on 19th & 20th July 2019

This is with reference to the invitation from the e-Yantra project of IIT Bombay attached herewith.

We would like to invite you to the 2-day workshop on "Introduction to Robotics" through the e-Yantra Lab Setup Initiative (eLSI).

Colleges may nominate four teachers who will participate in the hands on session of 2-day workshop on "Introduction to Robotics" through the e-Yantra Lab Setup Initiative (eLSI).

Details are given below:

Venue : LNM Institute of Information Technology, Rupa Ki Nangal, Post-Sumel, Via-Jamdoli, Jaipur, Rajsthan 302031

Date: 19th & 20th July 2019 (Friday & Saturday)

Time: 9:00 A.M. - 06:00 P.M. (Friday)
9:00 A.M. - 06:00 P.M. (Saturday)

To Register for 2-Day Workshop, go to: http://elsi.e-yantra.org/meetWorkshop/form.

We will greatly appreciate if you can confirm your presence at the earliest, preferably before 08th July 2019.

RSVP
Principal : Prof. Rahul Banerjee
Coordinator : Dr. Puneet Kumar Jain
Contact Number : +91 9252903393
e-mail : puneet.jain@lnmiit.ac.in

Regards,

Name: Dr. Puneet Kumar Jain
Designation: Assistant Professor, CSE Dept.

Stamp:

Date: July 1, 2019

Institute of Information JAIPUR

Campus : Gram :- Rupa Ki Nangal, Post-Sumel, Via-Jamdoli, Jaipur-302 031 (Raj.) INDIA
Tel.: +91-141-519 1851, 2688090 • Fax : +91-141-518 9214, 268 9014
E-mail : info.lnmiit@lnmiit.ac.in • Web : www.lnmiit.ac.in

Department of Computer Science & Engg.
Kanwal Rekhi Building
Indian Institute of Technology Bombay
Powai, Mumbai 400076 INDIA
Tel. : +91 22 25764986
email : support@e-yantra.org

e-yantra

IIT Bombay

Date: June 28, 2019

Dear Sir/Madam,

Greetings from e-Yantra!

e-Yantra in collaboration with The LNM Institute of Information Technology, Jaipur is conducting a Two-day workshop on "Introduction to Robotics" for colleges in Rajasthan region.

To know more about this exciting initiative, you may view our video: https://youtu.be/Y-MB7dusGss

The dates and venue are given below:

Date: 19th & 20th July 2019 (Friday & Saturday)
Time: 9:00 A.M. - 06:00 P.M. (Friday)
9:00 A.M. - 06:00 P.M. (Saturday)
Venue: The LNM Institute of Information Technology, Rupa Ki Nangal, Post-Sumel, Via-Jamdoli, Jaipur, Rajsthan 302031

Coordinator: Dr. Puneet Kumar Jain
Contact Number: +919252903393
e-mail: puneet.jain@lnmiit.ac.in

There is no registration fee to participate in the workshop. To register, visit this link: elsi.e-yantra.org/meetWorkshop/form.

Kindly confirm your participation by registering through the link.

All teams MUST register to be part of the workshop. Registrations for the workshop are on a First Come First Served (FCFS) basis. Preference will be given to teams from colleges that have given the Letter of Intent (LoI).

Here are the modalities of the workshop:
1. No fee will be collected from any participant. Tea/Lunch will be provided on both the days of workshop.

2. All traveling and staying expenses of the team members attending the workshops are borne by their respective colleges.

3. Each participating college team member has to give the attendance at the venue on both the days of workshop and registration will happen on the second day of workshop.

4. Teachers will be given a participation certificate from e-Yantra upon successful participation on both days of the workshop. For partial attendance or teachers doing a refresher course, only attendance certificates can be provided upon request for the dates attended.

5. Teacher teams from colleges that have given LoI (Letter of Intent), who have successfully participated on both days of the workshop, will receive a robotic kit at the end of the workshop. These teams will participate in the Task Based Training (TBT).

6. Other teams will not be given a robotic kit unless their colleges also process the LoI.

e-yantra

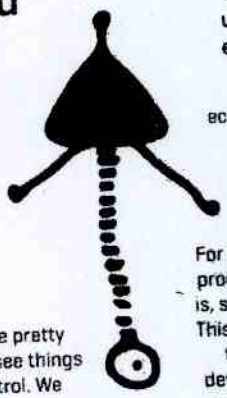
Engineering a better tomorrow

A Project funded by MHRD under National Mission for Education using ICT (NMEICT)

Targeting Colleges, Teachers, and Students

1. How it all started

When Prof. Kavi Arya and Prof. Krithi Ramamritham of Computer Science Department, IIT Bombay, taught the Embedded Systems course through the Distance Education Program, it was difficult to get the concepts across because the students didn't have a Robotics lab.



At that time, students were trained on "microcontroller development kits" which are pretty mundane. Students learn better when they see things move and lights flash, etc. - under their control. We decided to set up a Robotics Lab, but robots were either not available locally or too expensive and not supported locally.

This experience led us to design a robot using a microcontroller, that can sense its environment, and do things .

The robot is now a part of an Open Source eco-system, which keeps the costs low. We ensured that software written for it is reusable. Students began to use other students' code whereby more complex applications were developed than if the students were to build everything from scratch.

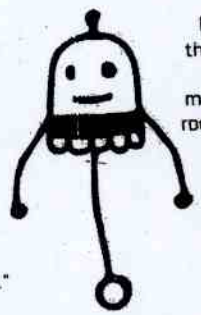
For instance if a cleaning robot wanted a "localization program" which helps it identify where on the arena it is, somebody would already have written code for this. This approach gives e-Yantra robots their real power - the power of open source and that of thousands of developers building reusable projects which might be a component of another students' project. Rarely do we build a complex system from scratch without reusing pre-existing artifacts.

In all this, the robot is a commodity item - it is the "pen" with which we can write interesting "robotic stories."

2. Creating Engineers

Who is an engineer? Someone who solves societal problems with the help of technology!

e-Yantra encourages a "can do" attitude amongst students, that prepares them for a career in research or as technology entrepreneurs. Students are encouraged to use robots to solve "real-life problems."

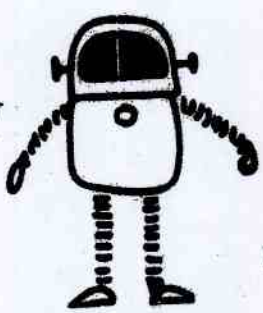


For instance, *'room cleaning'* was used as a theme for the e-Yantra Robotics Competition - 2012. The problem was prototyped, by making a square shaped arena to represent a room in which plastic granules were placed as dust particles. The challenge was to build a servo controlled 'jhadoo' or broom that 'sweeps the floor' and collects 'dust'. Our approach instills a 'can do' attitude rather than a bookish theoretical knowledge far removed from reality.

3. Identifying and nurturing talent

Through the e-Yantra Robotics Competition, we've discovered beautiful talent in colleges all over India.

For instance, a teams of girls from a small town like Sivakasi (TN), held its own while participating in the finals. Important skill that students pick up in their e-Yantra experience include Communication skills - so important to an engineer.



Through deliverables in a project they learn to express themselves, and to communicate through both the printed word and visual communication using 'Powerpoint' and video presentations. The kind of person that comes through the mill, we anticipate, does justice to a good academic programme. We believe students discover talents within themselves. We hope to discover research and academic ability - it is win-win for all stakeholders.

Illustrations by Kaumudi Sahasrabuddhe

e-Yantra Lab Setup Initiative (eLSI)

A Proposal to Decision Makers

1. eLSI

eLSI enables colleges to set up an Embedded Systems and Robotics facility and provides training to teachers to effectively use the facility.

eLSI is designed as a scalable and sustainable approach that addresses infrastructure creation and teacher training – and creates an eco-system at the colleges to help impart effective engineering education.

2. Steps involved

i. **Initiation**
Colleges from a region are invited to a prospective *Nodal Center (NC)*, a college identified as a coordinator for eLSI, for participating in the initiative.

ii. **Commitment**
Interested colleges sign a *Letter of Intent (LoI)* committing a team of 4 teachers and funds to procure equipment for setting up their Robotics lab.

iii. **Training**
A two-day workshop is conducted by e-Yantra at the prospective Nodal Center for teacher teams from participating colleges in that region. These teams then participate in an online Task Based Training (TBT) designed to impart practical skills. Each team is given an e-Yantra Robot along with accessories required to implement solutions to a set of experiments assigned to them. To encourage the teachers to implement a project using the concepts that they learnt, e-Yantra conducts TBT-Challenge. All teams that have successfully completed the TBT are eligible to participate. Certificates and exciting prizes are awarded based on performance. Teachers thus trained are ready to implement/mentor projects using the Firebird V robot.

iv. **Lab set up**
While the teacher teams are getting trained through TBT, colleges commit funds to procure robots and accessories to establish a Robotics lab. e-Yantra plays an advisory role. Colleges have their labs ready by the time the teachers finish their training through TBT.

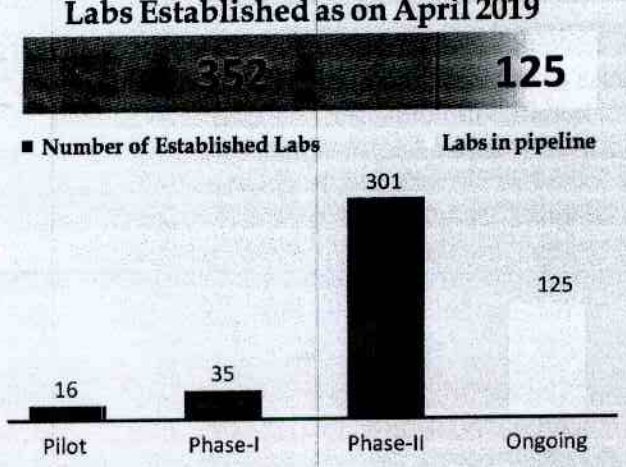
v. **Valedictory function and Lab inaugurations**
Every team member from teams that successfully participate in TBT receives a certificate and those that perform exceptionally well are awarded prizes in addition. All the newly established labs are formally inaugurated simultaneously and each college that inaugurates a lab is awarded 2 additional robotic kits and e-Yantra signage.

3. Role of e-Yantra

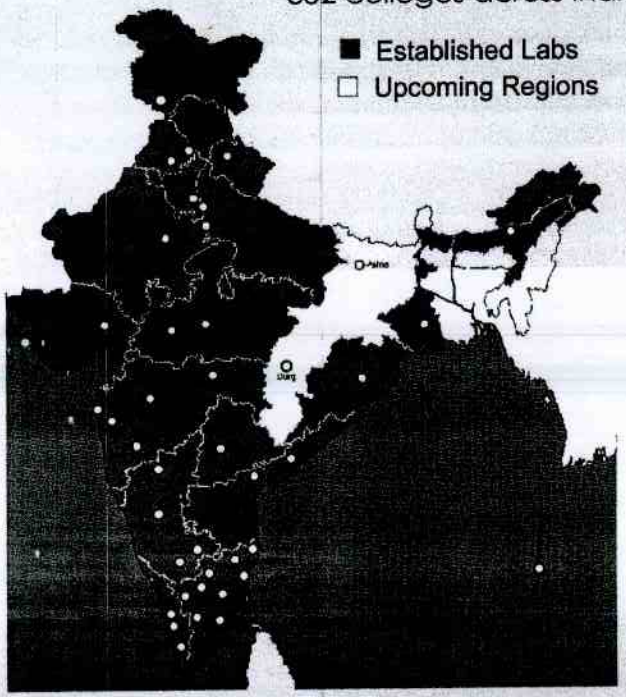
i. **Initiation**
   a. Sharing content, processes and know-how
   b. Coordination through NC
   c. Conducting workshop – e-Yantra team conducts the two-day workshop

ii. **Task Based Training (TBT)**
   a. Providing Robotic kit along with accessories to participate
   b. Training teachers through a set of tasks, each having simple exercises based on the robot
   c. Encouraging teams to be part of a full-fledged project through TBT-Challenge

Growth of eLSI:



e-Yantra labs established in 352 colleges across India.



Interested in setting up a Robotics Lab under eLSI ?

Contact: support@e-yantra.org

e-Yantra Competitions:

For Students:

e-Yantra Robotics Competition (eYRC):

Engages students using Project Based Learning (PBL) to implement a solution to a real world problem. Robots, accessories, training material, and rulebook are given to the teams selected for participation, free of cost. Winners get exciting prizes and an opportunity to get internship at e-Yantra, IIT Bombay.

For Teachers:

Task Based Training (TBT):

Engages teachers through hands-on experiments in a step-by-step manner with exciting prizes and certificates.

For Students, Teachers and Colleges:

e-Yantra Ideas Competition (eYIC):

eYIC is the basis for e-Yantra to build a startup eco-system around a college e-Yantra lab. We solicit ideas from student-teacher teams from eLSI colleges as the basis for innovative projects and for sustained use of Robotics labs set up through eLSI.

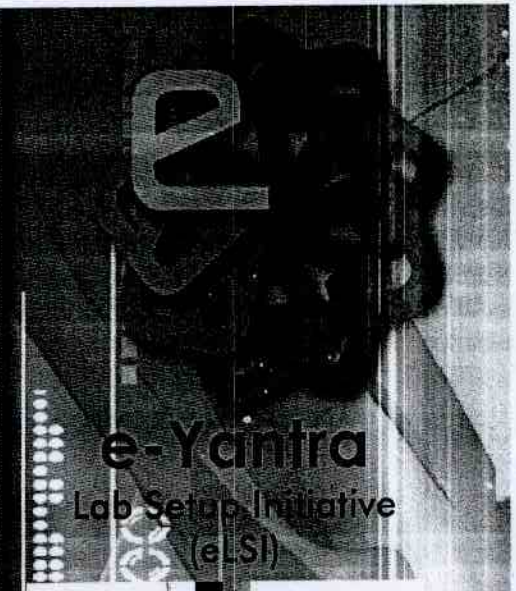
e-Yantra Team

Contact details:

Web-site: www.e-yantra.org
Email: support@e-yantra.org
Phone: 022-2576-4986; 022-2572-0184
Facebook: www.facebook.com/eyantra

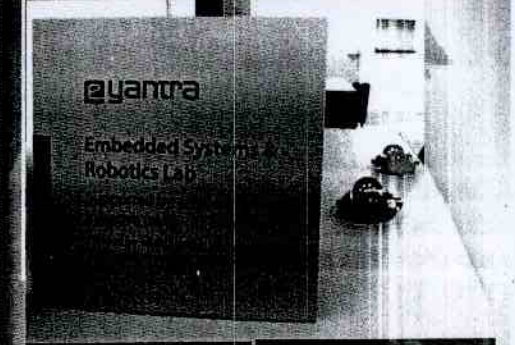
eYantra

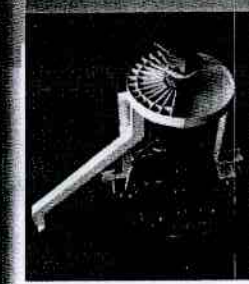
Engineering a better tomorrow

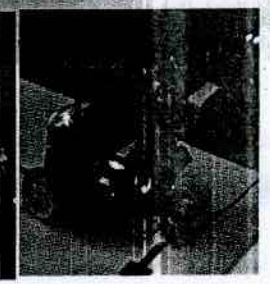


e-Yantra

Lab Setup Initiative (eLSI)







A project sponsored by MHRD through National Mission on Education through ICT (NMEICT)

Department of Computer Science and Engineering
IIT Bombay

e-Yantra Lab Setup Initiative (eLSI)

A Proposal to Decision Makers

1. eLSI

eLSI enables colleges to set up an Embedded Systems and Robotics facility and provides training to teachers to effectively use the facility.

eLSI is designed as a scalable and sustainable approach that addresses infrastructure creation and teacher training – and creates an eco-system at the colleges to help impart effective engineering education.

2. Steps involved?

i. **Initiation**

Colleges from a region are invited to a prospective *Nodal Center (NC)*, a college identified as a coordinator for eLSI, for participating in the initiative.

ii. **Commitment**

Interested colleges sign a *Letter of Intent (LoI)* committing a team of 4 teachers and funds to procure equipment for setting up their Robotics lab.

iii. **Training**

A two-day workshop is conducted by e-Yantra at the prospective Nodal Center for teacher teams from participating colleges in that region. These teams then participate in an online Task Based Training (TBT) designed to impart practical skills. Each team is given an e-Yantra Robot along with accessories required to implement solutions to a set of experiments assigned to them. To encourage the teachers to implement a project using the concepts that they learnt, e-Yantra conducts TBT-Challenge. All teams that have successfully completed the TBT are eligible to participate. Certificates and exciting prizes are awarded based on performance. Teachers thus trained are ready to implement/mentor projects using the Firebird V robot.

iv. **Lab set up**

While the teacher teams are getting trained through TBT, colleges commit funds to procure robots and accessories to establish a Robotics lab. e-Yantra plays an advisory role. Colleges have their labs ready by the time the teachers finish their training through TBT.

v. **Valedictory function and Lab inaugurations**

Every team member from teams that successfully participate in TBT receives a certificate and those that perform exceptionally well are awarded prizes in addition. All the newly established labs are formally inaugurated simultaneously and each college that inaugurates a lab is awarded 2 additional robotic kits and e-Yantra signage.

3. Role of e-Yantra

i. Initiation

a. Sharing content, processes and know-how
b. Coordination through NC
c. Conducting workshop – e-Yantra team conducts the two-day workshop

ii. Task Based Training

a. Providing Robotic kit along with accessories to participate
b. Training teachers through a set of tasks, each having simple exercises based on the robot
c. Encouraging teams to be part of a full-fledged project through TBT-Challenge

Department of Computer Science & Engg.
Kanwal Rekhi Building
Indian Institute of Technology Bombay
Powai, Mumbai 400076 INDIA
Tel. : +91 22 25764986
email : support@e-yantra.org

Mr Praveen Saraswat
ME Dept
S. L. Jawale
26/2/19

IIT Bombay

Date: August 12, 2019

To,
Dean/ Principal/ Director/ HOD/ Teacher/ Official,

Greetings from e-Yantra !!!

We are happy to announce the launch of the e-Yantra Robotics Competition (eYRC 2019-20).

e-Yantra Robotics Competition (eYRC) is a unique annual competition for undergraduate students in Engineering/Science/Polytechnic colleges. e-Yantra Competition is an MHRD funded initiative that teaches robotics through Project Based Learning approach. Registrations have grown from 4384 in 2012 to 28692 in 2018 where students from 786 colleges took part. It is proven that participation in e-Yantra competition teaches students practical skills, greatly helps placements and their BE project performance.

Finals of the competition will be held at IIT Bombay in March 2020. The competition features themes that are problem statements abstracted into a game with a rulebook. Details of themes will be disclosed after the selection test.

Registration:
Students participate as a team of four- with each team member taking the test simultaneously. A team`s selection test score along with other factors such as participation of team member/s in the past e-Yantra competitions may be used to assign Tracks and Themes to the team. *e-Yantra holds complete discretion in the selection and Track/Theme assignment processes.*

We request you to motivate your college students to register for the competition. Please find enclosed eYRC 2019-20 Posters to be displayed on the notice board of all departments at your college.

The winners of this competition will be rewarded with cash prize and are eligible for a paid summer internship at IIT Bombay through the e-Yantra Summer Internship Program (eYSIP).

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay

e-Yantra is a project funded by MHRD, Government of India, under the National Mission on Education through ICT (NMEIC

***Please visit http://portal.e-yantra.org to find more about the registration, eligibility and Terms and Conditions of the competition.**

Department of Computer Science & Engg.
Kanwal Rekhi Building
Indian Institute of Technology Bombay
Powai, Mumbai 400076 INDIA
Tel. : +91 22 25764986
email : support@e-yantra.org

Mr Praveen Sarasuwal
ME Dept
27/8/19

e yantra IIT Bombay

Date: August 12, 2019

To,
Dean/ Principal/ Director/ HOD/ Teacher/ Official,

Greetings from e-Yantra !!!

We are happy to announce the launch of the e-Yantra Robotics Competition (eYRC 2019-20).

e-Yantra Robotics Competition (eYRC) is a unique annual competition for undergraduate students in Engineering/Science/Polytechnic colleges. e-Yantra Competition is an MHRD funded initiative that teaches robotics through Project Based Learning approach. Registrations have grown from 4384 in 2012 to 28692 in 2018 where students from 786 colleges took part. It is proven that participation in e-Yantra competition teaches students practical skills, greatly helps placements and their BE project performance.

Finals of the competition will be held at IIT Bombay in March 2020. The competition features themes that are problem statements abstracted into a game with a rulebook. Details of themes will be disclosed after the selection test.

Registration:
Students participate as a team of four- with each team member taking the test simultaneously. A team`s selection test score along with other factors such as participation of team member/s in the past e-Yantra competitions may be used to assign Tracks and Themes to the team. *e-Yantra holds complete discretion in the selection and Track/Theme assignment processes.*

We request you to motivate your college students to register for the competition. Please find enclosed eYRC 2019-20 Posters to be displayed on the notice board of all departments at your college.

The winners of this competition will be rewarded with cash prize and are eligible for a paid summer internship at IIT Bombay through the e-Yantra Summer Internship Program (eYSIP).

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay

e-Yantra is a project funded by MHRD, Government of India, under the National Mission on Education through ICT (NMEIC

***Please visit http://portal.e-yantra.org to find more about the registration, eligibility and Terms and Conditions of the competition.**

College Name:
Swami Keshvanand Institute of Technology Management & Gramothan

Dilkhush Sharma Team Leader

This profile is complete.

dk8875402887@gmail.com

8875402887

Chandeshwar Kumar

This profile is complete.

xchandeshwar@gmail.com

9529038646

Ashok Kumar Choudhary

This profile is complete.

skfan341@gmail.com

9079191686

Chahat Bhatia

This profile is complete.

chahatbhatia90@gmail.com

9929638046

eYRC#8036

Profile

Result

Theme

Task 0

Task 1

Schedule

Grading Policy

Forum

NOC/NDA Submit

Task Result

Logout

Congratulations!!

Your team has been shortlisted for e-Yantra Robotics Competition (eYRC 2019-20).
The theme assigned to your team is Survey & Rescue in Track 1.

1. You shall not seek any help or discuss this work with persons such as your family, teachers and friends. You can only discuss and work with your fellow team members.
2. All teams from a college qualifying through the selection test participate in Stage 1. **However, only TOP FIVE (5) performing team/s in a Theme from the same college will be selected to participate in Stage 2.**
3. You can find theme introduction here. **Rulebook** will be provided in Stage 2.
4. e-Yantra's decision is final and binding.

Theme once assigned will not be changed under any circumstances.

Tip: Balance your academics and e-Yantra Robotics Competition

A healthy balance of academics and extracurricular activities is key to a successful career and an exciting life.

At e-Yantra, we want each of the teams selected for participation in eYRC 2019-20 to emerge as winners. Winning is not only about coming first, but about learning new concepts and applying your minds to solve problems creatively.

We have announced the Schedule so that you can work around your exams and other committments. Given that we have teams from across India, Nepal and Bhutan participating in eYRC 2019-20, we will NOT be in a position to extend the deadlines for any of the tasks.

The first lesson we want you to learn is time management. Plan out what needs to be done and when it needs to be finished. Prioritize your activities so that you don't leave anything important unattended till the last moment. e-Yantra has designed the tasks in such a manner that if all four team members work on it, it can be done very easily within the given time. The trick is to divide,

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

SKIT/2019/3060

Date: 28-11-2019

eYRC 2019-20
No Objection Certificate (NOC)

This is to state that:

1. Mr. Arpit Chechani,	3rd year	Mechanical Engineering
2. Mr. Deepak Kumar,	3rd year	Mechanical Engineering
3. Mr. Avish Dhirawat,	3rd year	Computer Science Engineering
4. Mr. Brij Bhushan,	3rd year	Electronics and Communication

are bonafide students of **Swami Keshvanand Institute of Technology, Management & Gramothan Jaipur.**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader **Arpit Chechani** in the e-Yantra Robotics Competition (eYRC 2019-20).

We understand that,

- In eYRC 2019-20, the themes are categorized under three (3) different Tracks namely Track 1, Track 2 and Track 3.
- All three Tracks will be conducted in two Stages: Stage 1 and Stage 2.
- Only teams that qualify in Stage 1 based on their performance will continue in the competition and participate in Stage 2.
- IF multiple teams qualify in Stage 1 in the **same theme** from our college, ONLY the top five best performing team/s from that theme in Stage 1 from our college will be selected for participation in Stage 2.
- All the selected teams will be given robotic kits along with other accessories to build/assemble a bot/mechanism.
- After such team/s complete all the tasks in the competition or participate in the finals of the competition (whichever be the case) the team/s shall return to e-Yantra, IIT Bombay, the robotic kits along with all the accessories given to the student team, to participate in the competition. This shall be done by shipping the same to e-Yantra Project, IIT Bombay. *

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

- Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any foul play is suspected.

The college will provide ONLY the following support for the selected team/s participating in the e-Yantra Robotics Competition (eYRC 2019-20) conducted by e-Yantra project of IIT Bombay:

1. Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Arpit Chechani**.
2. Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.
3. In case the team is unable to complete the competition, the college undertakes the responsibility to return the Robotic kit in working condition to e-Yantra Project.
4. The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, **if** selected (Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines to be eligible for the finals.)

S. L. Surana
Dr. S.L.Surana
Director (Academics)
Date: 28-11-2019

*e-Yantra will communicate the procedure for returning the robotic kits at the appropriate time.

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

SKIT/2019/ 3058 Date: 28-11-2019

eYRC 2019-20
No Objection Certificate (NOC)

This is to state that:

1. Mr. Harsh Nandwana,	3rd year,	Mechanical Engineering
2. Mr. Varnit Kashyap,	3rd year,	Electrical Engineering
3. Mr. Gaurav Vaishnav,	3rd year,	Computer Science Engineering
4. Mr. Avi Vanawat,	3rd year,	Electronics and Communication

are bonafide students of **Swami Keshvanand Institute of Technology, Management & Gramothan Jaipur.**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader **Harsh Nandwana** in the e-Yantra Robotics Competition (eYRC 2019-20).

We understand that,

- In eYRC 2019-20, the themes are categorized under three (3) different Tracks namely Track 1, Track 2 and Track 3.
- All three Tracks will be conducted in two Stages: Stage 1 and Stage 2.
- Only teams that qualify in Stage 1 based on their performance will continue in the competition and participate in Stage 2.
- IF multiple teams qualify in Stage 1 in the **same theme** from our college, ONLY the top five best performing team/s from that theme in Stage 1 from our college will be selected for participation in Stage 2.
- All the selected teams will be given robotic kits along with other accessories to build/assemble a bot/mechanism.
- After such team/s complete all the tasks in the competition or participate in the finals of the competition (whichever be the case) the team/s shall return to e-Yantra, IIT Bombay, the robotic kits along with all the accessories given to the student team, to participate in the competition. This shall be done by shipping the same to e-Yantra Project, IIT Bombay. *

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

- Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any foul play is suspected.

The college will provide ONLY the following support for the selected team/s participating in the e-Yantra Robotics Competition (eYRC 2019-20) conducted by e-Yantra project of IIT Bombay:

1- Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Harsh Nandwana**.
2- Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.
3- In case the team is unable to complete the competition, the college undertakes the responsibility to return the Robotic kit in working condition to e-Yantra Project.
4- The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, **if** selected (Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines to be eligible for the finals.)

S. L. Surana
Dr. S.L.Surana
Director (Academics)
Date: 28-11-2019

*e-Yantra will communicate the procedure for returning the robotic kits at the appropriate time.

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

SKIT/2019/306 Date: 28-11-2019

eYRC 2019-20
No Objection Certificate (NOC)

This is to state that:

1. Mr. Akshay Kumar, 3rd year, Mechanical Engineering
2. Ms. Priyanka Soni , 2nd year, Mechanical Engineering
3. Ms. Surbhi Agarwal, 2nd year, Mechanical Engineering
4. Mr. Lavesh Singhal, 3rd year, Mechanical Engineering

are bonafide students of **Swami Keshvanand Institute of Technology, Management & Gramothan Jaipur.**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader **Akshay Kumar** in the e-Yantra Robotics Competition (eYRC 2019-20).

We understand that,

- In eYRC 2019-20, the themes are categorized under three (3) different Tracks namely Track 1, Track 2 and Track 3.
- All three Tracks will be conducted in two Stages: Stage 1 and Stage 2.
- Only teams that qualify in Stage 1 based on their performance will continue in the competition and participate in Stage 2.
- IF multiple teams qualify in Stage 1 in the **same theme** from our college, ONLY the top five best performing team/s from that theme in Stage 1 from our college will be selected for participation in Stage 2.
- All the selected teams will be given robotic kits along with other accessories to build/assemble a bot/mechanism.
- After such team/s complete all the tasks in the competition or participate in the finals of the competition (whichever be the case) the team/s shall return to e-Yantra, IIT Bombay, the robotic kits along with all the accessories given to the student team, to participate in the competition. This shall be done by shipping the same to e-Yantra Project, IIT Bombay. *

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

- Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any foul play is suspected.

The college will provide ONLY the following support for the selected team/s participating in the e-Yantra Robotics Competition (eYRC 2019-20) conducted by e-Yantra project of IIT Bombay:

1. Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Akshay Kumar**.

2. Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.

3. In case the team is unable to complete the competition, the college undertakes the responsibility to return the Robotic kit in working condition to e-Yantra Project.

4. The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, **if** selected (Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines to be eligible for the finals.)

S. L. Surana

Dr. S.L.Surana
Director (Academics)
Date: 28-11-2019

*e-Yantra will communicate the procedure for returning the robotic kits at the appropriate time.

Department of Computer Science & Engg.
Kanwal Rekhi Building
Indian Institute of Technology Bombay
Powai, Mumbai 400076 INDIA
Tel. : +91 22 25764986
email : support@e-yantra.org

Mr. Praveen Saraswat
ME Dept.
E. C. Suana
29/8/19

IIT Bombay

Date: August 20, 2019

Dear Sir/Madam,

Greetings from e-Yantra !!!

We are glad to announce the launch of the e-Yantra Ideas Competition (eYIC-2019-20), a competition to encourage innovative projects from Embedded System and Robotics labs set up through the e-Yantra Lab Setup Initiative (eLSI), in colleges across the country.

About Competition:
e-Yantra Ideas Competition (eYIC) aims:

1. To ensure sustained use of robotics labs set up through eLSI.
2. To encourage innovative ideas from students in eLSI colleges across countries.
3. To inculcate innovative and entrepreneurial mindset in students.
4. To nurture BE projects in Embedded Systems and Robotics at eLSI colleges.

Finals of the competition will be held at IIT Bombay in April 2020.

The registration for 2019-20 edition will open on **1st September 2019**. We request you to motivate your college students to register for the competition. Please find enclosed eYIC-2019-20 Posters to be displayed on the notice board of all departments at your college.

The winners of this competition will be rewarded with cash prize and are eligible for a paid summer internship at IIT Bombay through the e-Yantra Summer Internship Program (eYSIP).

Please acknowledge the receipt of the posters through an e-mail to eyic@e-yantra.org. We look forward to your active participation in this exciting competition.

Regards,

Kavi Arya

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay

e-Yantra is a project funded by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT)

*Please visit http://eyic.e-yantra.org to find more about the registration, eligibility and terms and conditions of the competition.

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

.SKIT/2018/

SKIT/2018/2885

Date: 26/10/2018

eYRC-2018: Track 1
No Objection Certificate (NOC)

This is to state that:

1. Mr. Harsh Tenguriya — 3rd. year Mechanical Engineering
2. Mr. Lokesh Kumar Jat — 3rd. year Mechanical Engineering
3. Mr. Gajanand Jangid — 3rd. year Mechanical Engineering
4. Mr. Akshat Gupta — 4th. year Mechanical Engineering

are bonafide students of **Swami Keshvanand Institute Of Technology, Management and Gramothan, Jaipur (SKIT M&G).**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader Harsh Tenguriya in the e-Yantra Robotics Competition (eYRC-2018).

We understand that,

- In eYRC-2018, the themes are categorized under three (3) different Tracks namely Track 1, Track 2 and Track 3.
- The above team from our college has been selected to participate in Track 1.
- Track 1 will be conducted in two Stages: Stage 1 and Stage 2.
- Only teams that qualify in Stage 1 based on performance will continue in the competition and participate in Stage 2.
- If multiple teams qualify in Stage 1 in the **same theme** in Track 1 from our college, ONLY the best performing team/s from that theme in Stage 1 from our college will be selected for participation in Stage 2.
- After such team/s complete all the tasks in the competition or participate in the finals of the competition (whichever be the case) the team/s shall return to e-Yantra, IIT Bombay, the Robotic kits along with all the accessories given to the student team, to participate in the competition. This shall be done by shipping the same to e-Yantra Project, IIT Bombay.
- Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any foul play is suspected.

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

The college will provide ONLY the following support for the selected team/s participating in the e-Yantra Robotics Competition (eYRC-2018) conducted by e-Yantra project of IIT Bombay:

1. Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Harsh Tenguriya.**
2. Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.
3. In case the team is unable to complete the competition, the college undertakes the responsibility to return the Robotic kit in working condition to e-Yantra Project. (Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines.)*
4. The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, **if** selected.

Signed:

S.L. Surana

Dr. S.L. Surana
Director (Academics)
SKIT M&G
26-10-2018

* e-Yantra will communicate the procedure for returning the robotic kits at the appropriate time.

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

SKIT/2018/2886 **Date :- 26-10-2018**

eYRC-2018: Track 3
No Objection Certificate (NOC)

This is to state that:

1. Mr. Sharad Gupta	3rd Year	Electronics and Communication Engineering
2. Mr. Sarthak Chauhan	3rd Year	Electronics and Communication Engineering
3. Mr. Vipul Jain	3rd Year	Electronics and Communication Engineering
4. Mr. Madhav Dixit	3rd Year	Computer Science and Engineering

are bonafide students of **Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur.**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader **Mr. Sharad Gupta** in the e-Yantra Robotics Competition(eYRC-2018): Track 3

We understand that,

- This theme is designed to provide opportunities to teams from those colleges that have already established an e-Yantra lab through the e-Yantra Lab Setup Initiative (eLSI) **AND/OR** those colleges that have collected Firebird V robotic kits through their student teams participating in the previous editions of the e-Yantra Robotics Competition (eYRC).
- A qualified team gets this opportunity if and ONLY if our college will provide the required support for this team, to participate in the e-Yantra Robotics Competition (eYRC-2018): Track 3 conducted by e-Yantra project of IIT Bombay, that includes the following:

  1. A maximum number of three (3) teams if qualified through the selection test are selected from a college to participate in this theme;
  2. Our college has collected at least three (3) robotic kits from the e-Yantra project; the college undertakes to provide one robotic kit **in working condition** to each of the selected teams to take part in this competition.
  3. This theme is conducted in two stages: Stage 1 and Stage 2. Each team qualifies for Stage 2 by successfully completing all the tasks in Stage 1.
     If multiple teams qualify in Stage 1 in this theme from our college, ONLY the best performing team/s from our college will be selected for participation in Stage 2.

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

4. If the team is not qualified for Stage 2, the robotic kit is returned to our college.
5. After the team has completed all the tasks in Stage 2 or has participated in the finals of the competition (whichever be the case) our college will collect the robotic kit.
6. Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any **foul play** is suspected.

The college will provide ONLY the following support for the selected team participating in the e-Yantra Robotics Competition (eYRC-2018) conducted by e-Yantra project of IIT Bombay:

1. Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Mr. Sharad Gupta.**
2. Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.
3. In case the team is unable to complete the competition, we undertake the responsibility to return the Robotic kit in working condition to e-Yantra Project. (Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines.)*
4. The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, if selected.

I agree to the above terms;

S. L. Surana
Dr. S. L. Surana
Director (Academics)

**

- **Any Robotic kit or component if provided by e-Yantra shall be returned to e-Yantra.**
- **e-Yantra will communicate the procedure for returning the Robotic kit or component (if provided) at the appropriate time.**

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

SKIT/2018/ 2888

Date: 26/10/2018

eYRC-2018: Track 2
No Objection Certificate (NOC)

This is to state that:

1. Mr. Nitin Yadav	3rd. year Mechanical Engineering
2. Mr. Mohit Kumar Pareek	3rd. year Mechanical Engineering
3. Mr. Mohit Singh	3rd. year Mechanical Engineering
4. Mr. Mohd. Danish	3rd. year Electrical Engineering

are bonafide students of **Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur (SKIT M&G)**

Our college has no objection in the participation of the team consisting of the above-mentioned students, having team leader Nitin Yadav in the e-Yantra Robotics Competition (eYRC-2018).

We understand that,

- In eYRC-2018, the themes are categorized under three (3) different Tracks namely Track 1, Track 2 and Track 3.
- The above team from my college has been selected to participate in Track 2.
- Track 2 will be conducted in two Stages: Stage 1 and Stage 2.
- Only teams that qualify in Stage 1 based on performance will continue in the competition and participate in Stage 2.
- If multiple teams qualify in Stage 1 in the **same theme** in Track 2 from our college, ONLY the best performing team/s from that theme in Stage 1 from our college will be selected for participation in Stage 2.
- All the selected teams in Track 2 will be given robotic kits along with other accessories to build/assemble a bot/mechanism.
- After such team/s complete all the tasks in the competition or participate in the finals of the competition (whichever be the case) the team/s shall return to e-Yantra, IIT Bombay, the Robotic kits along with all the accessories given to the student team, to participate in the competition. This shall be done by shipping the same to e-Yantra Project, IIT Bombay.

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2 (f) of the UGC Act, 1956
Affiliated to Rajasthan Technical University, Kota

- Our college shall NOT interfere in the conduct of the competition by helping the team in anyway, during the course of the competition and e-Yantra holds complete discretion in disqualifying teams if any **foul play** is suspected.

The college will provide ONLY the following support for the selected team/s participating in the e-Yantra Robotics Competition (eYRC-2018) conducted by e-Yantra project of IIT Bombay:

1. Allocate working space to the student team along with appropriate equipment such as computer and appropriate modes of communication, as requested by the team leader **Nitin Yadav.**
2. Provide the student team with a safe place such as a locker or a cupboard with a lock and key where they can store the material.
3. In case the team is unable to complete the competition, the college undertakes the responsibility to return the Robotic kit in working condition to e-Yantra Project.(Note that the team has to complete the competition by submitting all the tasks and the final video demonstration of the working prototype within the stipulated deadlines.)*
4. The college will grant leave to the student team to travel to IIT Bombay to participate in the finals, **if** selected.

Signed:

S L Surana

Dr. S.L. Surana
Director (Academics)
SKIT M&G
26-10-2018

* e-Yantra will communicate the procedure for returning the robotic kits at the appropriate time.

: RAMNAGARIA (JAGATPURA), JAIPUR-302017 (RAJASTHAN), INDIA
: +91-141-5160400, 2752165, 2752167, 2759609 | : 0141-2759555
: info@skit.ac.in | : www.skit.ac.in

Swami Keshvanand Institute of Technology, Management & Gramothan

e-yantra Idea Competition (eYIC-2017)

Registered Projects

S. No.	Name of Team Member	Branch	Title of Project	Remark
1.	Lakshya Jain Abhishek Gupta Shivangi Gupta Harshita Gupta	Electronics & Communication Engg.	Smart Metering System for Energy Consumption and Remote Management with Control to Smart devices	
2.	Ayush Swami Abhishek Sharma Apoorv Ranjan Anubhav Pandey	Electrical Engg.	Net Zero Automatic Solar panel Cleaning Robot	Winner in Best Dernonstration and Presentation Category.

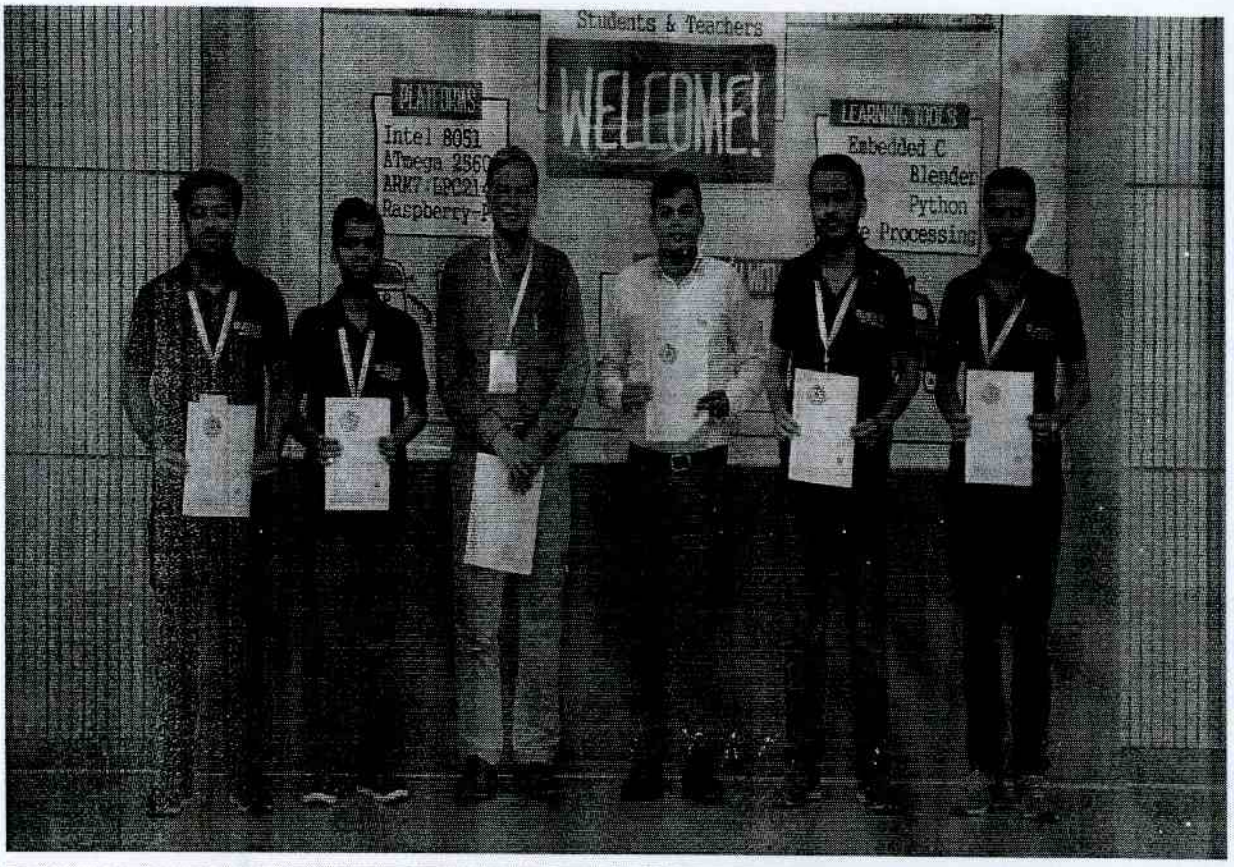
Net Zero Automatic Solar Panel Cleaning Robot

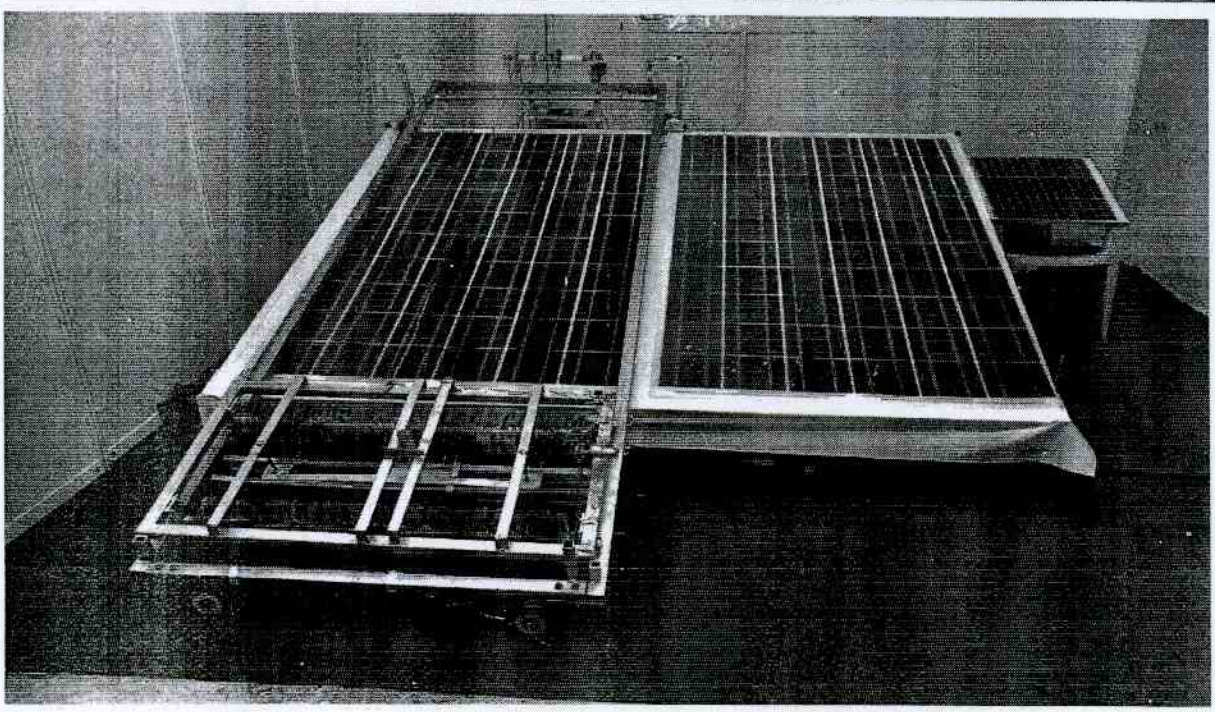
Project "Net Zero Automatic Solar Panel Cleaning Robot" won **Best Demonstration and Presentation Award** in the e-Yantra Ideas Competition (eYIC-2018) at IIT Bombay. Total 254 teams registered for this competition. A pre-selection in regional finals this year in Coimbatore, Ernakulum, Bangalore, Pune, Mumbai, Ahmedabad and Noida, the 18 finalists present their implemented ideas at IIT Bombay on March 23-24, 2018. We are delighted to say that the team of **Swami Keshvanand Institute of Technology, Management & Gramothan** with its project Net Zero Automatic Solar Panel Cleaning Robot, was one of the 18 finalists in the e-Yantra Ideas competition and also won **"Best Demonstration and Presentation Award"** in National Finals.

This Project was developed by final year Electrical students Aayush Swami, Abhishek Sharma, Apoorv Ranjan and Anubhav Pandey under the guidance of Mr. Ankit Vijayvargiya , Assistant Professor , Department of Electrical Engineering.

The efficiency of solar photovoltaic (SPV) panel depends upon the amount of solar radiation and spectral content. SPV panel are being widely used because of their economic and environmental merits. The performance of SPV panels get degraded due to factors like air pollution, birds poop (beats), dust, snow-accumulation, etc. Solar energy is the most abundant source of energy for all the forms of life on the planet earth. But the solar technology has not matured to the extent of conventional source of energy. It faces lot of challenges such as high cost, erratic and unpredictable in nature, need for storage and low efficiency.

This project aims at increasing the efficiency of solar power plants by solving the problem of accumulation of dust on the surface of solar panel which leads to reduction in plant output and overall plant efficiency. It purposes to develop a solar panel cleaning system which would remove the accumulated dust on its surface on a regular basis & maintain the solar power plant output. The system is a robotic system which could move autonomously on the surface of solar panels by using a frame with the power being supplied from a secondary panel of capacity approx. 100W attached to it. The system also uses water and wiper for obtaining crystal clean clarity. Dust accumulation on the panel can reduce the efficiency and energy output by up to 15-20% robotic solar panel cleaning system is designed so that the efficiency can be improved and human effort in cleaning is reduced.

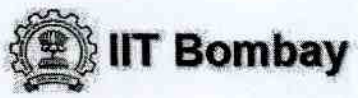

Students & Teachers
WELCOME!
Intel 8051
Embedded C
Blender
Python



Subject: Fwd: eYIC-2018 : Reminder for Final Progress Review Session

From: lakshaejain@gmail.com
To: saraswat_54@yahoo.com
Date: Tuesday, 18 September, 2018, 2:35:59 PM IST

---------- Forwarded message ---------
From: **e-Yantra IITB** <support@e-yantra.org>
Date: Wed, Dec 27, 2017 at 9:32 AM
Subject: eYIC-2018 : Reminder for Final Progress Review Session
To: <lakshaejain@gmail.com>, <abhishekg141997@gmail.com>, <harshigupta09@gmail.com>, <shivangi1996gupta@gmail.com>, <pallav@skit.ac.in>
Cc: <prawal87@gmail.com>



Dear Mentor/Students,

Greetings from e-Yantra!

This is to remind you that Final Review session for Your Project '**Smart Metering System For Energy Consumption And Remote Management With Control To Smart Devices.**' is scheduled today i.e. on 27 December, 2017 starting from 11:00 AM - 1:00 PM. **You must attend this Final Review Session.**

The session will be conducted on hangout using gmail account. **Hangout id is:** support_3@e-yantra.org

You have to use your registered gmail account to join the session. For joining the session, you will need the following:

- USB Webcam

- Speaker and MIC

- Good Internet connection

Session slots will be :

11 am - 11:30 am, 11:30 am - 12:00 pm, 12:00 pm - 12:30 pm, 12:30 pm - 1:00 pm.

Your team has to inform the reviewer on hangout half an hour before the chosen slot. We will give 20 minutes time to each team on a **First Come First served (FCFS) basis.** Your team(with all the team members -- Faculty mentor and Student members) is expected to attend a session. However at least 2 members must be present for the session, if there are any constraints. You can show your progress in the form of a demonstration, hardware structures, software(website/app) developed and anything you believe is worth sharing to illustrate your idea. We hope you will take advantage of this interactive session.

The main purpose is to do a final review and to ensure you are on the right path to implement a good prototype at the time of final assessments.

We look forward to our interaction with you.

NOTE: Kindly attend the session in either of the above mentioned dates. No further modification in date and time will be made.

With best wishes,

e-Yantra team

e-Yantra is a project sponsored by MHRD through the National Mission on Education through ICT (NMEICT)

Subject: Fwd: e-Yantra Ideas Competition - 2018 Stage 2 Results Announced

From: ankitvijay@skit.ac.in
To: saraswat_54@yahoo.com
Date: Saturday, 15 September, 2018, 3:15:48 PM IST

---------- Forwarded message ----------
From: **e-Yantra IITB** <support@e-yantra.org>
Date: Thu, Feb 15, 2018 at 6:18 PM
Subject: e-Yantra Ideas Competition - 2018 Stage 2 Results Announced
To: aayush.swami50@gmail.com, ssshivalayabi@gmail.com, apoorvranjan.45@gmail.com, ap580127@gmail.com
Cc: ankitvijay@skit.ac.in

Greetings from e-Yantra!

Congratulations! Your ProjectNet Zero Automatic Solar Panel Cleaning Robot is selected for the Regional Finals of the e-Yantra Ideas Competition (eYIC-2018) to be hosted at Regional Coordinating College (RCC).

RCCName :Mahatma Gandhi Mission's College of Engineering & Technology, Noida
Venue :A-9, Sector-62, Noida Gautam Budh Nagar
Date : 23rd February, 2018
Time: 09:00 - 16:00 hours

Regional Finals is a project exhibition/competition where shortlisted teams are invited to demonstrate the working solution of their projects. In eYIC-2018, **e-Yantra is conducting 5 Regional Finals across the country with a total of 41 teams participating**. At each Regional Finals the following protocol will be followed:

1. All participating teams will be awarded eYIC Regional Finals participation certificates. (**Note: Only teams who come to the Regional Finals and demonstrate their solutions are eligible for certificates.)**

2. Project demonstrations will be evaluated by the judges at the venue.

3. Judges shortlist projects based on a set of parameters.

4. All shortlisted project teams will be invited to attend the National Finals eYIC-2018 on March 22 to 24, 2018. (This list will be announced during the Valedictory Function at each Region so that the teams can make their travel arrangements to attend this event. Accommodation will be provided based on availability and travel to and from your institute to IIT Bombay will be reimbursed. Travel fare equivalent to 3-tier-AC-class by train will be reimbursed subject to proof of travel - original tickets. Details will be mailed to shortlisted teams).

5. **After the 6 Regional Finals are completed, some of the shortlisted teams will be selected as Finalists. Finalist Teams will be notified through an e-mail on or before midnight March 1, 2018.**

6. Only Finalist Teams will be demonstrating their projects at the exhibition of National Finals from March 22 to 24, 2018. Every individual student from every Finalist Team will be eligible for an Internship through the e-Yantra Summer Internship Program (eYSIP). Internships will be awarded to a few of these students based on a selection process.
7. At the National Finals of eYIC-2018 to be held between March 22 to 24, 2018, at IIT Bombay the exhibited projects will be evaluated by a panel of judges for exciting prizes and certificates.

Note : Teams are allowed to make minor modifications to improve the working solution of their projects for the Regional Finals.

Modalities for the Regional Finals

Demonstration :

ERTS Lab
Department of Computer Science and Engineering
Indian Institute of Technology Bombay
Powai, Mumbai-400 076

Certificate of Merit

This is to certify that *Aayush Swami* of *Swami Keshvanand Institute of Technology Management & Gramothan, Jaipur* has participated in the e-Yantra Ideas Competition (eYIC-2018). He/She is a member of the team having the following team members,

1. *Aayush Swami*
2. *Abhishek Sharma*
3. *Apoorv Ranjan*
4. *Anubhav Pandey*

Mentored By: *Prof. Ankit Vijayvargiya*

The team has been selected as one of the *18* finalist teams out of *318* teams. This team demonstrated their project titled *Net Zero Automatic Solar Panel Cleaning Robot* at the e-Yantra National Finals 2018 held on *22nd - 24th March 2018* at IIT Bombay and has received an award under *Best Demonstration and Presentation* category.

Prof. Kavi Arya
Principal Investigator, e-Yantra
Professor
Department of Computer Science and Engineering
Indian Institute of Technology Bombay

e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).

Certificate of Merit: awarded to finalist teams
Certificate of Commendation: awarded to teams for completing all the tasks of the competition
Certificate of Participation: awarded to teams for partial completion of tasks in the competition
Letter of Participation: an added as an acknowledgement of participation in e-Yantra Competition

e-Yantra
Engineering a better tomorrow

Department of Mechanical Engineering

List of eYRC (2017) Registered Students

S.NO	NAME	EMAIL	YEAR	BRANCH
1	PRATEEK CHOUDHARY	prateekc849@gmail.com	3	MECHANICAL
2	UMA SHARMA	umasharma2398@gmail.com	3	EC
3	NEERAJ JAIN	jainneeraj@gmail.com	2	IT
4	KARTIK SARRAF	kartiksaraf26@gmail.com	2	IT
5	KANISHK PRATAP SINGH RAJAWAT	kanishkrajawatbharthala@gmail.com	2	IT
6	PEEYUSH BHADUKA	peeyushbhaduka1999@gmail.com	2	IT
7	RONAK PANCHAL	ronak.panchal.165470@gmail.com	3	MECHANICAL
8	NISTHA AGARWAL	nisthaagarwal157@gmail.com	3	EC
9	MAYUR SHARMA	mayursharma20121998@gmail.com	3	EC
10	CHETAN SHARMA	chetannsharmajaipur@gmail.com	3	EC
11	VIJAY SHARMA	v.pareek.221898@gmail.com	3	EC
12	TANU SHARMA	tanu16172@gmail.com	3	EC
13	POORVA SHAH	shahpurva06@gmail.com	3	EC
14	AKASH AGARWAL	akashagarwal19993@gmail.com	3	MECHANICAL
15	BHARAT BANSAL	bbansal233@gmail.com	3	MECHANICAL
16	SIDDHANT SHARMA	siddhantsharma996@gmail.com	3	ELECTRICAL
17	HEMANG JOSHI	hemang2199@gmail.com	3	IT
18	SHREYA AGARWAL	shreyaagarwal266@gmail.com	3	EC
19	MIHIR JAIN	mihirjain04@gmail.com	2	IT
20	APOORV MISHRA	apoorve861998@gmail	3	MECHANICAL
21	ANKUR SHARMA	sankur605@gmail.com	3	MECHANICAL
22	ANKIT MISHRA		3	MECHANICAL
23	ANKIT SHARMA	ankit5121998@gmail.com	3	MECHANICAL
24	ABHISHEK SHARMA	abhicharm140899@gmail.com	3	MECHANICAL
25	AMAN AGARWAL	amanagarwal96314@gmail.com	3	MECHANICAL
26	ABHISHEK SHARMA	abhishek0299sharma@gmail.com	3	MECHANICAL
27	GAJANAND JANGID	pintujangir1623089@gmail.com	3	MECHANICAL
28	LOKESH KUMAR JATT	lokeshjat.9785@gmail.com	3	MECHANICAL
29	HARSH TENGURIYA	tenguriya.king@gmail.com	3	MECHANICAL
30	CHANDAN KUMAR PRAJAPATI	chandank.kumar129@gmail.com	3	MECHANICAL

Praveen 4/9/17.
Praveen Sarawat
e-Yantra Coordinator

SWAMI KESHAVANAND INSTITUTE OF TECHNOLOGY, MANAGEMENT & GRAMOTHAN

NOTICE

Date: 18/08/2017

E-yantra is an initiative by IIT Bombay that aims to provide practical solutions to some of the real world problems. e-yantra is sponsored by MHRD under the National Mission on Education through ICT program.

E-yantra, SKIT is going to conduct classes (Theory & Practical) for II & III year students of all branches to enhance their knowledge in embedded and robotics from **23/08/2017**. Interested students can register themselves to coordinators. The details are as follow:

Day & Time of Classes: Wednesday (1:45 pm to 3:15 pm)

Venue: ME101

Faculty Coordinators:

1. Praveen Saraswat, Asst. Prof., ME Deptt.(9785018458)
2. Pallav Rawal, Asst. Prof., ECE Deptt. (9887487953)

Student Coordinators:

1. Suraj Kumar, IV year, Mechanical Engg (9649602404)
2. Rajeev Ratna Singh, IV year, Mechanical Engg. (7690808851)

A copy of syllabus is attached herewith.

Faculty Coordinators:

18/8/17

Praveen Saraswat
(Asst. Prof.- ME)

18/8/17

Pallav Rawal
(Asst. Prof.- ECE)

21/8/17

Dr. Niraja Saraswat
(Coordinator, ECA)

Copy to:

Director
Director (Acedemics)
Director (D&W)
Principal

Syllabus for E-yantra Classes

S. No.	Topics to be covered
1	Introduction to basic electronics component
2	Introduction to fire bird V
3	Programming in embedded C
4	Interfacing of LCD with Atmega 2560
5	Interfacing of different sensors with Atmega 2560
6	Interfacing of motor with Atmega 2560
7	ADC, Interrupts, Timers
8	White line follower
9	Power transmission systems (gear, belt pulley, chain sprocket etc.)
10	Various types of links, joints
11	Electrical actuators
12	Hydraulic and Pneumatic actuators

Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur

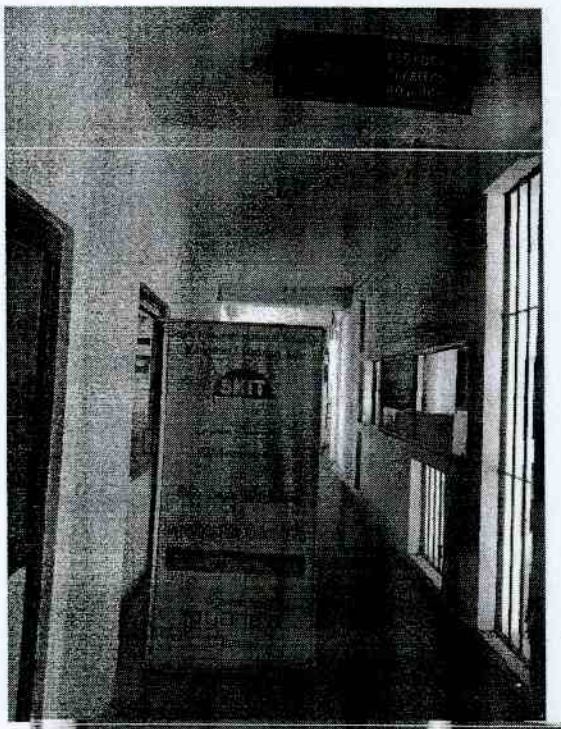
e-Yantra Workshop

Report

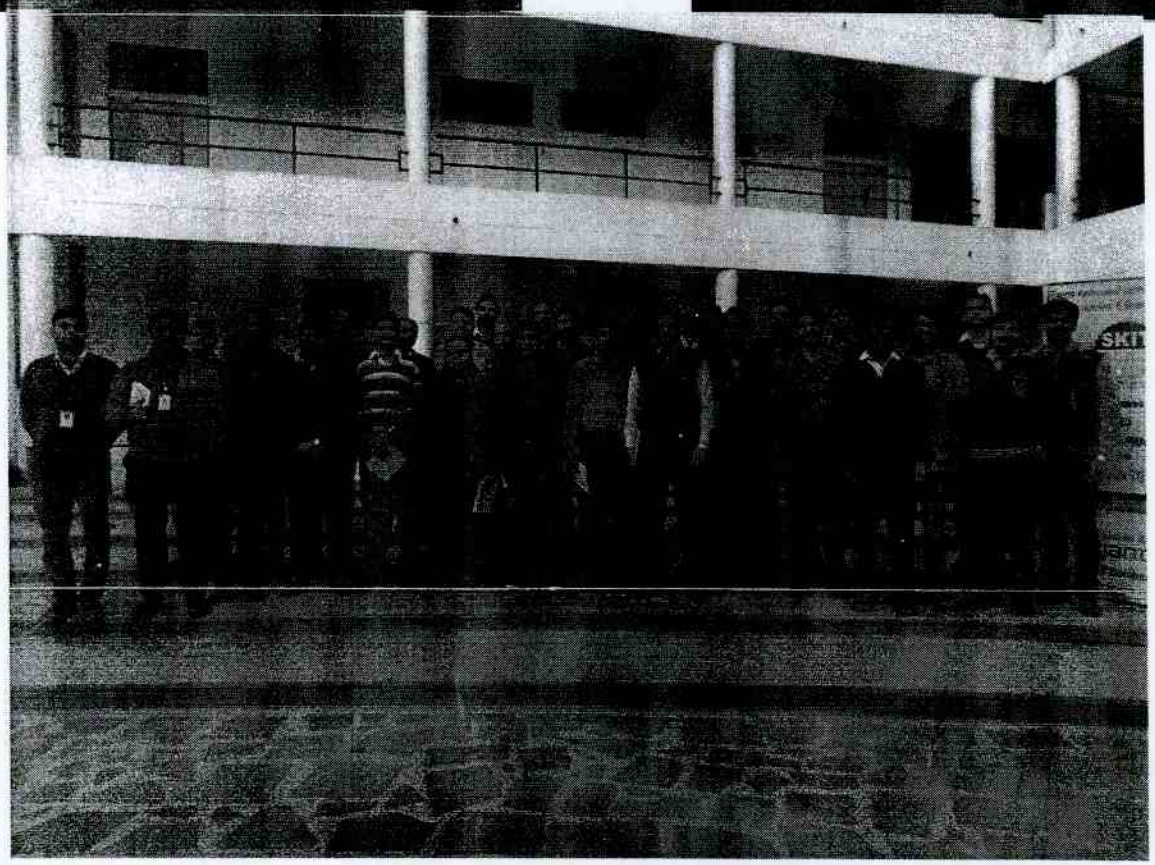
e-Yantra team, SKIT has conducted a Two day workshop on "**Introduction to Robotics and Embedded Systems**" for teacher's team from other colleges, on **22nd - 23rd December, 2016** under e-Yantra project of MHRD with IIT Bombay. Three project engineers Mr. Parin chheda, Mr. Sachin Gupta and Mr. Vamshi Krishna were come to deliver lectures in workshop. 50 faculty members of 12 enginnering institutes of Rajsthan were participated in this workshop.

Complete workshop is based on "**Firebird V**" robot. Firebird V is a research platform based on Microcontroller Atmega 2560 as a master and Atmega 8 as a slave. LCD, LED bar, white line sensors, sharp range sensors, DC geared motors, X-bee modual and RF receiver are interfaced on it.

In those two days, participents were being learnt about all interfacing circuits and codes of all interfaced devices and moduals. DC motor speed control using PWM, read sensor values using ADC and display it on LCD were also learnt. Finaly a white line follower robot was made.




SKIT


SKIT

Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur

e-Yantra Workshop

NOTE

Date: 08/12/16

e-Yantra team, SKIT is going to conduct a Two day workshop on "**Introduction to Robotics and Embedded Systems**" for teacher's team from other colleges, on **22nd - 23rd December, 2016** under e-Yantra project of MHRD with IIT Bombay.

(A)

Three project engineers will be come from e-Yantra (IIT Bombay) for conducting the workshop. The following need to be arranged by us:

1. Transportation (Car) from and to airport/railway station: 21st Dec and 23rd Dec, 2016.
2. Accommodation at SKIT guest house and food for them from 21st Dec (morning) to 23rd Dec, 2016 (evening).

All expenses for the e-Yantra team will be borne by the e-Yantra project.

(B)

We also require canteen and mess facility for tea and lunch of all participants on payment basis on 22nd - 23rd December, 2016.

Kindly grant us permission.

8/12/16
Coordinator
Pallav Rawal
Asst. Prof. ECE

SKB
9/12/16
HOD ECE

Shri Pradeepji
F.N.A.
S. L. Surana
9/12/16

Noted and
Please do the
necessary arrangements

Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur

e-Yantra Workshop

NOTE

Date: 08/12/16

e-Yantra team, SKIT is going to conduct a Two day workshop on "**Introduction to Robotics and Embedded Systems**" for teacher's team from other colleges, on **22nd - 23rd December, 2016** under e-Yantra project of MHRD with IIT Bombay.

Hence, the following venues are required for smoothly conduction of workshop:

1. IAI lab (Deptt of IT, 3rd floor): for both days (8:00AM to 6:00 PM)
2. J.C. Bose seminar hall: On 22nd Dec at 8:00AM- 12:00~~AM~~ Noon
3. Waiting room near J.C. Boss seminar hall for refreshment on 22nd Dec ~~at 9:00AM to [illegible]~~

Kindly grant us permission to access above mentioned venues for conducting workshop on **22 and 23 December 2016**.

Attached: 1. Copy of e-mail received

HOD IT
IAI Lab.
Pl. make available for the workshop.
S. L. Suman
9/12/16

8/12/16
Coordinator
Pallav Rawal
Asst. Prof. ECE

SKIT
9/12/16
HOD ECE

Shri Charan Singh
F.N.A. for Seminar hall & adjoining Hall.
S. L. Suman
9/12/16

Pallav Rawal <pallav@skit.ac.in>

IIT Bombay - e-Yantra Lab Setup Initiative (eLSI): Invitation to Attend the Two Day Workshop at Swami Keshvanand Institute of Technology, Jaipur, Rajasthan on 22nd & 23rd December, 2016

e-Yantra Support <support@e-yantra.org> Thu, Dec 1, 2016 at 3:56 PM
To: gwp_udaipur@yahoo.com, ietalwar@ietalwar.com, info.lnmiit@lnmiit.ac.in, "I.K. Bhat" <director@mnit.ac.in>, skverma@pilani.bits-pilani.ac.in, principal@ecajmer.ac.in, principal@gits.ac.in, info@gits.ac.in, Jaiprakash Bhamu <bhamujp@gmail.com>, principal@ecb.ac.in, principal@skit.ac.in, ait-ajmer@rediffmail.com, info@aryacollege.org, ssgok1@gmail.com, Director Lnmiit <director@lnmiit.ac.in>, manojkumar@lnmiit.ac.in, sharavan.jhajharia@jaipur.manipal.edu, Anu Gupta <anug@pilani.bits-pilani.ac.in>, aksarkar@pilani.bits-pilani.ac.in, snjece@gmail.com, admin@sbss.ac.in, admission@aryacollege.org, info@jnujaipur.ac.in, seedlingacademy@hotmail.com, info@regional-college.com, info@anandice.ac.in, macercjaipur@gmail.com, info@poornima.org, info@siitjaipur.org, admissionatmgec@gmail.com, info@shankaratechnology.org, info@vitj.ac.in, adm@ciitm.org, admin@jnit.org, smcet@smcet.in, info@maietjaipur.com, info@yitjpr.com, inquiry@bmitjaipur.org, tpo@aryacollege.in, vgiet2012@gmail.com, [redacted]@sbnitm.com, support@gitjaipur.com, principal@rietjaipur.ac.in, registraroffice@mygyanvihar.com, info@stwilfred.com, info@apexedu.org, info@sktc.ac.in, jeckukas@yahoo.com, info@jitjaipur.com, info@jecrcmail.com, info@kautilya.net, mgijaipur@gmail.com, chanakyajaipur@gmail.com, chanakyaengineering@yahoo.co.in, info@adved.org, info@apexcollege.in, director <director@biyanicolleges.org>, admin@aayojan.edu.in, ait_ajmer@rediffmail.com, gecbanswara banswara <principalgecbanswara@gmail.com>, arvindbecs@gmail.com, vkagrawal@shikshasetu.com, mitrcindia@gmail.com, vcetbundi08@yahoo.com, siethmo@gmail.com, gitsmrp@gmail.com, sditcollege@gmail.com, vishnu goyal <vishnugoyal1968@gmail.com>, jeetendra.godara@gmail.com
Cc: Krishna Lala <krishna.lala@e-yantra.org>, praveen saraswat <saraswat_54@yahoo.com>, pallav@skit.ac.in, e-Yantra Support <support@e-yantra.org>

Respected Sir/Madam,

Greetings from e-Yantra!

We would like to invite you to the 2-day workshop on "Introduction to Robotics" through the e-Yantra Lab Setup Initiative (eLSI).

To know more about this exciting initiative, you may view our video : eLSI - Overview

The dates and venue are given below:

Date : **22nd & 23rd December, 2016 (Thursday & Friday)**

Venue : **Swami Keshvanand Institute Of Technology, Jaipur, Rajasthan - 302017**

Coordinator : **Pallav Rawal, Assistant Professor, Electronics and Communication Department**

Contact Number : **09887487953 / 09413287953**
e-mail : prawal87@gmail.com

There is no registration fee to participate in the workshop.

The registrations for the workshop are on the First Come First Serve (FCFS) basis. **Kindly contact the Coordinator to confirm your participation for the workshop before December 15th, 2016.**

There are some colleges who have given the Letter of Intent (LoI). Such colleges are all confirmed to attend the workshop.

Those colleges who have not expressed their interest in the e-Yantra Lab Setup Initiative (eLSI) through a formal LoI **can also depute a team of four teachers for the 2-day workshop.**

Here are the modalities of the workshop:

---

1. No fee will be collected from any participant. Tea/Lunch will be provided on both the days of workshop.

2. **All traveling and staying expenses of the team members attending the workshops are borne by their respective colleges.**

3. Each participating college team member registers at the venue on the first day of workshop.

4. Teachers will be given a participation certificate from e-Yantra upon successful participation on **both days of the workshop**.

5. Teacher teams from colleges that have given LoI (Letter of Intent), who have successfully participated on both days of the workshop, will receive a **robotic kit** at the end of the workshop. These teams will participate in the Task Based Training (TBT).

6. Other teams will not be given a robotic kit unless their colleges also process the LoI.

What after the workshop?

1. Teams from colleges participating in eLSI by giving the LoI will participate in Task Based Training (TBT) to solve assigned tasks designed to include hands-on experiments using the robot, over a 3-4 month period. Teams participate in TBT online. No travel is required.

2. Colleges set up their labs during this 3-4 month period.

3. Certificates and 2 additional robotic kits are awarded to colleges at the end of TBT, during the valedictory function when all the labs in the region are inaugurated simultaneously.

4. No substitution of team members will be allowed during TBT. Teachers who are trained through the 2-day workshop will participate in TBT.

Please click on below link to find the detailed schedule for the 2-day workshop:
Workshop Schedule

The format for the Letter of Intent (LoI) can be downloaded from the following link:
Letter of Intent

Two brief video tutorials on "**Embedded C Programming basics**", which will provide quick review for teachers before attending the workshop, is included in this mail.

These tutorials outline all the essential concepts which will aid the teachers to better understand the contents of the workshop. Please find their video links below:

Basics of Embedded C (part 1) : https://youtu.be/yxq-xCq1Gg4

Basics of Embedded C (part 2) : https://youtu.be/k4fcKgiYsZk

We look forward to meeting you and your team at the workshop.

Feel free to contact us at support@e-yantra.org should you have any query.

--
Regards,
e-Yantra Team
IIT Bombay.

Swami Ke[illegible]vanand Institute Of Technology, Jaip[illegible]

Workshop on 22nd & 23rd December 2016

Sr No	College Name	College Address	Team Member Name	Mobile Number	email id	Sign		Robotic kit Given
						Day 1	Day 2	
1	Jagannath University, Jaipur	NH-12, Chaksu Bypass, Tonk Road,, Jagganath University, Jaipur, Rajasthan 303901	Ramesh Bhati	9460144512	ramesh.bhati@jagannathuniversity.org			
			Anupam Agarwal	9982116013	anupamagarw@gmail.com			
			Rakesh Kumar	9468270471	rakesh228@gmail.com			
			Tarun Badiwal	9887663731	Tarun.Badiwal@jagannathuniversity.org			
2	~~Vedic~~ Gurukul Institute Of Engineering And Technology, ~~Jaipur~~ KOTA	Panwalia,Renwal (Before Rohani-1), Sanganer,Jaipur-302033 RajasthanA IPB-13 Ranpur, KOTA	Brijendra Singh	9214988321	brijendar@gmail.com			
			Sanwarlal Meena	9667641364	Sanwarlal.Sini@gmail.com			
			Arya Kumari	7073527568	angelpriya8@gmail.com			
3	Anand International College Of Engineering, Jaipur	Near Kanota, Agra Road, Jaipur, Rajasthan 303012	Prakash Chandra	7339926766	Prakash.Chandra@anandice.ac.in			
			Deepesh Ajmera	9785674108	deepeshajmera10@gmail.com			
			Vivek Bhojak	9413175055	vivekscc@gmail.com vivek.bhojak@anandice.ac.in			
			Archana Singh	9351465287	archana.singh@anandice.ac.in			

			Member Name	Mobile No.	e-mail id	Day1		
4	Manipal University, Jaipur	Dehmi Kalan, Near GVK Toll Plaza, Jaipur-Ajmer Expressway, Jaipur, Rajasthan 303007	Ashish Vijay	8302306548	ashish.vijay@jaipur.manipal.edu			
			Pallavi Pande	9950212325	pallavi.pande@jaipur.manipal.edu			
			Dr. Himanshu Choudhary		himanshu.choudhary@jaipur.manipal.edu			
5	Compucom Institute of Technology, Jaipur	SP-5, EPIP, Sitapura, RIICO Industrial Area, Jaipur - 302022 Rajasthan	Sandeep Jaiswal	9887628832	Jaiswalsandeep69@gmail.com			
			Manish Gupta	8432186891	Stack_manish@yahoo.com			
			deepak Kumar Gautam	9784657783	gautamdeepak61@gmail.com			
6	School of Engineering, JECRC University, JECRC University, Jaipur	Plot No. IS-2036 to 2039, Ramchandrapura, Sitapura Industrial Area Extn, Near Mahatma Gandhi Hospital, Vidhani Village, Jaipur 303 905, Rajasthan	MANOT GUPTA	9463824850	manoj.gupta@jecrcu.edu.in			
			Gaurav Bansal	9351271710	Gaurav.bansal@jecrcuda.in			
			Dr. Dinesh Sethi		Dinesh.sethi@jecrcu.edu.in			
7	G.I.T Global Institute of Technology, Jaipur	ITS-1&2, IT Park, EPIP, Sitapura, Jaipur, Rajasthan 302022	GCT Jayant Mehta	9694690013	arjayantmehta@gmail			
			Jitendra Bedi	9950791438	jedvendra21@gmail.com			
			Nitin Kr Sharma	9828646789	nitinsharma.git@gmail.com			
			Pushpendra Singh Sawarth Dargan 723001					
			GIT					

			Team Member Name	Mobile No.	e-mail-id.	Day 1	
8	Poornima College of Engineering	Near ISI-6, RIICO Institutional Area, Sitapura, Jaipur – 302022	DURGESH	9460878065	durgesh86@gmail	1	
			Sandeep Gupta	9785052878	guptasandy007@gmail.com		
9	Vivekanand Insitute of Technology Jaipur East	Sector-36, Sisyawas, NRI Road, Jagatpura, Jaipur-303012 Rajasthan	Pawan Sharma	9983630962	pawan.viteast@gmail.com		
			Ganesh Dubey	7727968332	gd.mitoc.vit@gmail.com		
10	M. L. V. Textile & Engineering College	Pratap Nagar, Pur Road, Bhilwara, Rajasthan : 311001	Shekhar Dwivedi	7890416554	Shekhardwivedi25@gmail.com		
			Ajay [illegible]	9929529309	engg.ajay02@gmail.com		
11	Swami Keshvanand Institute of Tech.	Jagatpura, Jaipur	Ajay Dhanopia	9928909235	ajay_dhanopia@rediffmail.com		
			Ruchika Jain	9166099788	ruchikajainrec@gmail.com		
			Gloria Joseph	8302111335	gljoseph@gmail.com		
			Akash Deo	9784[illegible]866	akashilpe456@gmail.com		
			Ramesh Prakash	7891590961	rameshnavodaya.diatm@gmail.com		

			Member Name	Mobile No.	e mail -id	Sign Day1	Sign Day2
	GIT		Saurabh Jargan	7230013011	saurabh.[illegible]gan13@gmail.com		
			Pushpendra Singh Panwar	9887729378	pspanwarjaipur@gmail		
			Dinesh Verma	9166499480	dverma646@gmail		
			Nitin Kr. Sharma	9828696789	nitinsharma.git@gmail		
	SKIT	Jagatpura, Jaipur	Vinay Singh Marwal	9829368210	vinayskit77@gmail.com		
			Mamta Jain	7597738131	ermamta@yahoo.co.in		
			Brijmohan Sharma	9571463814	bsharma1984@gmail.com		
			Vipin Jain	7665028925	Vipin@skit.ac.in		
			S. Sabjeet Singh	9828483582			
	Amity University Jaipur SKIT	SKIT, Jagatpura	Amit Sharma	9521917522	asharma5@jpr.amity.edu		
			Deepak Kachhal	7737357560	dkachhal@jpr.amity.edu		
			~~Ruchika Jain~~	~~9660997768~~	~~ruchikajain@gmail.com~~		
			Rukhsar Zafar	8058318788	Rukhsar.zafar@gmail.com		
			Ramesh Kumar	9468665718	rameshkumar.chadhar@gmail.com		
	§		Chandan Kumar	9460981589	chandanpink1988@gmail.com		
			Arun Beniwal	9887102200	beniarun1987@gmail.com		

Attendance sheet E-Yantra Workshop

Sr.No	College Name		Faculty Name	22/12/16		23/12/16	
				Morning	Evening	Morning	Evening
1	Compucom Institute of Technology, Jaipur	a	Mr. Sandeep Jayswal				
		b	Mr. Manish Gupta				
		c	Mr. Deepak Gautam				
2	ANAND ICE, JAIPUR ~~Anand Institue of Tech, Jaipur~~	a	Mrs. Archana Singh(EE)				
		b	Mr. Vivek Bhojak (EC)				
		c	Mr. Prakash Chandra(EE)				
		d	Mr. Deepesh (ME)				
3	Global Institute of Technology, Jaipur	a	Mr. Saurabh Dargan				
		b	Mr. Nitin Kr. Sharma				
		c	Mr. Dinesh Kr Verma				
		d	Mr. Pushpendra Singh				
4	Manipal Univ. Jaipur	a	Dr Renu Kumawat				
		b	Ms. Pallavi Yarde				
		c	Dr. Himanshu ~~Choudhary~~				
		d	Mr. Ashish Vijay				
5	Jagannath Univ. Jaipur	a	Dr. Ramesh Bharti				
		b	Mr. Anupam				
		c	Mr. Rakesh Kumar [ME]				
6	JECRC Univ. Jaipur	a	Mr. Manoj Gupta				
		b	Mr. Gaurav Bansal				
		c	Dr. Amit Shrivastava				
		d	Dr. Dinesh Sethi				
7	VIT East, Jaipur	a	Mr.Pawan Sharma				
		b	Mr. Ganesh Dubey				
8	Poornima College of Engineering, Jaipur	a	Mr. Durgesh ~~Gupta~~ KUMAR				
		b	Mr. Sandeep Gupta				
9	MLV Govt. Textile Engg. College, Bhilwara	a	Mr. Ajay Sharma,				
		b	Mr Shekhar Dwivedi,				
10	Gurukul Inst. Of Engg. & Tech, Kota	a	Mr. Brijendar Sengar				
		b	Ms. Arya Kumari				
		c	Mr. Sanwarlal Mali				
11	Amity Univ. Jaipur	a	Mr. Amit Sharma				
		b	Mr. Deepak Kachhot				
12	Global college of Technology, Jaipur	a	Mr. Yogesh Mehta				
		b	Mr. Yadvendra Bedi				
	[redacted]		[redacted]				

				22 Dec 2016		23 Dec 2016	
				Morning	Evening	Morning	Evening
13	Swami Keshvanand Institute of Technology, Jaipur	a	Mr. Ajay Dhanopia (ME)				
		b	Mr. Vinay Singh Marwal (ME)				
		c	Mr. Brijmohan Sharma(ME)				
		d	Mr. Akash Deo (EE)				
		e	Mr. Ramesh Prakash (EE)				
		f	Ms. Ruchika Jain (CS)				
		g	Ms. Gloria Joseph(EC)				
		h	Ms. Mamta Jain (ECE)				
		i	S. Sarabjeet Singh Sethi				
		j	Rukhsar Zafar				
		k	Manju Chaudhary				
		l	Swati Arora				
		m	Arun Beniwal (ME)				
			Ramesh Kumar (E)				
			Chandan Kumar (ME)				
14	Jagannath University		Tarun Badiwal (ECE)				

Swami Keshvanand Institute of Technology, Management and Gramothan

Department of Mechanical Engineering

NOTE

Date:30/08/16

Subject: Requirement of MeghnadSaha Seminar Hall, ME Block for online inauguration of e-yantra Laboratory on September 8, 2016

IIT Bombay had allotted the date of September 8, 2016 for the online inauguration of e-yantra Laboratory. Therefore, the seminar hall is required for full day to setting up video conferencing system and testing the same before online inauguration.

Kindly allot this seminar hall for September 8, 2016 so that the program can be conducted.

30/8/16.

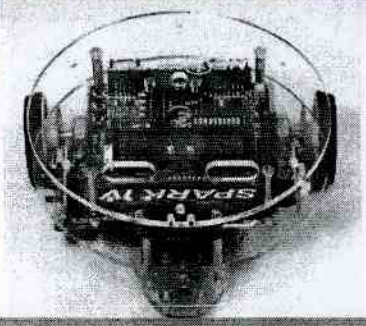
Team Leader

Praveen Saraswat

e-yantra Lab.

HOD, ME

e-yantra
Embedded Systems & Robotics Lab
(Supported by e-Yantra Lab Setup Initiative (eLSI)-IIT Bombay)



SKIT
असतो मा सद्गमय

INVITATION LETTER

INAUGURATION OF E-YANTRA LAB

Dear Sir/ Madam,

With a warm welcome, we cordially invite you for *online inauguration of e-yantra lab* with the team *of e-yantra, IIT Bombay* & other participating colleges from all over India where SKIT is the first participant among all engineering colleges in Rajasthan.

Date: **Thursday, 08th September, 2016**

Time: **12:00 to 1:15 pm**

Venue: **Meghnad Saha Seminar Hall, Vishvakarma Block**

Swami Keshvanand Institute of Technology, Management & Gramothan

Regards

e- yantra Team, SKIT

Robotics & Embedded Clubs, SKIT

We request all to be present on this occasion and make it graceful and successful.

Swami Keshvanand Institute of Technology, M & G, JAIPUR

Department of Mechanical Engineering

Tentative Program of e - yantra lab Inauguration

Date: 08/09/2016 (Thursday)

Time: 12:00 to 01:15pm

Venue: Meghnad Saha Seminar Hall, Vishvakarma Block

The following activities will be carried out during online inauguration session (To be completed in 10 minutes, according to protocol of e –yantra team, IIT Bombay)

1. The function will start by lighting a lamp/diya. **(Time: 2 mins)**
2. Then there will be symbolic ribbon cutting ceremony. **(Max 1 min.)**
3. A short address (**maximum 2 minutes**) by Dr. S. L. Surana.
4. Following the address, there will be opening of e yantra signage. This signage symbolically declares our lab as an e-Yantra lab. **(Max 1 min)**
5. Then two free robotic kits will be handed over to the Lab in-charge/ Team Leader of teacher team. **(Max 2 mins)**
6. Certificate distribution to the team members. **(Max 2 mins)**

Activities after1:15 pm:

7. Group Photograph
8. Ribbon cutting ceremony and visit at lab venue.
9. Tea.

NOTE: - The time allotted for each college is 10 mins only, but we have to be present for the entire session. Program is for 4 colleges. Our turn has not been decided.

स्टूडेंट्स व टीचर्स के लिए शुरू हुई ई-यंत्र लैब

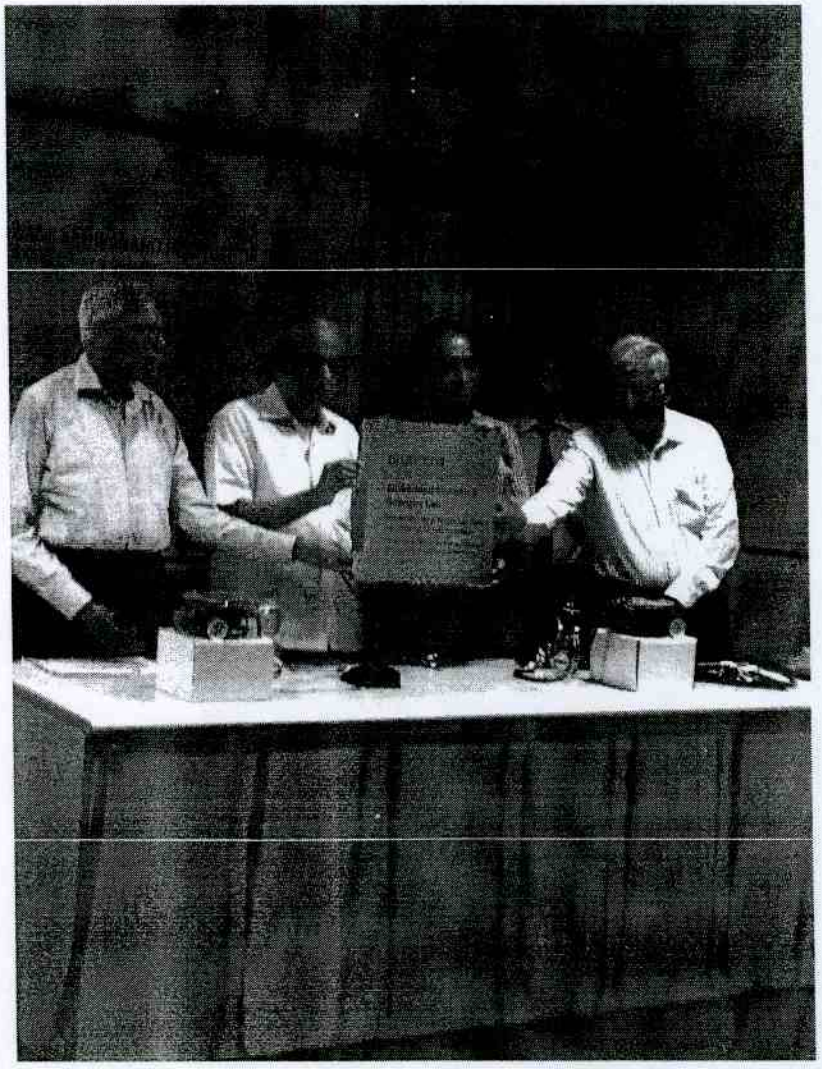
सिटी रिपोर्टर • जगतपुरा स्थित एसकेआईटी में आईआईटी बॉम्बे की ई-यंत्र टीम ने ई-यंत्रः एम्बेडेड एंड रोबोटिक्स लैब का शुभारंभ वीडियो कॉन्फ्रेंस के जरिए किया। ई-यंत्र आईआईटी बॉम्बे की ओर से संचालित एवं मानव संसाधन विकास मंत्रालय भारत सरकार द्वारा प्रायोजित कार्यक्रम है जो रोबोटिक्स के क्षेत्र में फैकल्टी एवं छात्रों को ट्रेनिंग देता है। इस दौरान टीम लीडर प्रवीण सारस्वत सहित चार फैकल्टी मेंबर्स को ट्रेनिंग पूरी करने पर सर्टिफिकेट भी दिए गए।

Dainik Bhaskar, 09/09/2016

ई-यंत्र लैब के जरिए ट्रेनिंग

पत्रिका प्लस जयपुर • आईआईटी मुंबई की टीम ई-यंत्र ने एसकेआईटी में रोबोटिक्स लैब के संबंध में वीडियो कॉन्फ्रेंस के जरिए जानकारी दी। एमएचआरडी के इस कार्यक्रम के जरिए स्टूडेंट्स और फैकल्टीज को ट्रेनिंग दी जाएगी। इस मौके पर चार फैकल्टी मेंबर्स को सर्टिफिकेट दिए गए।

पत्रिका Fri, 09 September 2016
www.readwhere.com/read/c/13070756



SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY, JAIPUR

Department of Mechanical Engineering

Date: 19.07.16

NOTE

Subject: Purchasing of Robotics Equipments for e-yantra Lab Setup

Online Task Based Training (TBT) of e-yantra program of IIT Bombay and MHRD was started on 15 Feb, 2016. A team consisting of following faculty members was identified and received training.

- Mr. Praveen Saraswat, (Team Leader), Sr. Lecturer, ME Department
- Mr. Manoj Kumar Sain, Reader, ME Department
- Ms. Vinita Agrawal, Reader, ECE Department
- Mr. Pallav Rawal, Lecturer, ECE Department

All the tasks have been completed before the last date i.e. 6 June, 2016 and the team SKIT is ranked in top category 'A'. The various tasks were related to Introduction to Embedded C, I/O interfacing on AVR based microcontrollers, Introduction to timers and delay generation and DC motor control and PWM generation for velocity control.

Now, the next step is to setup e-yantra laboratory at our institute; e-yantra IIT Bombay allotted the time in the last week of August for the online inauguration of lab. M/s NEX Robotics Pvt. Ltd., Mumbai was recommended by e-yantra IIT Bombay for purchasing these equipments. On Director (Academics)'s suggestion, other participating institutions were also consulted about the supplier from whom they were purchasing the equipments. They also recommended M/s NEX Robotics Pvt. Mumbai.

As per the quotation received from M/s NEX Robotics Pvt. Ltd., Unit No. 13, Building No. 2 (Sector 1, Millenium Business Park, Mahape, Navi Mumbai 400 710, Maharashtra, the purch work would cost of Rs. 181273.50 /- which includes all taxes and courier charges of the equipments. The company's term for supply was 100% advance payment. After negotiations, M/s NEX Robotics has agreed to take 50 % advance payment.

It is kindly requested to approve the amount Rs. 90,636/- (50% of total amount) as advance, so as to initialize the work.

It is also requested to please facilitate the payment via cheque in favor of **NEX Robotics Pvt. Ltd. Payable at Mumbai** so that this project can be completed in time.

19/07/16

HOD, ME

A-O

Pl. obtain permission from Management and on approval make the cheque for Rs 90,636/-

20/7/16

Director (Academics)

Swami Keshvanand Institute
of Technology, Management & Gramothan
Approved by AICTE, Ministry of HRD, Government of India and
Affiliated to Rajasthan Technical University, Kota

Purchase Order for e-yantra Robotics Lab Setup

SKIT/2016/39

Dated: 26/07/2016

NEX Robotics Pvt. Ltd.
Unit No.13, Building no.2 (A3), sector 1,
Millennium Business Park, Mahape,
Navi Mumbai-400 710
MH, IND. +91 9004094490, +91-022-27782445
e-mail: info@nex-robotics.com
web: http://www.nex-robotics.com

Subject: - Purchase order of purchasing robotics equipments for e-yantra lab setup

Dear Sir,

With reference to our inquiry and your quotation with reference no. NRPL/121.678 dated 11/05/2016 by email and enclosed details and after technical discussions with our Director (Academics) and further financial discussions with management, we accept your offer, and are pleased to place an order for purchasing following robotics equipments.

Sr No.	Equipment	Quantity	Original Unit Price	Discounted Unit Price	Amount
1	FireBird V 2560	4	27000	17999	71996
2	Spark V Robot	5	4999	4499	22495
3	Fire Bird V P89V51RD2 adapter card	3	3937.5	3937.5	11812.5
4	Fire Bird V LPC2148 adapter card	5	3937.5	3299	16495
5	Zigbee Modules 100m range	10	1950.75	1499	14990

असतो मा सद्गमय

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India and
Affiliated to Rajasthan Technical University, Kota

Sr No.	Equipment	Quantity	Original Unit Price	Discounted Unit Price	Amount
6	Zigbee Modules Adapter	5	2812.5	2099	10495
7	Metal-gear Servo Motors	10	1,138	990	9900
8	Servo Motor Based Gripper kit for the Fire Bird V robot	2	2800	2,800	5600
9	Sharp GP2Y0A21YK0F infrared range sensor (10cm to 80cm)	10	1664	749	7490
10	Shipping charges (by Air)		10000	10,000	10000
	Total				**181273.5**

We are attaching a cheque of Rs. 90, 636/- (round off) as advance payment of following particular:

Bank: Kotak Mahindra (Branch- Sardar Patel Marg, Jaipur)
Cheque No: 005175
Date: 21/07/2016

TERMS AND CONDITIONS :-

1. Delivery free of cost at our Institute within 03 weeks from date of order.
2. If any points need clarification, you can contact Mr. Praveen Saraswat, Sr. Lecturer, Mechanical Engg. Department or Mobile- 09785018458.
3. Please confirm by mail that the order will be executed in time.

Yours faithfully,

26/7/16

(Rachana Meel)
Registrar

RAMNAGARIA (JAGATPURA), JAIPUR-302017 (Raj.) India
Tel. : 0141- 2752165, 2752167, 2759609, 5160400 | Fax : 0141-2759555
E-mail : info@skit.ac.in Website : www.skit.ac.in

NEX Robotics Pvt. Ltd.
Unit No.13, Building no.2 (A3), sector 1,
Millennium Business Park , Mahape,
New Mumbai-400 710
MH, IND. +91 9004094490 ,+91-022-27782445
e-mail: info@nex-robotics.com
web: http://www.nex-robotics.com

Ref : NRPL/121.678
Date : 11th May 2016

To,
The Principal,
Swami Keshvanand Institute of Technology, Management & Gramothan,
Ramnagaria, Near 7 Number Bus Stop,
Jagatpura, Jaipur,
Rajasthan 302017

Subject : Quotation for Fire Bird V series advance research platforms and accessories for E-Yantra Lab setup as per your enquiry by e-mail.

Fire Bird Series Robotic research platforms are designed by Embedded Real-Time Systems from CSE, IIT Bombay in collaboration with NEX Robotics.

We are confident that these robots will meet your demanding application requirements in terms of quality reliability and ease of use.

Please let us know if you require any more information for the same. We would welcome the opportunity to assist you at all the times.

For NEX Robotics Pvt. Ltd.

Dr. Anant Malewar
Director, NEX Robotics Pvt. Ltd.
Email: anant@nex-robotics.com
Cell: 022-27782445, 09004094490

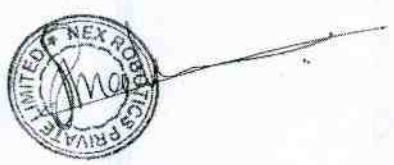
NEX Robotics Pvt. Ltd.
Unit No.13, Building no.2 (A3), sector 1,
Millennium Business Park , Mahape,
New Mumbai-400 710
MH, IND. +91 9004094490 ,+91-022-27782445
e-mail: info@nex-robotics.com
web: http://www.nex-robotics.com

To, **The Principal,** **Swami Keshvanand Institute of Technology,** **Management & Gramothan,** **Ramnagaria, Near 7 Number Bus Stop,** **Jagatpura, Jaipur,** **Rajasthan 302017**	**Ref : NRPL/121.678** **Date : 11th May 2016**

Quotation for E-Yantra Lab setup

Sr No.	Equipment	Quantity	Original Unit Price (Rs.)	Discounted Unit Price (Rs.)	Amount (Rs.)
1	FireBird V 2560	4	27000	17999	71996
2	Spark V Robot	5	4999	4499	22495
3	Fire Bird V P89V51RD2 adapter card	3	3937.5	3937.5	11812.5
4	Fire Bird V LPC2148 adapter card	5	3937.5	3299	16495
5	Zigbee Modules 100m range	10	1950.75	1499	14990
6	Zigbee Modules Adapter	5	2812.5	2099	10495
7	Metal-gear Servo Motors	10	1138	990	9900
8	Servo Motor Based Gripper kit for the Fire Bird V robot	2	2800	2800	5600
9	Sharp GP2Y0A21YK0F infrared range sensor (10cm to 80cm)	10	1664	749	7490
10	Shipping charges (by Air)		10000	10000	10000
				Grand Total	**181273.5**

For NEX Robotics Pvt. Ltd.



Dr. Anant Malewar
Director, NEX Robotics Pvt. Ltd.
Email: anant@nex-robotics.com
Cell: 022-27782445, 09004094490

NEX Robotics Pvt. Ltd.
Unit No.13, Building no.2 (A3), sector 1,
Millennium Business Park , Mahape,
New Mumbai-400 710
MH, IND. +91 9004094490 ,+91-022-27782445
e-mail: info@nex-robotics.com
web: http://www.nex-robotics.com

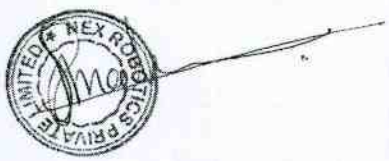
TERMS AND CONDITIONS

Delivery and Payment Terms

- Product carries 06 months warranty against any manufacturing defects.
- Any problems / manufacturing defects with the product are to be reported within 1 week from the date of delivery by email. After one week no such claim will be entertained.
- Payment terms: 100% advance.
- Payment is to be made by Net banking. If it is to be made by cheque / DD, then ensure that cheque is sent by Blue dart / Aramex / Speed Post only.
- Robots are covered extensively in the documentation and are self explanatory in nature. No commissioning and demonstration will be carried out at the destination.
- Products will be serviced at our New Mumbai office. Two way courier charges for the servicing will be borne by the buyer.
- Any documents which are required to be sent with the shipment such as Octroi exemption certificate, entry tax exemption certificate, road permit, way bill etc, must be sent along with the purchase order.
- Purchase order will be considered invalid if it does not contain quotation reference number.
- By releasing purchase order against this quotation it is assumed that the buyer agrees to above terms and conditions.

PAYMENT TERMS	As mentioned in terms and conditions
SALES TAX	Prices are inclusive of all taxes
VALIDITY	90 days
PRICES	EX- Warehouse New Mumbai
DELIVERY TERMS	Within 4 Weeks after receiving PO
OCTORI / ENTRY TAX / ANY OHER TAX	Will be paid by consignee
ORDER TO BE PLACED AT	**NEX Robotics Pvt. Ltd.** www.nex-robotics.com Unit No. 13,Building No. 2 (A3), Sector 1, Millenium Bussiness Park, Mahape, Navi Mumbai 400 710, Maharashtra, INDIA Tel. : 022-27782445, 09004094490 Email: anant@nex-robotics.com
PAN No. AACCN4265B VAT TIN: 27490644098V w.e.f. 18th February 2008 CST TIN: 27490644098C w.e.f. 18th February 2008	
Payment can be made by DD/Cheque in the favor of NEX Robotics Pvt. Ltd. Payable at Mumbai or through online fund transfer to our bank account. Advanced cash receipt can be issued on request.	

For NEX Robotics Pvt. Ltd.



Dr. Anant Malewar
Director, NEX Robotics Pvt. Ltd.
Email: anant@nex-robotics.com
Cell: 022-27782445, 09004094490

Task Based Training (TBT -2016)

(e-Yantra program of IIT Bombay)

Duration 11th February to 16th June 2016

Team Profile

- **We will be issuing Cheques as cash prizes to the teams depending on their grade.**
- **These Cheques will be issued in favour of the team member names mentioned here.**
- **You can change the name that appears on your cheque by clicking on the edit option below.**
- **Also, the name menitoned in your profile will be the name on your respective completion certificate.**
- **In case there is a spelling mistake, please send us an e-mail to support@e-yantra.org along with your corrected name and team details.**

College name: **Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, Rajasthan**

PRAVEEN SARASWAT	Asst. Prof.	Mechanical Engineering
PALLAV RAWAL	Asst. Prof.	Electronics and Communication Engineering
VINITA AGRAWAL	Associate Professor	Electronics and Communication Engineering
MANOJ KUMAR SAIN	Associate Professor	Mechanical Engineering

Above mentioned names are verified by the Team Leader!

Congratulations! your team is awarded a Class A award and Completion Certificates.

Bonus Marks (30)

For cash awards, Cheques will be issued in favour of the respective team members. Please verify your name, Click here Team Profile(http://tbt2016.e-yantra.org/tbt/profile)

Award Details

- **Class A Cash Prize of Rs. 6000/Team**
  Class B Cash Prize of Rs. 4000/Team
  Class C Cash Prize of Rs. 2000/Team
- You will be notified about distribution of the award money soon
- We appreciate the time and efforts your team has put in to complete all the tasks and encourage your team to participate in **TBT-2016: Challenge**
- Here's a glimpse of your team's performance in Task Based Training (TBT-2016)

Tasks Status

40

[redacted] Bonus M

Eligible for Class A Awards and Completion Certificates

- Guru Nanak Institute of Engineering & Technology, Maharashtra
- Prof. Ram Meghe College of Engineering & Management, Maharashtra
- J D College of Engineering and Management, Maharashtra
- St. Vincent Pallotti College of Engineering & Technology, Maharashtra
- Rajiv Gandhi College of Engineering Research & Technology, Maharashtra
- IMS Engineering College, Uttar Pradesh
- **Swami Keshvanand Institute of Technology, Management & Gramothan, Rajasthan**
- SRES's College of Engineering, Kopargaon, Maharashtra
- P.E.S. Modern College of Engineering, Maharashtra
- Vidyavardhaka College of Engineering, Mysuru, Karnataka
- PES University, Karnataka
- Ballari Institute of Technology and Management Ballari, Karnataka
- VSM Institute Of Technology, Nipani , Karnataka
- Kingston Engineering College, Tamil Nadu
- Universal College of Engineering, Maharashtra
- C. V. Raman College of Engineering, Bhubaneshwar, Odisha
- U V Patel College of Engineering, Gujarat
- Peoples Education Society's P.E.S. College of Engineering, Aurangabad, Maharashtra
- Chhatrapati Shahu Maharaj Shikshan Sanstha's College of Engineering, Maharashtra
- Mahatma Basaweshwar Education Society's College of Engineering, Maharashtra
- Vidharbha Youth Welfare Society's Prof. Ram Meghe Institute of Technology & Research, Badnera-Amravati, Maharashtra
- Government Polytechnic College, Kottayam, Kerala
- Kumaraguru College of Technology, Tamil Nadu
- Dhirajlal Gandhi College of Technology, Tamil Nadu
- Dr. Mahalingam College of Engineering and Technology, Tamil Nadu
- Vel Tech Dr. RR & Dr. SR Technical University, Tamil Nadu
- G. H. Raisoni Polytechnic, Maharashtra
- Pondicherry Engineering College, Pondicherry

Tasks Progress Report (TBT-2016)

To know about your team award click here: Award(http://tbt2016.e-yantra.org/tbt/tbtConclusion)

Task #	Status	MCQ Marks (5)	Experiment Marks (20)	Bonus Marks (5)	Maximum Marks (30)		Remarks
Task 0 (NOC)	NOC Uploaded	--	--	--	--		--
Task 1	Completed	5	20	5	30		Nicely Done
Task 2	Completed	5	20	5	30		Good Work
Task 3	Completed	5	20	5	30		good work,you can try removing the flickering of the display
Task 4	Completed	5	20	5	30		Good Job
Task 5	Completed	5	20	5	30		Good Job
Task 6	Completed	5	20	5	30		Good Job!

f (htt

#	Tasks	Launch Date	Task deadline	Absolute deadline
0	No Objection Certificate (NOC) Upload	11th February	11th March	16th June
1	Introduction to Embedded C, digital logic and AVR Studio 4.17	1st March	11th March	16th June
2	I/O interfacing on AVR based microcontrollers	12th March	29th March	16th June
3	Interfacing LCD for debugging	30th March	13th April	16th June
4	Introduction to timers and delay generation	14th April	28th April	16th June
5	DC motor control and PWM generation for velocity control	29th April	13th May	16th June
6	Analog-to-Digital conversion and white line following	14th May	4th June	16th June

★ Each task has a **Launch date** and two different deadlines: **Task deadline and Absolute deadline.**

★ **Task deadline:** Task deadline is the suggested deadline to submit a given task.

- Teams submitting a task on or before the **Task deadline** for that task will be awarded bonus marks subject to acceptable performance in that particular task. (Refer to the Grading criteria (http://tbt2016.e-yantra.org/tbt/tbtAbout) section for details)

★ **Absolute deadline:** The last date for submission of the tasks.

- Flexibility in timelines is a key attribute of TBT, included to account for the time constraints faced by faculty members.
- We have already provided sufficient time for each task considering its complexity and number of experiments. However, we will provide an option to submit any of the tasks up to **16th June,** referred to as the **Absolute deadline**.
- If you have already submitted a part of a given task or some of the tasks, you will not have an option to resubmit.
- However, you will have an option to submit your pending taks on or before the **Absolute deadline**.

असतो मा सद्गमय

Swami Keshvanand Institute
of Technology, Management & Gramothan

Approved by AICTE, Ministry of HRD, Government of India and
Affiliated to Rajasthan Technical University, Kota

SKIT/2016/ 847

Date: 29.02.2016

No Objection Certificate (NOC)

This is to state and place on record that **Mr. Praveen Saraswat** is a bonafide teacher of College **Swami Keshvanand Institute of Technology Management & Gramothan** working in **Mecahnical department.**

This college has no objection in the participation of Mr. **Praveen Saraswat** in the Task Based Training (TBT) conducted by the e-Yantra project of IIT Bombay.

The college shall provide the required support for the participating teacher team having team leader **Praveen Saraswat** and team members **Mr. Manoj Kumar Sain** (Mechanical Department), **Ms. Vinita Agrawal** and **Mr. Pallav Rawal** (Electronics & Communication Department) to participate in TBT.

Swami Keshvanand Institute of Technology Management & Gramothan agrees to provide support which includes the following:

1. Allocate working space to the teacher team along with appropriate equipment such as computer(s) and appropriate modes of communication, as may be requested by the team leader **Mr. Praveen Saraswat.**
2. Provide the teacher team with a safe place such as a locker or a cupboard with a lock and key where they can store the material(s) that are to be utilized.
3. Provide support to teacher team to cover expenses related to their participation in the TBT.
4. After the completion of the training, the college shall ensure that the teacher designated as team leader surrenders the robot to the college for safe custody and an acknowledgement to this effect shall be provided to the e-Yantra team of IIT Bombay.
5. If the team or the college authorities decide to discontinue participation in e-Yantra Setup Initiative (eLSI) for any unforeseen reason before the training ends, the Principal/ a competent authority/designated official of the college assumes responsibility of returning the robot and accessories given to the team for participating in TBT in original packing, back to e-Yantra project team at IIT Bombay. All costs for shipping shall be borne by the college.

S. L. Surana

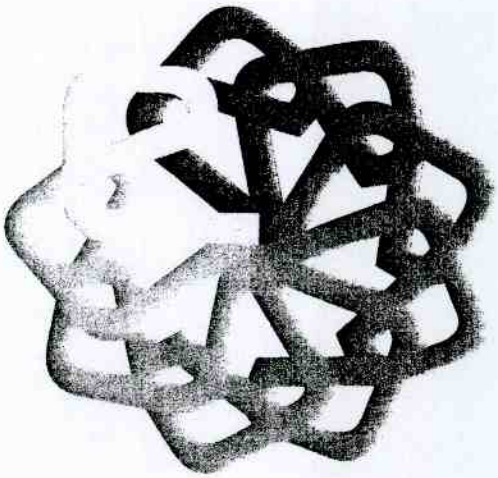
Dr. S. L. Surana
Director (Academics)

Date: 29.02.2016

College Stamp:

RAMNAGARIA (JAGATPURA), JAIPUR-302017 (Raj.) India
Tel. : 0141- 2752165, 2752167, 2759609, 5160400 | Fax : 0141-2759555
E-mail : info@skit.ac.in Website : www.skit.ac.in

ERTS Lab
Department of Computer Science and Engineering
Indian Institute of Technology Bombay,
Powai, Mumbai-400 076.



Certificate of Participation

This is to certify that ***Pallav Rawal*** has successfully participated in the two-day workshop on "Introduction to Robotics" conducted on *5th and 6th February, 2016* held at *MGM's College of Engineering and Technology, Noida.*

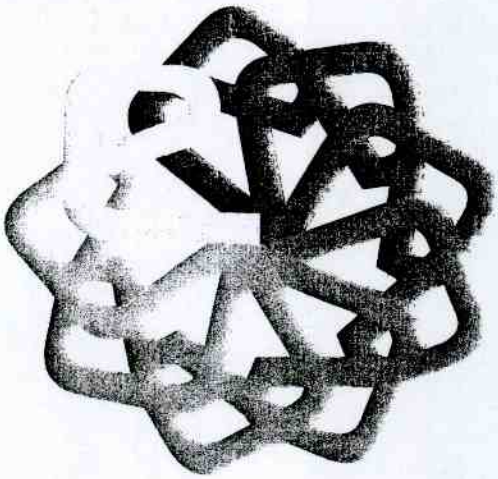
Prof. Kavi Arya
Principal Investigator, e-Yantra,
Associate Professor
Computer Science & Engineering Department,
IIT Bombay.

b61e0965abeec3c92d71a5e81204c013326de7bb

e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).

Engineering a better tomorrow

ERTS Lab
Department of Computer Science and Engineering
Indian Institute of Technology Bombay,
Powai, Mumbai-400 076.



Certificate of Participation

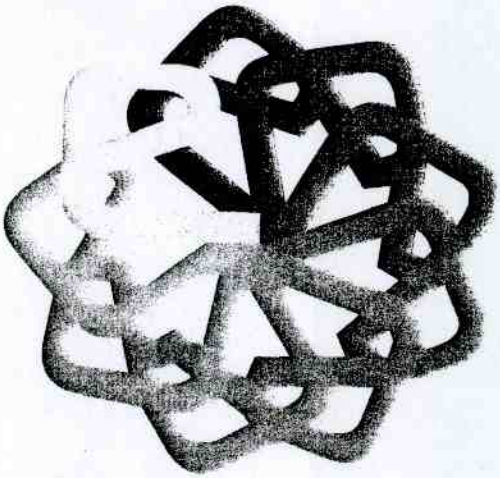
This is to certify that ***Vinita Agrawal*** has successfully participated in the two-day workshop on "Introduction to Robotics" conducted on *5th and 6th February, 2016* held at *MGM's College of Engineering and Technology, Noida.*

Prof. Kavi Arya
Principal Investigator, e-Yantra,
Associate Professor
Computer Science & Engineering Department,
IIT Bombay.

8a16089efa7f1155857035484e154e91a3e78b49

e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).

ERTS Lab
Department of Computer Science and Engineering
Indian Institute of Technology Bombay,
Powai, Mumbai-400 076.



Certificate of Participation

This is to certify that ***Manoj Kumar Sain*** has successfully participated in the two-day workshop on "Introduction to Robotics" conducted on *5th and 6th February, 2016* held at *MGM's College of Engineering and Technology, Noida.*

Prof. Kavi Arya
Principal Investigator, e-Yantra,
Associate Professor
Computer Science & Engineering Department,
IIT Bombay.

87a158e4d3e32fd57815855ddc14e2c1ab1b620b

e-Yantra is a project sponsored by MHRD, Government of India, under the National Mission on Education through ICT (NMEICT).

Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

A report on E- Yantra Workshop (IIT, Bombay)

On"Introduction to Robotics"

(Held at MGM'S College of Engineering & Technology, Noida from **5- 6 February, 2016**)

The following faculty members have attended the workshop:

1. Mr. Praveen Saraswat, Sr. Lecturer, ME Department
2. Mr. Manoj Kumar Sain, Reader, ME Department
3. Ms. Vinita Agrawal, Reader, ECE Department
4. Mr. Pallav Rawal, Lecturer, ECE Department

Day 1 (05/02/16) Friday

The workshop was started with registration and tea at 9 am. The inaugural ceremony started at 10 am with national anthem. Ms. Ashvini Deshmukh (workshop coordinator) welcomed all the participants. After that Prof. Krishana Lalla (IIT, Bombay) inaugurated the workshop through video conferencing. A team of three trainers from IIT Bombay, All HODs and Administrative officer presented during the inauguration ceremony.

Following members were the instructors from the IIT, Bombay:

1. Mr. Sudeep Rajput
2. Mr. Aditya Kumar
3. Mr. Rama Krishana

After inauguration, session-I was started in which following topics were covered:

I. Introduction to Fire Bird V robot
II. Introduction to AVR Micro- controller and Programming environment

After Lunch break, Session- II was started which covered following topics related to embedded C programming for interfacing the robot:

I. Motion Control using I/O ports.
II. Introduction to LCD interfacing

Day 2 (06/02/16) Saturday

In the morning session, following topics were covered:

I. Robot velocity control using pulse width modulation
II. Display of Data Array of eight elements on LCD

After Lunch, Session- II was started which covered following topics:

I. Analog sensor interfacing using Analog to Digital Convertor
II. Robot programming for white line following

After tea, there was a quiz and feedback session, a robotic kit was provided to those colleges who have submitted the letter of intent then Ms. Ashvini Deshmukh gave the vote of thanks.

The workshop ended with group photograph session.

26/2/16.
Praveen Saraswat
Team Leader

29/02/16
HOD, ME

SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY, MANAGEMENT & GRAMOTHAN, JAIPUR

Department of Mechanical Engineering

NOTE

Date: 02/02/2016

We have received a proposal of NMEICT project for setting up a Robotic facility under e- yantra program of IIT Bombay. We accepted the proposal and sent to IIT Bombay. The copy of proposal is attached herewith.

In the context of e- yantra program, IIT Bombay is organizing two day workshop at MGM's College of Engineering and Technology, Noida (UP), this is pre requirement for establishment of robotic lab. A team of four faculty members is going to participate in this workshop on "Introduction to Robotics" on February 5-6, 2016.

The team is as follows:

1. Mr. Praveen Saraswat, Sr. Lecturer, ME Deptt.
2. Mr. Manoj Kumar Sain, Reader, ME Deptt.
3. Ms. Vinita Agrawal, Reader, ECE Deptt.
4. Mr. Pallav Rawal, Lecturer, ECE Deptt.

Kindly sanction the ~~ODs~~ AL from 4/2/2016 (~~Afternoon~~) to 06/02/2016. Also approve the approximate expenditure for the same.

Approximate Budget: As per rules.

S. No.	Particular	Amount	Total	Remarks
1.	Travelling	2500x4	10,000	To and From including taxi
2.	Boarding and Lodging	4400x3	13,200	
3.	DA	1000x4	4,000	
	Miscellaneous	1000	1000 X	
		Total	**28200/-**	

may kindly be approved.

3/2/16
HOD. ME, Deptt.

1. Recommended and may be permitted to attend the workshop.
2. If approved an advance of Rs 20,000/- may be given.

S. K. Swami
3/2/16

Director (Academics)

SKIT/2015/684

Date: 18/12/2015

To
Principal Investigator
e-Yantra project
IIT Bombay

Subject: Expressing intent to participate in e-Yantra Lab Setup Initiative (eLSI)

Dear Sir/Madam,

We understand that the MHRD funded e-Yantra project is facilitating setting up of Robotics labs at engineering colleges with the goal of spreading Embedded systems and Robotics education.

In order to achieve the desired impact, e-Yantra would provide necessary support in the following manner:

1. Conducting workshops for a team of 4 teachers identified by us
2. Training the team of teachers through hands-on experiments in a step-by-step manner through Task Based Training (TBT)
3. Providing support and advice to set up a robotics lab such that by the time the teachers are trained, a robotics lab is set up at our college

On our part, we express our intent to participate in this nation-building effort by committing the following resources:

1. Team of teachers:
   Team leader: MR. PRAVEEN SARASWAT

   e-mail id of Team-leader saraswat_54@yahoo.com

   Team members: Mr. Himanshu Singh Rathore
   Ms. Vineeta Agarwal
   Mr. Pallav Rawal

2. Funds to set-up a Robotics lab: ---------2L---------- (Rs. 2L)

3. Creating a Robotics club for students to experiment with the robots

Sincerely, S L Surana

Stamp:

Name: DR S.L. SURANA
Designation: DIRECTOR (Academics)
Phone: 9198874441 0
e-mail: sls@skit.ac.in

IIT Bombay - e-Yantra Lab Setup Initiative (eLSI): Invitation toAttend the Two Day Workshop at MGM's College of Engineering and Technology,Noida, UP -- February 5 and 6, 2016

From: e-Yantra Support
Sent: Thu, Jan 28, 2016 at 2:35 am
To: kumar.shashi651@gmail.com, abhishek11_soni@yahoo.co.in, sls@skit.ac.in
Cc: ashvini@coet.in, vamshi@coet.in, Krishna Lala, e-Yantra Support

Respected Sir/Madam,

Greetings from e-Yantra!

e-Yantra announces the 2-day workshop on "Introduction to Robotics" for teacher teams from your region through the e-Yantra Lab Setup Initiative (eLSI).

The dates and venue are given below:

Date: **February 5 and 6, 2016 (Friday & Saturday)**
Venue: **Computer Center,**
MGM's College of Engineering and Technology,
A-09, Sector-62, NOIDA
Uttar Pradesh

Coordinator **: Prof. Ashvini Deshmukh**
Contact Number **: +91-99715-07111**
e-mail **: ashvini@coet.in**

There is no registration fee to participate in the workshop.

The registrations for the workshop are on the First Come First Serve (FCFS) basis. **Kindly contact the Coordinator to confirm your participation for the workshop before February 2, 2016.**

There are some colleges who have given the Letter of Intent (LoI). Such colleges are all confirmed to attend the workshop.

Those colleges who have not expressed their interest in the e-Yantra Lab Setup Initiative (eLSI) through a formal LoI **can also depute a team of four teachers for the 2-day workshop.**

Here are the modalities of the workshop:

1. No fee will be collected from any participant. Tea/Lunch will be provided on both the days of workshop.
2. **All traveling and staying expenses of the team members attending the workshops are borne by their respective colleges.**
3. Each participating college team member registers at the venue on the first day of workshop.
4. Teachers will be given a participation certificate from e-Yantra upon successful participation on **both days of the workshop**.
5. Teacher teams from colleges that have given LoI, who have successfully participated in both days of the workshop,will receive a **robotic kit** at the end of the workshop.These teams will participate in the Task Based Training (TBT).
6. Other teams will not be given a robotic kit unless their colleges also process the LoI.

What after the workshop?

1. Teams from colleges participating in eLSI by giving the LoI will participate in Task Based Training (TBT) to solve assigned tasks designed to include hands-on experiments using the robot, over a 3-4 month period. Teams participate in TBT online. No travel is required.
2. Colleges set up their labs during this 3-4 month period.
3. Certificates and 2 additional robotic kits are awarded to colleges at the end of TBT, during the

valedictory function when all the labs in the region are inaugurated simultaneously.
4. No substitution of team members will be allowed during TBT. Teachers who are trained through the 2-day workshop will participate in TBT.

Please click on below link to find the detailed schedule for the 2-day workshop:
Workshop Schedule

The format for the Letter of Intent (LoI) can be downloaded from the following link:
Letter of Intent

Two brief video tutorials on **"Embedded C Programming basics"**, which will provide quick review for teachers before attending the workshop, is included in this mail.

These tutorials outline all the essential concepts which will aid the teachers to better understand the contents of the workshop. Please find their video links below:

Basics of Embedded C (part 1) : https://youtu.be/yxq-xCq1Gg4

Basics of Embedded C (part 2) : https://youtu.be/k4fcKgiYsZk

We look forward to meeting you and your team at the workshop.

Feel free to contact us at support@e-yantra.org should you have any query.

Best Wishes,

e-Yantra Team
IIT Bombay.