



ATHARVA EDUCATIONAL TRUST'S
ATHARVA COLLEGE OF ENGINEERING

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Report on e-Yantra Symposium 2023-24

(Held on 5th & 6th April 2024)

Name of Event :- e-Yantra Symposium

Date :- 5th & 6th April 2024

Venue :- Indian Institute of Technology-Bombay (IIT-B)

No. of Participant Colleges :- 500+ Colleges pan India

No. of Team Members :- 4 Members

Staff Coordinator: Prof. Priyanka Tripathi

About e-Yantra Symposium

E-Yantra is an initiative hosted in **IIT Bombay** (in CSE Dept.) To spread a wide variety of technical skills across colleges world-wide. The e-Yantra Symposium is a national event that brings together researchers, educators, incubators, industry experts, and students to explore innovative approaches to embedded systems, design thinking, robotics and automation. It is an important event in the diary of e-Yantra faculty and students. A variety of engagements, such as panel discussions, lightning talks by IITB faculty, lab visits, poster presentations and exhibition of cutting-edge technologies, contributes to a holistic experience for attendees. The showcasing of projects developed by e-Yantra Innovation Challenge finalist teams adds a practical and competitive element to the event, allowing participants to witness real-world applications and innovations. Moreover, the networking opportunities provided by the symposium offer a valuable chance for individuals to connect with peers and experts from different backgrounds. This exchange of ideas and experiences can lead to fruitful collaborations, knowledge sharing, and the exploration of new possibilities in the realm of embedded systems, design thinking, robotics, and automation.

Many renowned personalities were present there for the panel discussion and for addressing the opportunities in defense sector and other industries promoting startup for better future of the country.

The personalities present there were:

- 1. Dr. Kota Harinarayana – Aircraft Designer, Programme Director and Chief Designer of India's Light Combat Aircraft.*
- 2. Commodore. Ajay Sharma (Retd.) – Vice President, Head Marine Systems/Defense Electronics, R&D, Defense Business development, Bharat Forge Ltd*
- 3. Rear Admiral AS Seth (Retd.) – Ex-Director General, WESEE.*
- 4. Rear Admiral. DK Goswami – Admiral Superintendent, Naval Dockyard, Mumbai.*
- 5. Prof. Deenesh Singh – Vice Chair & Chair EC, J & K Higher Education Council.*
- 6. Prof. Ganesh Ramakrishnan – Professor, CSE, IIT Bombay*
- 7. Prof. Kavi Arya – Principal Investigator, e-Yantra, IIT Bombay*
- 8. Mr. Kiran Deshpande – Co-Founder - Mojo networks, Past-President TIE Pune, TIE Global Board Member*
- 9. Mr. Kiran Shesh – TiH Foundation, IIT Bombay*
- 10. Prof. Milind Rane – Professor Heat Pump Laboratory, IIT Bombay*
- 11. Prof. Paritosh Pandya – Adjunct Professor IIT Bombay*
- 12. Colonel Prasad – Indian Army DRDO*
- 13. Ms. Richa Verma – Principal, 7i World School, Gwalior*

14. *Commodore Sandeep Wadhwa – Indian Navy*
15. *Prof. Dhakil Ahmad Romshoo – Vice Chancellor, IUST, Kashmir*
16. *Pro. Shobha Badar – Director, CIC, New Delhi*
17. *Prof. Shubha Pandit – Ex-Principal, K J Somaiya College of Engineering*
18. *Prof. Surya S. Durbha – Professor & Head, CSRE, IIT Bombay*
19. *Prof. Umesh Rai – Vice Chancellor, University of Jammu*
20. *Prof. Varsha Apte – Professor & Head, CSE, IIT Bombay*
21. *Dr. VK Rai – Retd. Naval Officer*
22. *Captain Victor Pratap Singh – Indian Navy*

Day 1: 05-04-2023 : Building a Defence Startup Ecosystem

Prof. Milind Atrey, Dean (R&D) from IIT Bombay inaugurated the symposium with Lamp lighting and gave an overview of e-Yantra. After that Prof. Kavi Arya gave the present status and progress of e-Yantra.

E-Yantra is a robotics outreach program funded by the Ministry of Education and hosted at IIT Bombay. The goal is to harness the talent of young engineers to solve problems using technology across a variety of domains such as: agriculture, manufacturing, defence, home, and smart-city maintenance and service industries. e-Yantra complement the existing higher education system Project Based Learning - i.e. “Learn by Doing”. It trains students, teachers and institutions by establishing an innovation culture tasked with solving real problems using technology. e-Yantra builds labs in colleges to facilitate training and to connect students and teachers to a wider innovation community. He explained the various activities run by e-Yantra like-eYRC, eYIC, eLSI, eFSI, eYSRC, and eYMOOC.

Next there was a talk given by hon, Padma Shri Dr. Kota Harinarayana, the programme director and chief designer of India's Light Combat Aircraft (LCA) Tejas Programme. He addressed everyone about the defence system of the LCA Tejas how that its was made and the journey.

Next there was a session called “**Innovation challenge business pitch**”. In the session, students from different colleges presented their business ideas to potential investors for start-up business. Students explained their prototype and goals to attract investors to gain buy-in. Participants visited the Project exhibition that displayed top10 e-YIC prototype models from various colleges all over India.

The projects are namely - Sensorium, Nigrani-Mosquito catcher, Smart Bin, Dhawani, My Farm-Hydrogrow Pro, Digital Eye for visually impaired, Cotton Ginning Machine, Visionmate, Helping Hand, and Hydroponic System. Projects are really appreciating and attracting part of the event.

Next there was IITB research meet where research presentations were given by e-Yantra college faculty members. It was interactive and informative session. All the researchers briefed their on-going activities in the department. As a part of symposium 'DesignUp' which has collaborated with e-Yantra to create a special workshop "**Jab We Met-Design meets Engineering**" by **Mr. Amit Krishn Gulati** to sensitise engineers to the importance of Design Thinking. In the Design workshop, eminent speakers gave insights to participants to solve their problems. Designer, Juneza Niyazi shared her journey of co-creations with small holder farmers. Designer, Nishita Mohta focused on the power of inner critics and how to come out from inner fear. Designer, Tanvi Srivastva shared a story for design of a product. The session was very much interesting and it brought how the designing aspect is important in engineering to develop products.

The day was ended up with Stand-up comedy by **Piyush Sharma – Alumini of IIT Bombay**.

Day 2: 06-04-2023: Implementing NEP2020 "Design your Degree"

The session for day 2 was started with welcome speech by **Prof. Siddhartha Ghosh**, Dean (Educational Outreach). Next, Prof. Kavi Arya (e-Yantra) overviewed "Measuring the Josh on e-Yantra Campuses". He discussed the achievements of various colleges under e-Yantra. He also announced top ten colleges having best e-yantra Lab set up in their colleges. Then, one of the recent successful projects "**Vande Bharat**" was discussed by **Mr. Sudhanshu Mani**. As part of the "**Make in India**" initiative, the Integral Coach Factory (ICF), under the direction of Sudhanshu Mani, created and produced the Vande Bharat. The Vande Bharat Express, formerly known as Train 18, is an electric multiple-unit train operated by Indian Railways. The train has achieved a maximum speed of 180 km/h during testing.

The next session was panel discussion where "**The challenges of implementing National Education Policy - NEP-2020**" topic was discussed by panellists- **Mr. Vikas Rastogi, Dr. Vinod M. Mohitkar, Prof. Paritosh Pandya, Dr, Rajan Welukar, Mr.Ashank Desai, and Prof. Shubha Pandit**. The session was interesting as **Prof. Kavi Arya** raised the questions and every one of the panel members have shared their views on NEP and its implementation according to the questions.

There was a Panel Discussion: 'Building High - Tech Startups' where the role of e-Yantra Labs in Industry/Academia interaction was discussed by Prof. Deepak B Phatak, Mr. Sriram Parthasarthy, Mr. Kiran Deshpande, Mr. Vivek Pawar, Mr. Sudhanshu Mani. In the session participants learnt how academia& industry can collaborate to fulfil the dream "Make in India".

In the next session, Innovative Projects from e-Yantra Colleges” and e-Yantra Lab Presentations were displayed. There were special talks on ‘Taking Ideas to Products in MedTech - A BETiC Perspective” by Dr. Rupesh Ghyar - BETiC Lab for Medical device Innovation and “A Model for Building High-Tech Startups” by Mr. Vivek Pawar (Founder, Sankalp Semiconductors)

In the end the award ceremony and valedictory function was started. Prof. Kavi Arya has distributed the certificates to best eYIC projects team winner and poster presentation winners for college ranking. Feedback session was also conducted quickly. e-Yantra team was highly appreciated by all participants for their co-ordination and support.

The concluding session was started with vote of thanks speech by Prof. Kavi Arya. He greeted everyone presented in the event, followed by expressing his gratitude to the guests. He presented a report on the entire happenings of two days. He shared words of encouragement with the students quoting the need to invest in improving the practical know-how of every engineering student apart from the theoretical knowledge they gain in the course of their study. He also gave tips to the faculty members to encourage their students so that students can participate in e-Yantra activities.

The e-Yantra Symposium provided an excellent platform for networking and exchanging ideas with peers and experts from various fields.

Theme for e-Yantra Symposium - 20244
NEP2020 & Building a Defence Ecosystem!



Team Members :-

Sr. No	Name	Roll No.	Branch/Year
1.	Manan Kotecha	50	ELEC / 3
2.	Kamlesh Kumavat	13	ELEC / 3
3.	Parv Parikh	60	ELEC / 3
4.	Sunil Kadam	49	ELEC / 3

Team Photo :-





Finalist Projects from E- Yantra Innovation Challenge:





