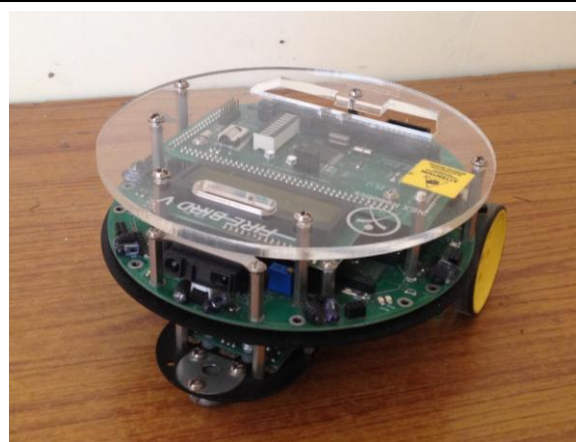


A Report on 2 Day Workshop on Introduction to Robotics

A 2-day workshop on Introduction to Robotics for institutes from North East India was held in Tezpur University, Tezpur, India on April 29 - 30, 2016 under e-Yantra. e-Yantra – a project in the Department of Computer Science and Engineering, Indian Institute of Technology Bombay - is a flagship project of MHRD through the National Mission on Education through ICT (NMEICT) to spread Embedded systems and Robotics education in colleges across India.

The workshop was fortunate to have participation from 12 institutes representing Assam, Meghalaya and Mizoram. Four faculty members from each participating institutes registered for the workshop following an automated process.

The workshop started with the welcome address by Dr. Nayan M Kakoty, Workshop Coordinator followed by the Inaugural address by Professor Dhruva K. Bhattacharyya, Dean-ACADEMICS, Tezpur University. Citing the Robotics activities at Tezpur University, Professor Bhattacharyya encourage all the participants to become an active element in the nation building processes through this robotics lab setup initiative and project based learning in embedded systems and robotics. Dr. Saraswathi Krithivasan, Indian Institute of Technology Bombay address the gathering sharing the process of e-Yantra lab setup initiative and briefing about take home and follow up action of the workshop.



Firebird V

Following the inauguration, the work shop proceeded to hands on training session. This session was conducted by Pavan Attavane and Abhishek Shanbhag, Senior Project Technical Assistants, e-Yanta, Indian Institute of Technology Bombay. Teams of participants from each institute were provided a robotic kit, Firebird V, and accessories, for hands on. The training covers introduction to the Firebird V robot, introduction to AVR microcontroller and programming environment, simple motion control using I/O ports, robot velocity control using pulse width modulation, sensor interfacing, interrupt programming, closed loop position control of robot using position encoders. At the end of the hands on, participants have completed the projects on zig-zag line following robot, obstacles avoiding navigation etc.

Follow up Action

Following the learning in this workshop, the participants will be going through the task based training (TBT). TBT is an endeavour to train teachers already familiar with Firebird V robot to implement hands-on experiments as the second phase of training.

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A total of 12 institutions from Assam, Meghalaya and Mizoram have participated in the workshop. The participating institutes were:

1. Assam Agriculture University, Assam
2. Assam Engineering College, Assam
3. Assam Women's University, Assam
4. Central Institute of Technology Kokrajhar, Assam
5. Dibrugarh University, Assam
6. Gauhati University, Assam
7. Indian Institute of Information Technology Guwahati, Assam
8. Jorhat Engineering College, Assam
9. National Institute of Technology Mizoram
10. North-Eastern Hills University, Shillong
11. Regional Institute of Science and Technology, Meghalaya
12. Tezpur University, Assam



Professor Dhruba K. Bhattacharyya



Acknowledgement

The team of 2 Day Workshop on introduction of robotics wishes to thank all participants who have actively joined in the workshop and assisted in one way or another for the initiatives to spread the embedded system and robotics education in the North East India. We sincerely thank them all. We would also like to express our gratitude to the Tezpur University authority for their role in ensuring the success of the workshop.