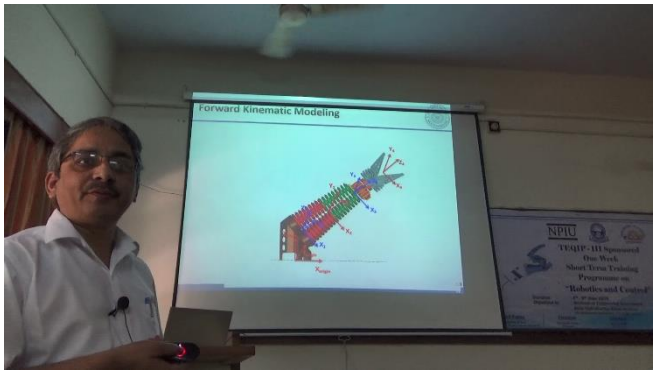
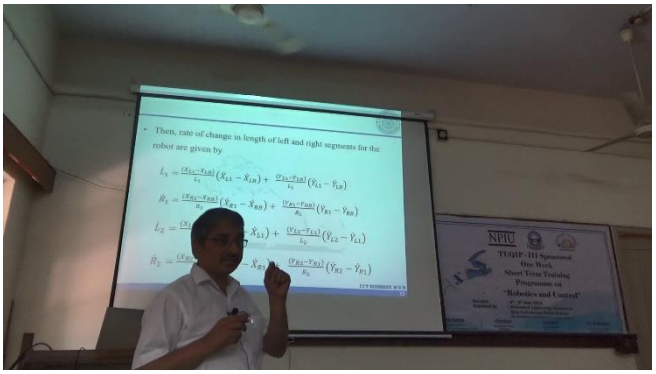
Report on TEQIP-III Sponsored One week STTP
on
"Robotics and Control"
Organized during 4-9 June, 2018 at Mech. Engg. Dept., B V Mahavidyalaya, V. V. Nagar

The influence of Robots in industries and society has been increased rapidly. There are almost all the areas in which we find the application of robotic technology and hence the robotic research field is expanding. Researchers around the globe are involved in advanced robotic systems to address the challenges. Keeping this in mind, to make the faculties of Engineering Institutions up-to-date in these areas, TEQIP-III sponsored STTP on "Robotics and Control" was organized at Mech. Engg. Dept., B. V. Mahavidyalaya, from 4-9 June, 2018. The STTP was attended by 37 participants from 13 different Engineering Institutions of Gujarat and Maharastra, including 15 faculty members, 16 PG and Ph. D. Research Scholars and 6 internal faculty members. The participants were benefited by the 3 Expert faculties from IITs (Roorkee, Madras and Jodhpur), 2 Experts from reputed industries and 7 Experts from Engineering Colleges.

The training program was inaugurated by lighting the holy Deep on 4th June, 2018 (along with other two training programs for Production and Electronics Engineering Departments) with the esteem presence of Er. Bhikhubhai Patel, President of function and Chairmen CVM, Er. Mayurbhai Patel, Hon. Jt. Secretary CVM, Dr. Indrajit Patel, Principal BVM, Chief Guest Er. Jayanta Mukhopadhyay, Vice

President R&D Elecon Engineering Co. Ltd., Dr. P. M. George, HoD, Mech. Engg., Dr. A. M. Trivedi, HoD, Prod. Engg., Dr. T. D. Pawar, HoD, Electro. Dept. and Dr. S. D. Dhiman, Coordinator, TEQIP-III Project. The session was followed by the Key Note address by Prof. P. M. Pathak, IIT Roorkee on latest trends in the field of Robotics and control. During the afternoon sessions, Prof. Bhavesh Mevada from Parul University delivered a lecture on Introduction to Robotics. Prof. Faiju Malek, from GCET, talked on Homogenous Transformations and DH-parameters.



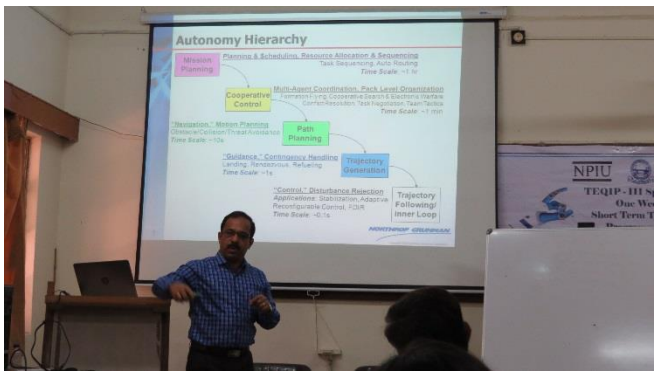


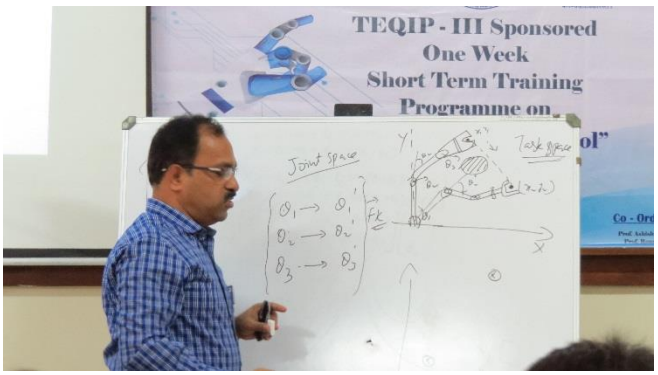
On 5th June, 2018, during morning sessions, Prof. Faiju Malek, from GCET, narrated about Forward and Inverse Kinematics of Robotic Manipulator. During post lunch session again Dr. Mehul Gor, GCET, explained Manipulator Differential Motions and Statics.

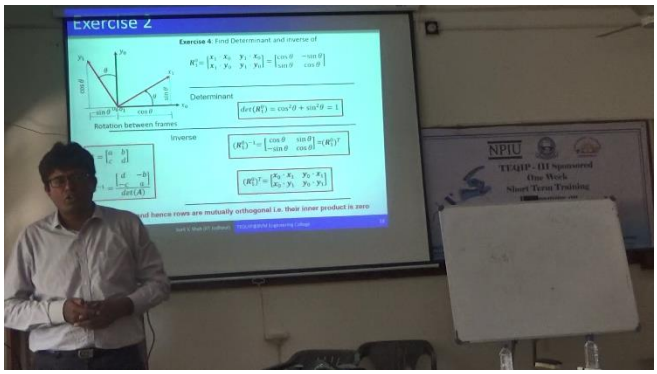
Prof.(Dr.) T. Asokan, IIT Madras talked on Trajectory Generation and Motion Planning on 6th June, 2018 during morning sessions. During post-lunch session, Dr. Suril Shah, IIT Jodhpur talked on Robot Dynamics. Prof. S. P. Joshi, BVM, discussed about General Control Theory during last session.

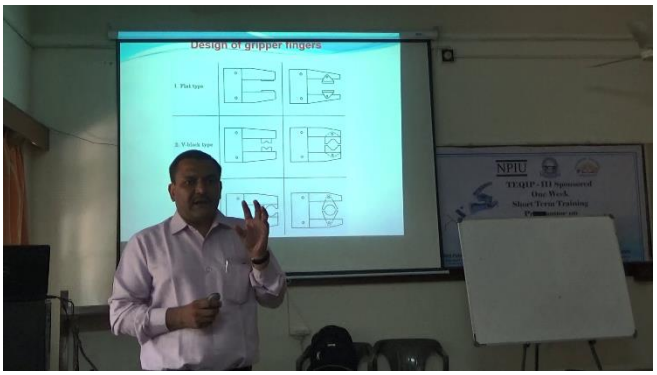
On 7th June, 2018, again Dr. Suril Shah, IIT Jodhpur continued on Robot Dynamics during morning session followed by Dr. Y. D. Patel, ADIT, highlighted about Robotic Grippers and Sensors. Next, Dr. D. M. Patel, BVM, discussed on Robot Control using Microcontrollers. Lastly, Dr. Vivek Deshpande, GCET talked on Robotic Applications.

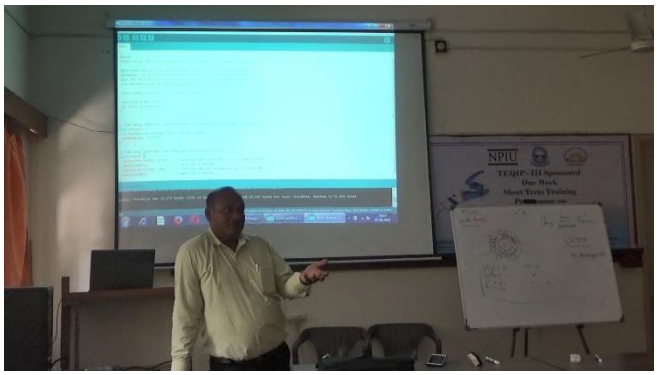
On 8th June, 2018, a full day had been spared as Project Day. During morning sessions, Prof. Kenal Tandel, GIDC Degree College, Navsari, demonstrated the use of RoboAnalyzer, a simulation software.









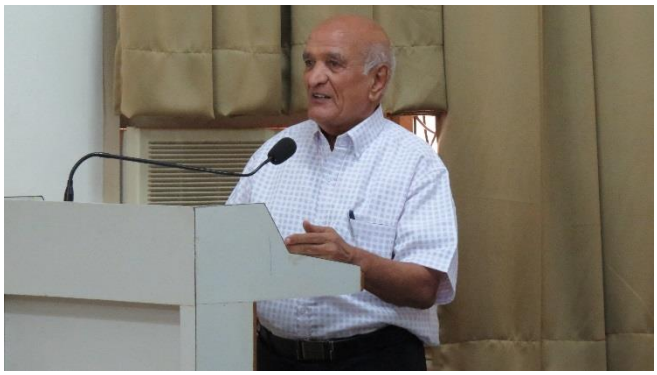


PG students of BVM, Mr. Manan, Mr. Nirmal and Mr. Jay demonstrated how to construct a 1-DoF and 2-DoF robotic manipulators. During the sessions, the participants were given hands-on training on Robotic Software and Hardware.










Dr. K. Shiva Prasad, Head, Corporate R&D, ELECON Group, delivered a talk on Robotics – A Learning Tool for Students and Professionals during the morning session on 9th June, 2018. Lastly, during the Valedictory Function, the certificates had been given to all the participants of two parallel STTPs in the

august presence of Er. Mayurbhai Patel, President of function and Hon. Jt. Secretary CVM, Dr. Trushit Upadhyaya, CHARUSAT, Chief Guest of the function, Dr. Indrajit Patel, Principal BVM.

Hopefully such STTPs would percolate advances in relevant technologies aimed at improving the quality of the teaching-learning process. This will certainly encourage the teachers and students to take up the challenges in such kind of interdisciplinary and multidisciplinary subject like Robotics and Control.

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