NBKR Institute of Science & Technology: Vidyanagar

Robotics Research & Training Center

About: The center is established in 2016 under Grant sanctioned to Dr.CH. R Vikram Kumar Professor Mechanical Engineering under AICTE RPS. Center is also associated with the e-entra IIT Bombay and Robotic society of India. The center is equipped with the 6-axis ABB Make Industrial robot along with 60 robotsudio licenses for simulation and 3D Printing.

Infrastructure facilities:

S.No	Name of Equipment	Cost in Lakhs
1.	Robot 1RB 1600	12.75
2.	Robot dressing ,cable,gripper and pedestal set	3.14815
3.	Air compressor motor+pump	0.22
4.	Robot accessories	1.80473
5.	Dell Desktop 3040 Model ---- 19	6.12085
6.	Dell desk top ----1	0.572
7.	Epson L360 printer	0.104
8.	3 D printer and its accessories	1.25071
9.	Microsoft X box one kinetic sensor + adaptor for Xbox one s4 windows motion controller B076Y1VPBC	0.12200

Ongoing Research

Currently PhD scholars are working on computer vision for robots and 3D printing using industrial robot in the center .The lab equipped with is good computational facility for simulation and Research.

Area of Research

Computer vision, Robotics, 3D printing, kinematics, unmanned aerial vehicles

Research Publications:

1. Pramod Kumar Thotapalli[1] CH. R. Vikramkumar[2]B.ChandraMohana Reddy [3] Object tracking on moving conveyor using Image subtraction With Gaussian Mixture model(GMM) published and Presented XXV Silver Jubilee Congress & National Conference Emerging Trends In

Mathematical Sciences Application In Engineering Sciencesorganized by Andhra Pradesh Society for Mathematical Sciences Hosted at NBKRIST 9-11 December 2016.

2. Pramod Kumar Thotapalli 1 CH. R. Vikramkumar 2 B.ChandraMohana Reddy 3 Trace the centroid of coloured object on a conveyor using Digital Image Processing Published and Presented International Conference on International Conference on Manufacturing Technology and Simulation (ICMTS - 2017)organized by Mechanical Engineering Department ,7 th& 8 th July 2017,IITMadras
3. Pramod Kumar Thotapalli[1] CH. R. Vikramkumar[2]B.ChandraMohana Reddy [3] Feature Extraction Of Moving Object Over A Belt Conveyor Using Background Subtraction Techniqueaccepted for 10thInternational Conference on Precision, Meso, Micro and Nano Engineering (COPEN 2017) organized by Mechanical Engineering Department ,7 th - 9 th Dec 2017,IITMadras
4. Pramod Kumar Thotapalli[1] CH. R. Vikramkumar[2]B.ChandraMohana Reddy [3] Applications of Industrial Robots with artificial Intelligence through Machine VisionPresented and Published Paper at TEQIP-III Sponsored two day National Level seminar cum Workshop during July 30-31 ,2018, organized by Dept of Mechanical Engg @ SVU College of Engg, Tirupati, India.
5. A. Sri Harsha [1] CH. R. Vikramkumar [2] "Importance of Fusion Deposition Modeling (FDM) for Industrial Applications"Presented and Published Paper at TEQIP-III Sponsored two day National Level seminar cum Workshop during July 30-31 ,2018, organized by Dept of Mechanical Engg @ SVU College of Engg, Tirupati, India
6. Pramod Kumar Thotapalli[1] CH. R. Vikramkumar[2]B.ChandraMohana Reddy [3] A New Approach to Control the Position of Joint Arm Robot Using Image Background Subtraction Technique Presented and Published Paper at 7th International & 28th All India Manufacturing Technology, Design and Research Conference 2018 (AIMTDR 2018) 13th-15th Dec 2018 , Anna University Chennai.
7. A. Sri Harsha [1] CH. R. Vikramkumar [2] "Fused Deposition Modeling Using 6-Axis Industrial Robot" Presented and Published Paper at 7thInternational & 28th All India Manufacturing Technology, Design and Research Conference 2018 (AIMTDR 2018) 13th-15th Dec 2018, Anna University,Chennai.


ABB