

# **NEXT LEVEL INNOVATION IN ROBOTICS AND AUTONOMY**

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**Title: Bin-Emptying Revisited: Object Recognition, Pose Estimation and Manipulation**

**Abstract:**

The talk will start with some of the initial work in object identification and recognition in IITD. We will then focus on the problem of emptying a bin full of feature-less pellets: engineering approaches, and getting a state-of-the-art fast system for emptying a boat full of pellets in random orientation. The system uses a bit of machine learning, robust estimation, uncertainty handling and fits in with the multi-pronged multi-disciplinary work in the Program on Autonomous Robotics Laboratory at IIT Delhi.