**Abstract:**

Conveyor tracking in modern production employing collaborating robots with Vision cameras is an innovative technique. This method allows cobots to interact dynamically with moving goods on a conveyor belt, increasing efficiency, precision, and adaptability. Thanks to vision cameras, cobots can accurately detect, locate, and track things in real-time even when their shape, speed, or orientation change. The cobot can now perform tasks like sorting, assembly, and pick-and-place with minimal human help thanks to the integration of vision technology. The technical elements of conveyor tracking with cobots are addressed in this abstract, with a focus on the contribution of vision systems to boosting automation potential, minimizing mistake rates, and permitting adaptable manufacturing settings. Additionally, my thesis discusses the challenges in synchronizing cobot actions with fast-moving conveyors and the potential benefits for industries like logistics, packaging, and electronics assembly. The thesis work consists of integrating a collaborative environment of cobots which can be used for conveyor tracking experiments with a Vision camera. The experiment target is to improve the tracking position of the object and capture different shaped objects in the conveyor belt. The tracking seems to be the most advantageous and needed application in the current scenario for industrial applications. The tracking setup comprises two cobots, a conveyor belt, 2 Grippers, different-shaped objects, and a Vision Camera. Once the Conveyor belt moves the differently oriented shaped objects, the camera captures different picture and poses of the objects and its PCS (part coordinate of the system), this information is then sent to the 1st robot that helps in sorting out different shaped objects. Moreover, the conveyor belt consists of a capture zone where the 2nd robot syncs with the sorted object thereby picking up the object and placing it in the required target position (different-shaped boxes) provided by the user. Ultimately once the Boxes are filled up with items the boxes are removed by conveyor track or any other moving means.

**Keywords:** Collaborating cobots, Vision camera, synchronizing, Capturezone,