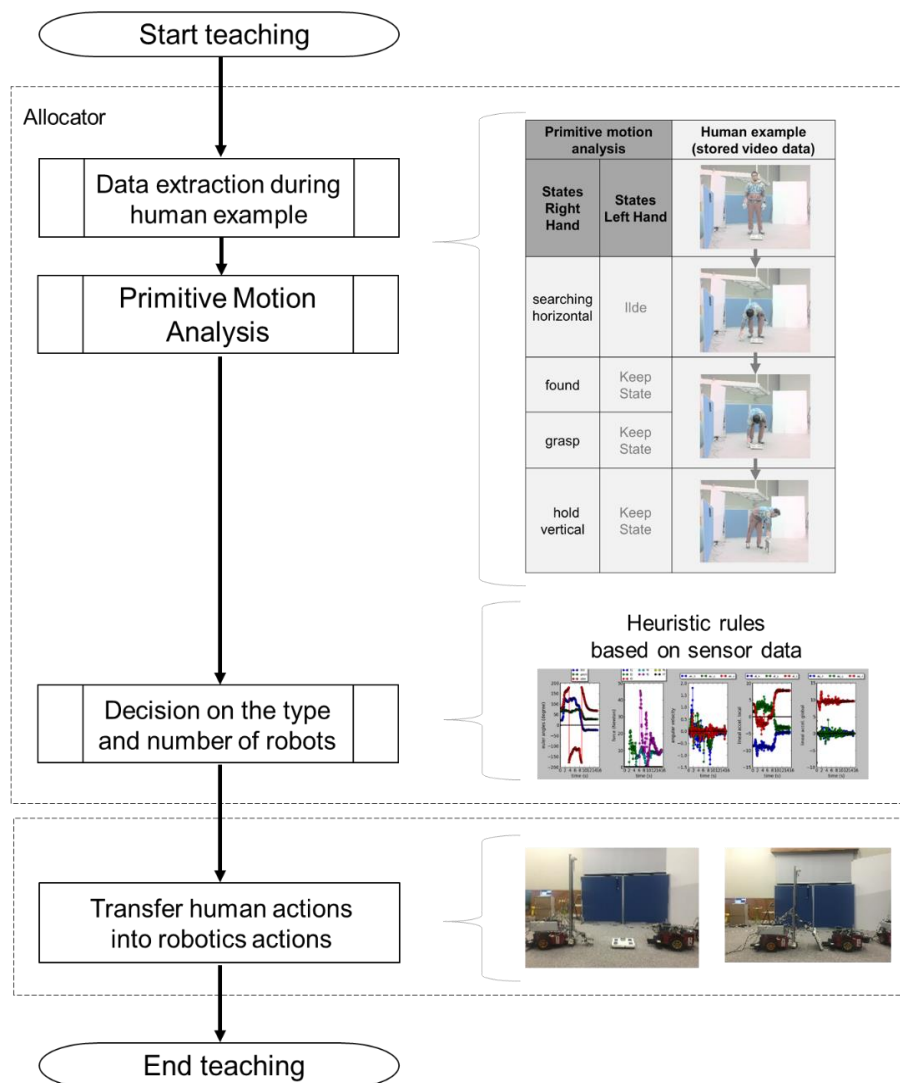


# Teaching Multiple Robots by a Human

In this study, we present a novel framework to address the problem of teaching a task performed by a single human to a set of multiple small robots <sup>[1]</sup>. Specifically, we focus on transferring information on how to perform manipulation tasks to multiple robots by a single human example. Data is extracted and then analyzed during a teaching process which consists in detecting human actions, classifying the task and deciding the number and type of robots to teach. Finally, according to the task requirements, robotics behaviors may be assigned in an independent or collaborative way into the created robots program. To illustrate the complete system, example of one manipulation task taught to multi-robots is shown in Fig 1.



**Figure 1.** Manipulation task taught to multiple robots by a human example: flipping a bascule

<sup>[1]</sup>Figueroa Heredia Jorge David, Rubrico Jose I. U., Ota Jun, "Teaching multiple robots by a human", Proceeding of the ACM/IEEE International Conference on Human-Robot Interaction (HRI 2016), (pp. 613-614). Christchurch, New Zealand.