# Robotic Gripper Design: Basic Concept and Evaluation.

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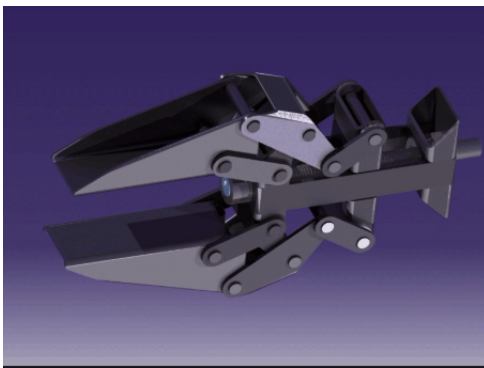**Notes:** 12 hours per week

## 1. Introduction

Review about 1st Iteration.



**Fig. 1.** The Universe

### 1.1. Iteration 1 description by first Estimation

**TMM part :**

- Open a review article and choose a flu scheme, modeling complexity

- Choose scheme

- Calculate simulate scheme (read book, Kinematics+Dynamics)

MVP is planned to be done during the first iteration of the project development, but now it is shifted to the end of the 2nd iteration due to small skill amount.

### 1.2. What have I done during the first iteration (task, hours spent, status, results)

- Open a review article and choose a flu scheme, modeling complexity:
  Sources from which I try to choose my Gripper: (1 hour)
  Link to list of grippers.

  - Link to Gripper, chosen be me
    Advantages:

      * self-locking mechanism
      * good for task to grab a brick
      * exist giff to see how mechanism can work => better understanding

    Disadvantages:

  - can be slow, need fast motor

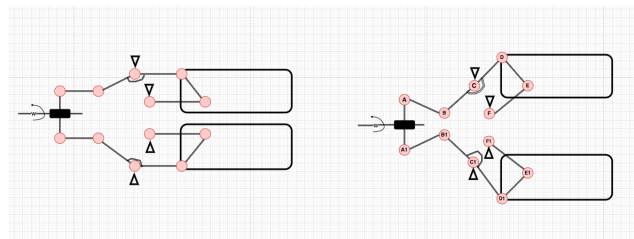- Chosen scheme structural analysis (pictures in GitHub with explanation)(2 hours)



**Fig. 2.** The Universe

- Read support material, to understand: "Theory of Mechanism and Machines (1988) I.I. Artobolevskii"(pages about Structural Analysis and Kinematics) (5-6 hours)

- Kinematics on blank list , now in process in Matlab Coding this kinematics (link to GitHub in References). (1 hour)

- CAD (download soft - understand how to work with it).
  Download Fusion 360, watched some videos to understand how to work with it - (2 hours) (problems with installing and tutorial)

### 1.3. Current issues: What you did not do like planning, or task still in progress (the reasoning why that happened and what you can improve during the next iteration to prevent that)

- Dynamics not done (not enough time to do it, and need to read support material)

- Kinematics not finished (in process of finishing in code)

- Verification, movement work (not start)

**1.4. What are you planning to do for the next iteration: extend your initial project proposal plan with more information related to the second iteration, add hours to the planning activities alter (if needed) your initial project proposal plan. If you modify the initial plan, then explain the reasons for altering**

ITERATION-2-1702-0203

- Dynamics - 6 hours

- Finish Kinematics - 2 hours

- Verification, movement work - 4-5 hours

- Optimizations in CAD - 5 hours

- Checking the real balance in power - 3-4 hours

- Making model in 3D printer - not estimated yet

## 2. References

- Link to GitHub repository

- Link to Trello