

Type Synthesis Process

October 18, 2025

Brief Answers to Key Design Questions

Provide one- or two-sentence answers to each question below. Replace the placeholder line after each item.

1. **How many links and joints are required for the desired degrees of freedom? (See Eqn 1)**

Brief answer:

2. **What are the link types, and how many of each are needed for this link set? (See Eqn 2)**

Brief answer:

3. **How many different link sets satisfy the desired degrees of freedom?**

Brief answer:

4. **How many linkage topologies can be formed from these sets of links?**

Brief answer:

5. **How many unique topologies are available from which to choose?**

Brief answer:

6. **How many ways can a ground link be chosen for each topology?**

Brief answer:

7. **How can one predict if any topologic inversions are inherently better than all others for the task at hand?**

Brief answer:

- 8. How many ways can the types of joints required to satisfy the task be distributed throughout the linkage?**

Brief answer:

- 9. How many different links could serve as the input drivers?**

Brief answer: