**A Computational Framework for Cooperative 3D Printing Schedule**

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**Cooperative 3D Printing (C3DP)** is a novel concept that integrates multi-robot system with 3D printing. It envisions large number of 3D printing robots along with assembly robots, working together to complete a print job. Cooperative 3D Printing mitigates the prominent issues of conventional 3D printing system without compromising the quality of the part.

- C3DP discretizes the continuous 3D printing process in discrete inter-coupled stages as shown on the flowchart on the right.

**Research Questions**

- **RQ1:** What chunking strategy can be used to divide a part into smaller chunks so that no post processing is required after C3DP?
- **RQ2:** What are the constraints (geometric, chunking and, scheduling) that must to be satisfied in order to enable cooperative 3D printing?
- **RQ3:** What approaches can be taken to integrate different stages of C3DP in a robust way?

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**Flowchart of the framework of computational framework**

1. **Introduction**
2. **Chunking (RQ1)**
3. **Scheduling (RQ2)**
4. **Computational Framework (RQ3)**

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**References**


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