



Fig. 13. Sliding orbits between upper and middle layers.

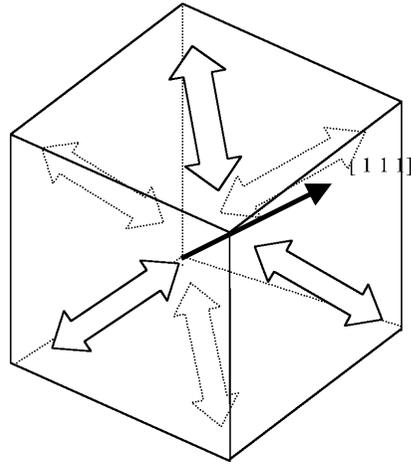


Fig. 14. Sliding direction on each facet of cubic jigsaw puzzle.

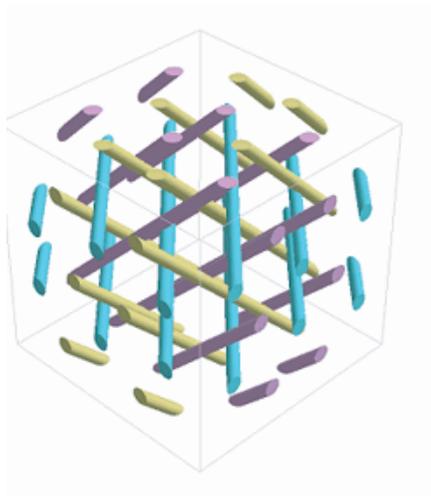


Fig. 15. Orbits around $[111]$ screw axis in cubic jigsaw puzzle shown in Fig. 12.



Fig. 16. Solid $3 \times 3 \times 3$ model produced by STL.

4. 3DJG

The jigsaw puzzle is one of the most popular puzzles. However, a 3DJG has not been developed to date as far as the authors are aware. Some solid jigsaw puzzles such as a glove or the Eiffel Tower are produced but they are a surface-covering-type 2D jigsaw puzzle essentially.