

We apologize for not answering Reviewer 4's comments earlier, but we were not sent the review until now. We thank the reviewer for the careful read and helpful feedback. Responses to the reviewer's comments are addressed inline below.

----- REVIEW 4 -----

Q1) Definitions 1-6: Shouldn't the section curve restricted to be planar, because the resulting shape is a generalized cylinder. Currently, "joint planes" exist as many as the number of joints, but this should be unique. Also, this section plane should be parallel after the sweeping process. Can you simplify the definition from this point of view? The current definition has a freedom that is not used afterwards.

A1) No, the joint planes may be distinct for each joint, and the final folding need not be a generalized cylinder. It just happens to be the case that our construction has a common joint plane at all times (not a generalized cylinder though), but it breaks for relatively simple cases.

For instance, the strip narrowing gadget in Figure 4 is not a generalized cylinder. Also, if you fold the beginning of the strip narrowing gadget (Figure 4(a)-(c)) in half with a crease following the direction of the strip, the joint planes no longer coincide (in fact they become orthogonal). The photo linked below shows this.

<https://tinyurl.com/ydh5ll8u>

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Q2) What does it mean by "valid" in Proposition 1? Also, shouldn't it be "non-joint node" that the distance will not change? Wait, what happens when non-joint node collides with the joint? Does the node transfer to the adjacent segment or is merged to the joint? What is the purpose of "proposition"?

A2) This is now Definition 8. Good point, we changed it to non-joint nodes for clarification. The joint node is moves along the cross section, and the nodes that pass through it transfer to the adjacent segment.

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Q3) Definition 9: What is the definition of "folding"? Shouldn't it be the extruded surface instead of folding?

A3) This is now Definition 10. We are referring to the final folded state, which is formed by gluing the trapezoids together. This can be any straight crease origami folding (decomposed into trapezoids and degenerate trapezoids i.e. triangles).

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Q4) There are duplicate theorems and property numbers. (two Theorem 1, two property 1). I stopped following the theorems after this duplication. I would like to review them after the revision.

A4) Sorry about that. It has been fixed. We have also used unified numbering for Theorems, Lemmas, and Corollaries. Thank you for pointing this out.

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