

Title: Repeat length of patterns on weaving products

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This paper models the weaving of strands in fabric using cellular automata. Mathematically, the paper is correct, well-motivated, and thoroughly explained. The author has a nice theoretical result with a tangible application.

In the original version, my main critique was about organization. This exposition has been nicely streamlined since the previous draft. I have a handful of minor comments below. Once these corrections are addressed, I recommend this paper for publication in the Rose-Hulman Undergraduate Mathematics Journal.

- p. 1, column 2, line 7: Perhaps it would be better to say “to make the problem simpler” instead of to make it “easy”.
- p. 3, first paragraph of section 2.2: It may be better to move the parenthetical comment to the end of the paragraph, so that it doesn’t break up your comments on unpaired strands.
- p. 3, column 2: Perhaps give a parenthetical comment of what “ N ” stands for? One might expect “ U ” for unpaired, but presumably “ N ” has meaning, such as “null”?
- Throughout the paper: when you type x'_i the $'$ seems further from the x_i than it should be. You might double check your typesetting here.
- p. 6: Three lines after Figure 14: “boarder” should be “border”.
- p. 6-7: It is atypical to have a proof environment within a proof environment. Instead, if you need to prove several claims to get to a bigger proposition, each claim can be its own Lemma with a proof environment. Then you can prove the proposition after all the Lemmas by citing the Lemmas in your explanation.
- p. 7: There is an undefined reference to Remark ?? towards the end of column 2.
- p. 8: Consider actually putting your conjectures in Conjecture environments similar to how you typeset propositions, to make them stand out more than a bulleted list. Perhaps sections 5.2 and 5.3 could just be combined into one future work section.

Changed "easy" to "simpler"

Moved the comment to the end of the paragraph, removed parenthesis, and rephrased the sentence.

Added the comment that " N " stands for "nonspecific" to column 1, the paragraph under Definition 2. This is where " N " first appears.

Fixed

Corrected spelling

For Propositions 2 and 3, wrote subproofs as lemmas, and re-organized the proofs for the two propositions

Changed it to "section 3". This problem is caused by a structural change in the previous revision. Also added the definition of "width" at the end of section 3.

Replaced the bulleted list by conjecture environments. Combined sections 5.2 and 5.3 into one Future Work section.