Review of: "A model of octopus epidermis pattern mimicry mechanisms using inverse operation of the Turing reaction model"

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The author proposes a model of the mimicry mechanism of octopi by using inverse operation of the Turing reaction model. It shows that this learning mechanism is realized by extracting the characteristics of environmental patterns and reconstructing them. The author realizes this mechanism through the cellular automaton model using a convolution filter. It is a very meaningful and interesting work.

For this kind of pattern reconstruction, we have done similar work, such as Mingzhu Sun 2017. We proposed a visual feedback simulation framework for automated numerical simulation of biological pattern formation. It may help to further improve your work.

The model proposed by the author can realize the learning of simpler modes, such as point mode or line mode. It can continue to explore whether the model can be used for the reconstruction of more complex patterns, such as mixed patterns.

The pattern formation in this paper can only simulate the learning of texture information in the environment. Adding the mechanism of color learning will improve the pattern imitation mechanism of Octopus skin.