

## Accepted Manuscript

Effects of feedback regulation on vegetation patterns in semi-arid environments

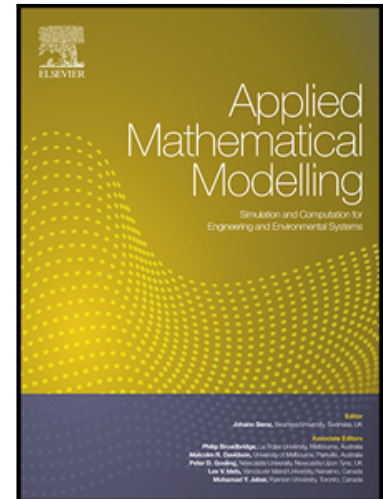
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**highlights**

- We systematically reveal a mechanism of positive feedback on vegetation pattern.
- Regular spot, stripe and the mixed patterns appear in the range of appropriate feedback intensities.
- Positive feedback may induce the emergence of desertification.
- Our findings highlight the relationship among feedback intensity, rainfall and pattern dynamics of the vegetation.

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