

Accepted Manuscript

A Computational Study of the Role of Spatial Receptive Field Structure in Processing Natural and Non-Natural Scenes

Victor J. Barranca, George Zhu

PII: S0022-5193(18)30305-9
DOI: [10.1016/j.jtbi.2018.06.011](https://doi.org/10.1016/j.jtbi.2018.06.011)
Reference: YJTBI 9506



To appear in: *Journal of Theoretical Biology*

Received date: 10 April 2018
Revised date: 30 May 2018
Accepted date: 12 June 2018

Please cite this article as: Victor J. Barranca, George Zhu, A Computational Study of the Role of Spatial Receptive Field Structure in Processing Natural and Non-Natural Scenes, *Journal of Theoretical Biology* (2018), doi: [10.1016/j.jtbi.2018.06.011](https://doi.org/10.1016/j.jtbi.2018.06.011)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Localized receptive fields and nonlinear dynamics give rise to illusory effects
- Center-surround receptive fields facilitate accurate encoding of natural scenes
- Model networks with several classes of receptive fields are proposed and compared
- A compressive sensing framework is developed for analyzing stimulus encoding

Download English Version:

<https://daneshyari.com/en/article/8876574>

Download Persian Version:

<https://daneshyari.com/article/8876574>

[Daneshyari.com](https://daneshyari.com)