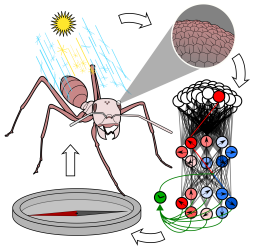
Mar 20, 2019

Insect Vision 1.0.1



PLOS Computational Biology

DOI
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DOI: https://dx.doi.org/10.17504/protocols.io.y9hfz36

External link: https://github.com/InsectRobotics/insectvision/tree/version-1.0.1

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Protocol status: In development
We are still developing and optimizing this protocol

Created: March 16, 2019

Last Modified: March 20, 2019

Protocol Integer ID: 21513

Keywords: insectvision computer vision toolbox, insectvision computer vision toolbox for insect vision, insect vision, insectvision package, computational model of the insect, light compass, insect, skylight input to behavioural output, skylight input, plos computational biology, compmodels package

Abstract

InsectVision

Computer Vision Toolbox for Insect Vision

Version 1.0.1

This version has been created as support for the article:
Gkanias E., Risse B., Mangan M., and Webb B. (2019) From skylight input to behavioural output: a computational model of the insect polarised light compass. PLOS Computational Biology.

Requirements

To be able to run all the experiments and replicate the results presented in the article, the **compmodels** package is needed. If you don't have access to this package, please contact the authors.
Clone both repositories and set the **compmodels** as a dependence to the **insectvision** package.

Observe the plots presented in the article

To see the results, it is not necessary to run the code. By simply opening the **notebooks/plos.ipynb** file, the plots should be automatically generated for you to observe them.

Replicate the results from the article

To create the plots by yourself, you need to start a **Jupyter notebook** kernel at the root of the package. Then run the **notebooks/plos.ipynb** file, which already contains all the plots and the respective code to replicate them. Some plots (especially the ones related to the global optimisation) may need a long time to run; this does not mean that they do not work.

Author

All the code has been implemented by **Evripidis Gkanias**.

Github repository

You can go the github repository by following **this** link. The release version is attached and it can also be found **here**.

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Attachments

insectvision-1.0.1-b...

13.5MB

Troubleshooting