**Bonvision- User guide**

**About and good to know:**

**What is Bonvision?**

Bonvision is a community package which can be installed in Bonsai and allows creating diverse visual stimuli protocols

**Most important thing to remember:** Bosai is asynchronous, unlike Python, Matlab etc

**Further resources:**

There is a [Bonvision website](https://bonvision.github.io/pages/001_info/) which more or less describes what it does, how it works and the different nodes such as DrawQuad, DrawGratings etc (scroll down on the about page for a useful youtube tutorial video)

**Step by step guide**

1. Loading Bonvision resources in Bonsai

Graphical user interface, text, table

Description automatically generatedIn order to be able to work with Bonvision, there are these three nodes that always have to be added first (Figure 1):

Diagram, text

Description automatically generated with medium confidence

Figure 1. First 3 nodes

* This creates a window in which all the stimuli will be seen, on top of this the Bonvision Resources are loaded so they are readily available whenever a Bonvision command is being called
* In the window node, can change different parameters such as which screen is being shown, what the ratio of the window is etc (Figure 2)

1. Rendering frames and View

Diagram

Description automatically generated

Figure 2. “Create Window“ Settings

Diagram

Description automatically generated

Figure 3. Render frame and View options

As the name suggests, RenderFrame renders a frame. This is usually connected to a “View” node. The most common ones are:

1. Normalized view which normalizes the location of the stimulus between 0 and 1 and stimuli will have sizes and locations defined in terms of screen proportions.
2. Orthographic view: stimuli drawn will have sizes and locations defined in terms of visual angle