

Assignment 2: Motion Capture Interface for Sketching Path

We have added one additional file called *sphere.egg* and made changes to *amcviewer.py*. If you have not made any changes to *amcviewer.py*, just replace it with *amcviewer.new.py*. If you have made changes, run this command at a linux prompt (make sure you are in the directory where the files *amcviewer.py* and *patch_amcviewer* are).

```
patch -p0 <patch_amcviewer
```

You can now run the viewer using the following command.

```
ppython amcviewer.py 0/1 filename.amc
```

If the second parameter is 1, you can then sketch a path on the floor using the mouse. Holding and dragging the left mouse button creates a set of yellow spheres on the floor. If you look at the code, you will see that $(floor_x_amc, floor_z_amc)$ are the center of the spheres drawn on the screen. These points are in the coordinate system corresponding to the one used in the amc file (Y up). You should use these points when you are searching for motion in the graph that will follow the path. Note that the spheres are drawn at $(floor_x_panda, floor_y_panda, floor_z_panda)$, which are in the Panda coordinate system. You should, however, not have to deal with these points.

You may print the points $(floor_x_amc, floor_z_amc)$ out to a file, use them as input to another program, and generate a resulting amc file which can then be displayed using the viewer. Or you can find some way to read these points directly in the same code and have the character move a while after the path is sketched. The points are printed fairly often, so you can also sample the points.

Your assignment here is to find some motion in the graph that allows the character to follow the path as best as possible. See the two papers for examples. No obstacles avoidance is needed. The key here is to find some heuristic that allows the character to follow the path. Make sure you document what you did, and how we can reproduce your results.