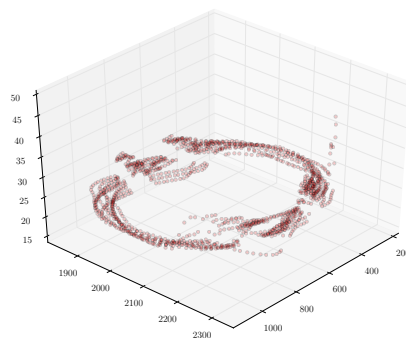


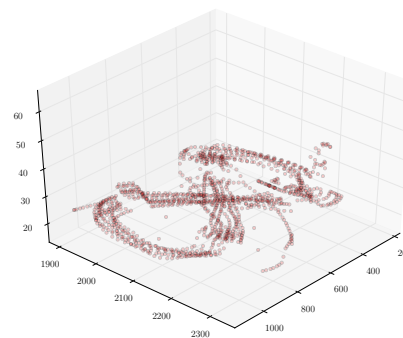
project 11: self-organizing maps (SOMs)

task 11.1: preparation

Download the files `q3dm1-path1.csv` and `q3dm1-path2.csv`. They contain human trajectory data, i.e. sequences of vectors x_t indicating at which 3D position x the avatar of a human player was seen at time t while moving around the Quake III map *q3dm1*. When plotted, these data should look like this:



data in `q3dm1-path1.csv`



data in `q3dm1-path2.csv`

task 11.2: fitting self-organizing maps

Fit self organizing maps to both data sets. In both cases, choose the SOM topology to be a *cyclic graph* $v_1 \leftrightarrow v_2 \leftrightarrow \dots \leftrightarrow v_k \leftrightarrow v_1$ of k vertices.

Experiment with different choices of the parameter k and (try to) visualize your results.

The following videos provide an idea of how a visualization could look like:

<http://www.youtube.com/watch?v=ddbBIWAlzxE>

<http://www.youtube.com/watch?v=k7DK5fnJH94>