

Exercise: Depth Perception - Energy Model

Expected time: 3h

A. Random dot stereograms

Build a random dot stereogram that can be fused to perceive depth from it with a shape of your choice (e.g. a simple rectangle, see basic algorithm in the lecture).

Try to fuse it on the monitor or print out the random dot stereogram.

B. Energy model

- Take a look at `exerciseEnergyModel.m` and understand what the program is doing.
- Alter it to filter the image at one specific orientation and spatial frequency and for zero vertical disparity and a small range of horizontal disparities.
- Plot the energy filter responses and see how far they give a clue for depth. Try running the algorithm for different orientations
- What is the meaning of the difference of RF 1 and RF 2 in the function `EnergyModel(...)` ?