

Course Assignments  
for  
Information Visualization  
4DV805 – Fall 2021

Assignment 2

Deadline for this assignment is Sept. 20, 2021 at 23:55.

**Task 1** *Read the article*

Read the online article *Perception in Visualization* by C. Healey (see URL below). You are encouraged to 'play' with the applets found on the site as they might help you understand some of the key points presented there. This article might help you solving the other assignments. After reading, answer the following questions related to the article:

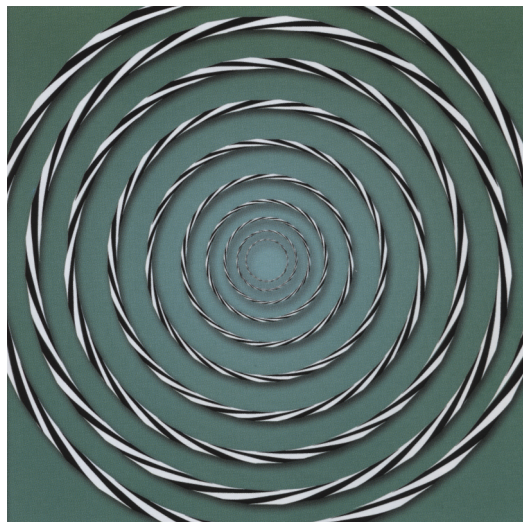
1. Describe what *preattentive processing* means and discuss in your own words how it can be helpful for making good visualization environments.
2. What strategy can be used to show multiple data objects with different attribute values simultaneously in a single image? What visual feature is favored in case of boundary detection?
3. What is change blindness? If possible, explain one case where it might affect the outcome of perception of certain visualizations!
4. Explain at least two cases where motion is usually used in visualization environments. Which are the most important motion properties? Which motion property would you consider as most useful for preattentive processing?

Article URL: <http://www.csc.ncsu.edu/faculty/healey/PP/index.html>

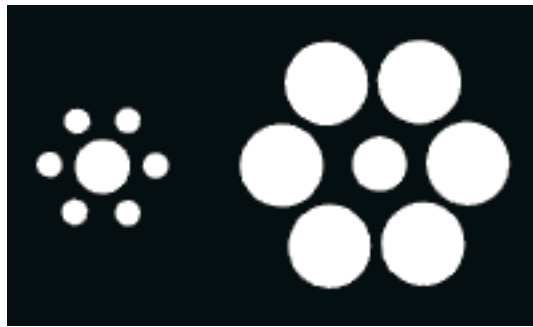
**Task 2** *Optical illusions*

Answer the questions regarding the images below them:

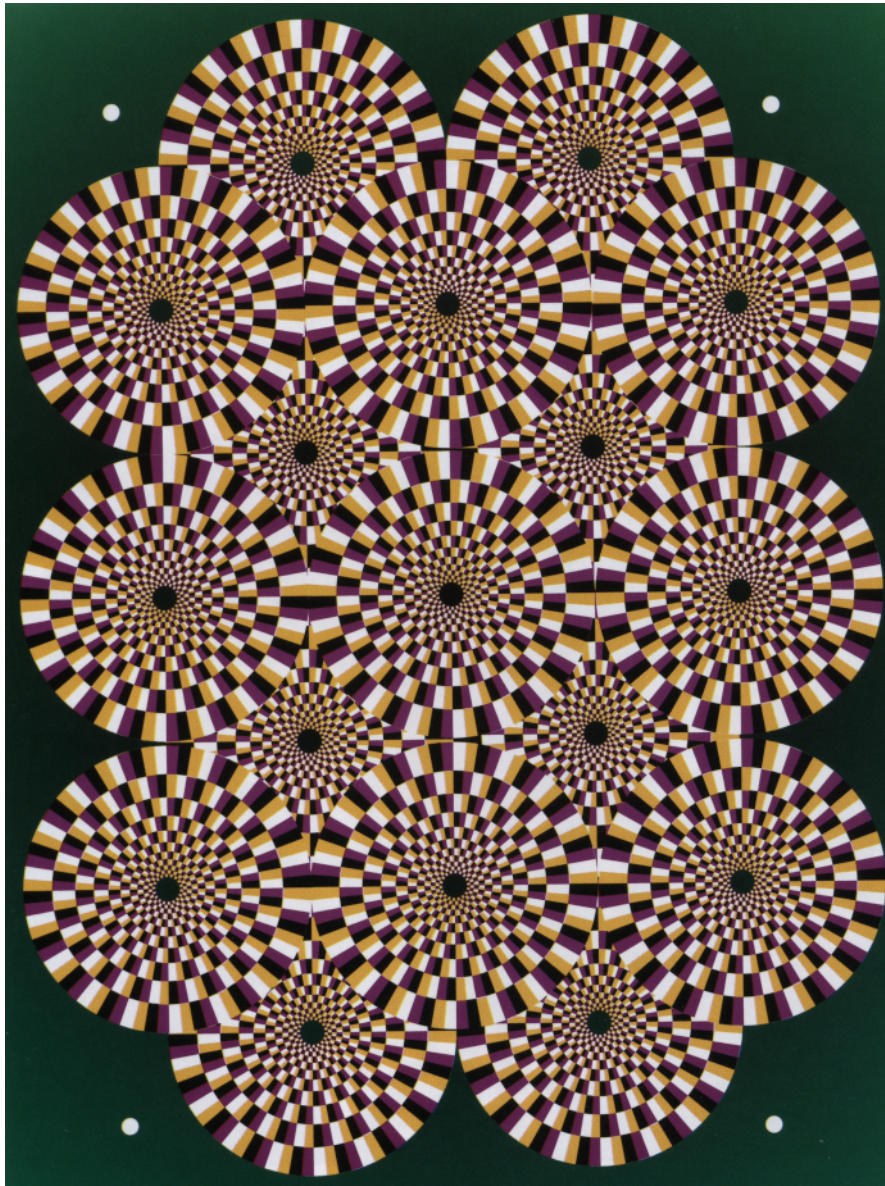
1. Are the circles consistently arranged around a common center point? Explain your answer!



2. Which one of the middle circles looks bigger? Explain your answer!



3. The circles seem to rotate. Why?



---

Please, prepare a report (PDF) with your results and upload it to Moodle by the given deadline! If you have questions you can contact Angelos Chatzimparmpas via email ([angelos.chatzimparmpas@lnu.se](mailto:angelos.chatzimparmpas@lnu.se)). You will have to present your work on Sept. 21, 15:15-17:00, room D1167V or online via Zoom. Please note: any kind of plagiarism is not acceptable!