

Indian Institute of Science

Mathematical Methods and Techniques in Signal Processing

Instructor: Shayan Srinivasa Garani

Home Work #4, Spring 2021

Late submission policy: Points scored = Correct points scored $\times e^{-d}$, $d = \#$ days late

Assigned date: June 3rd, 2021

Due date: June 12th, 2021, 11:59 pm.

In this homework you will try to experiment with images. Consider the standard grayscale image of Barbara. Perform a KL transform on this. Obtain the compressed image that retains 90% of the original energy. What is your compression ratio? Show all your experimental details, including the software code in an Appendix. (100 pts.)