EE5602: Probabilistic Graphical Models, Fall 2019 (56)

Indian Institute of Technology Hyderabad

HW 0, Assigned: Friday 15.11.2019.
Due: Thursday 21.11.2019 at 11:59 pm.
Instructions: Use **Python3** for your implementation.

1. Complete the missing steps in the derivation of the sum-product form of the marginal distribution of a probabilistic graphical model defined on an undirected graph. (5)

2. Recall the disparity estimation algorithm from class. Implement the sum-product algorithm to estimate the disparity map from a stereo image pair. Assume the left image to be the reference. Use the same settings as discussed in class for the compatibility functions and the local neighborhood size. For simplicity, assume that the disparity values are quantized to 10 levels. You can refer to the description in *Sudderth2008.pdf* for details. Use the image pair posted along with this HW. (10)