

CS341 SYSTEMS BIOLOGY I

HOMEWORK ASSIGNMENT #6 – READING (TUES OCT 3, 2017)

1. READING

The goal of this reading assignment is to examine the mathematics of the feed-forward loop motif.

Read Mangan & Alon, “Structure and function of the feed-forward loop network motif”, *PNAS*, 2003 (emailed by Stephanie).

Write the ODEs for each of the following networks. Use the equations they provide in the Materials and Methods.

- (1) Coherent type 1 network with an AND gate
- (2) Coherent type 1 network with an OR gate
- (3) Incoherent type 4 network with AND gate