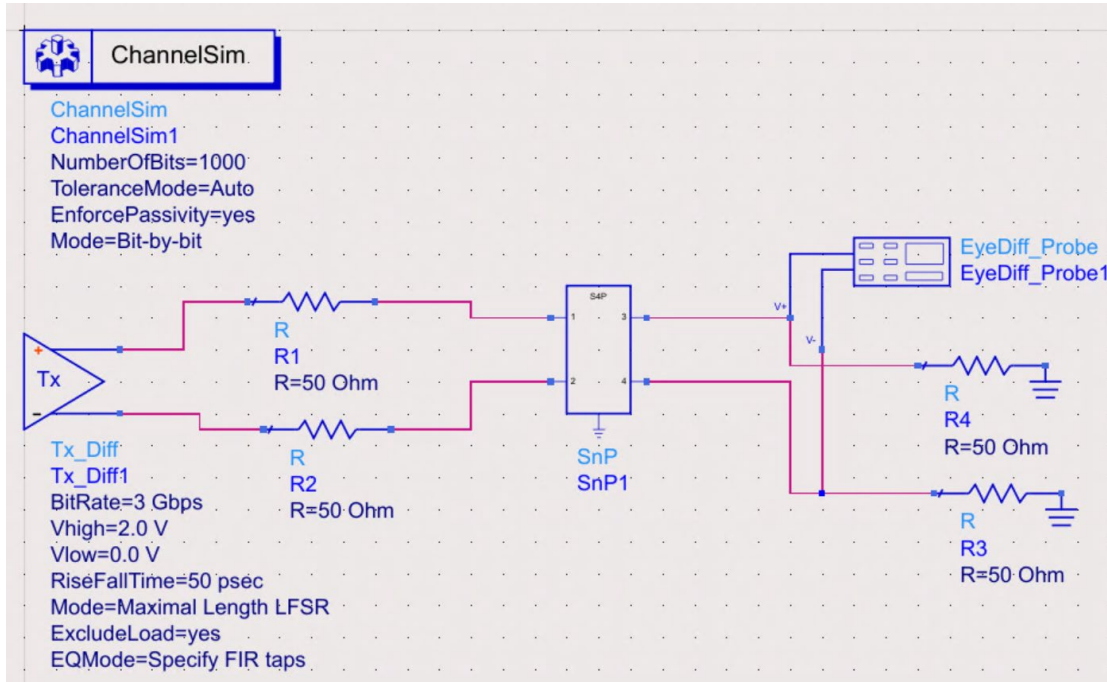# ECE 546 SP2024 Homework 8 Solution

(a) Use the .s4p file from homework 7 to generate the eye diagram. Terminate the two dangling ports with 50 Ohms in your four-port data item.
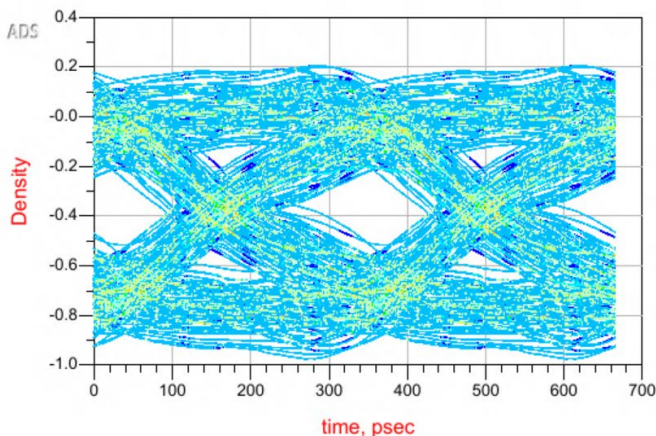
Use differential excitation + differential eye probe + matching impedance -> ADS schematic

(The s4p used here is from a different project, hence the eye will look different from yours)
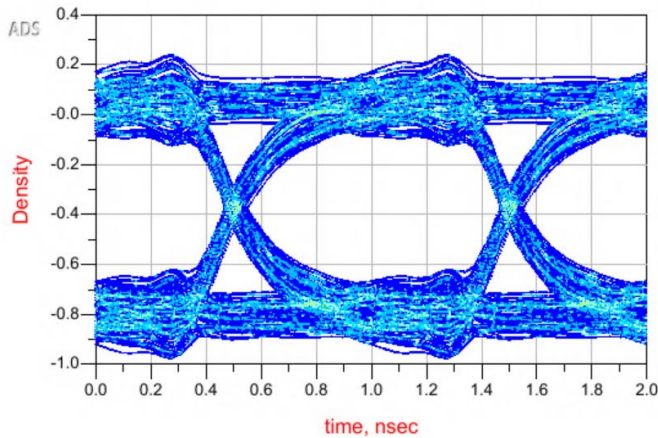

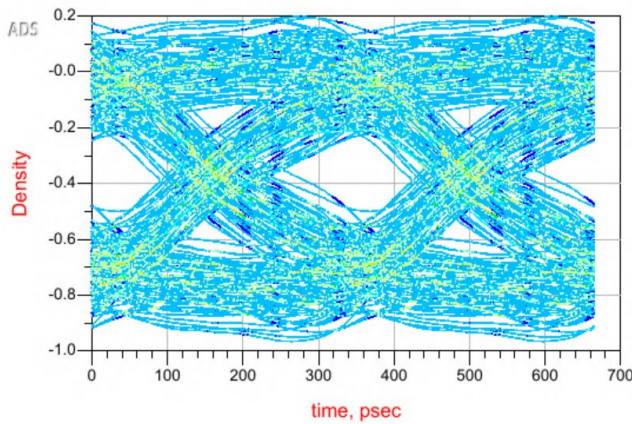*(b) Try different a bit rate and rise/fall time.*

Original

measurement	Summary
Level1	-0.041
Level0	-0.707
Height	0.136
Width	2.067E-10

Change BitRate = 1 GHz

measurement	Summary
Level1	0.045
Level0	-0.792
Height	0.553
Width	9.400E-10

Change Rise/FallTime = 100 ps

measurement	Summary
Level1	-0.046
Level0	-0.702
Height	0.142
Width	1.483E-10

(c) Use broadband spice in ADS to generate a circuit model. Replace the data item with the circuit model and generate the eye-diagram. Repeat step 2.

After fitting with the broadband spice generator tool, imported the *.bbn file with the component show below. Use it to replace the s4p component in the previous schematic and run the simulations. If the fitting was done correctly, you should be able to see the exact same eyes as in step 2.