

**EE 481/581 Microwave Engineering (Fall 2024)**

**Homework 7**

**Wednesday, October 16, 2024**

- 1) 4.4
- 2) 4.7a
- 3) 4.9
- 4) 4.11
- 5) 4.14
- 6) For  $[S]$  of problem 4.18, find  $[S']$  when ports 3 and 4 are separately connected with lossless matched TLs of electrical length  $45^\circ$ . No changes at ports 1 and 2.
- 7) **EE 581 only:** Find  $[S]$  for the pi-network of problem 4.7a.
- 8) **EE 581 only:** Evaluate  $[S]$  for the pi-network of problem 4.7a when  $Z_A = -j50 \Omega$ ,  $Z_B = 100 + j40 \Omega$ , and  $Z_0 = 50 \Omega$ .

**Due Monday, October 21, 2024.**