

### Homework Problem 2.E

**Given:** Pre-tensioned cables AB and AD, having tensions of  $2T$  and  $T$ , respectively, are attached to end A of the L-shaped bracket and exert forces of  $\vec{F}_{AB}$  and  $\vec{F}_{AD}$ , respectively, on the bracket due to these tensions.

**Find:**

- Determine the vector projection of  $\vec{F}_{AB}$  onto cable AD.
- Determine the vector projection of  $\vec{F}_{AD}$  onto cable AB.
- Determine the angle that exists between cables AD and AB.

Use the following parameter value in your analysis:  $\phi = 25^\circ$ .

