

## Six Rules for Sketching Root Loci

There are *six rules* for sketching root loci. These rules are mainly qualitative, and their purpose is to give intuition about impact of poles and zeros on performance.

These rules are:

- ▶ Rule A — number of branches
- ▶ Rule B — start points
- ▶ Rule C — end points
- ▶ Rule D — real locus
- ▶ Rule E — asymptotes
- ▶ Rule F —  $j\omega$ -crossings

Today, we will cover mostly Rules A–C (and a bit of D).