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Course: EEE 449
- Servo mech & control systems

Assignment

1) Root locus technique is a plot or way of constructing root locus that involves some rules as it helps in determining the stability of the control system

2a) When the entire row is zero on the row th table

- We first of all find an auxilliary equation to decipher the stability. The auxilliary equation is then formed using the element of the two just above the row of zeros in the routh array. After finding the equation, we differentiate it to obtain elements of the zero row. If the new routh array formed through the auxilliary equation is the same as the original, it implies that the given system is limited stable; whereas in other cases the given system is unstable

2b) To determine the poles on the jω axis After the completion of the table. The number of sign changes in the first column will be the no. of negative poles. There are cases where the coefficients of the routh table in a whole row become 'zero' & therefore the elements of the array cannot be further calculated. In the above case there are conjugat poles on the imaginary axis, therefore we must use the auxiliary polynomial which is built from the coefficients of the last non-zero row,

then differentiate it