## EECS 210 Section 2 - Lecture Summaries Lecture 34, Monday, April 2, 2001

- Interpretation of the pole/zero plot where $\mathrm{z}_{\mathrm{I}}$ are zeros and $\mathrm{p}_{\mathrm{I}}$ are poles
$>$ The $\left(\mathrm{s}-\mathrm{z}_{\mathrm{i}}\right)$ and the $\left(\mathrm{s}-\mathrm{p}_{\mathrm{i}}\right)$ are vectors in the s -domain
$>$ Find $A_{d B}=20 \log _{0}(K)+\sum_{i=1}^{m} 201 \log _{0}\left|s-z_{i}\right|-\sum_{i=1}^{n} 201 \log _{0}\left|s-p_{i}\right|$
$>$ Find $\angle \mathbf{H}(\omega)=\angle \mathbf{K}+\sum_{\mathbf{i}=1}^{\mathbf{m}} \angle\left(\mathbf{s}-\mathbf{z}_{\mathbf{i}}\right)-\sum_{\mathbf{i}=1}^{\mathbf{n}} \angle\left(\mathbf{s}-\mathbf{p}_{\mathbf{i}}\right)$
- Convert pole/zero plot to Bode plot by using straight-line approximations for each term in equation for $\mathrm{A}_{\mathrm{dB}}$
$>$ Start with the baseline (constant)
$>$ The computation sequence for higher order terms is not important

