Topics for Today:

• Announcements
  • Last homework “Dispatch” due ~Fri this week.
  • Term Project final report due Fri Dec 12th (Mon 9am ET, extension possible if result improved, and if it does not interfere with other courses)
  • Final Project presentations - Wed Dec 17th 12:45 start. Coffee, juice, snacks.
  • Office: EERC 614. Phone: 906.487.2857

• Project Presentations (by local 6 projects)
  • Emphasize your project (Journal paper analysis in Appdx)
  • ~6 presentations in 2 hrs - 20 mins each including Q&A.
  • Provide .ppt handouts for audience (min 12 copies).

• Wrap-up of Stability (background for EE6210)
  • Changes in Transfer impedance due to faults, switching.
  • Equal area criterion for first-swing
  • Effect of reclosing strategies

• Connection of EE5200 to EE5223 - Power System Protection
  • Short circuit calcs: balanced and unbalanced
  • Protective devices, measure V(t), I(t), Z(t), etc.
  • Must understand system planning & operations
- .ppt on memory stick
- software

Format: (20 mins)
- Intro/Motivation (1 min)
- Background (5 min)
  - Info/Case
  - Theory/Concepts (Refs, Journ. Aps)
- Weaknesses in existing approaches
- Development & Implement (12 mins)
- Results
- Conclusions - Technical
- Recommendations (2 mins)
Conclusions (Not a Summary!)
- If..... then.......  
- Quantitative observations, "rules"
- Be specific - sensitivities

Summary
- Recap.

- Recommendations based on this work.
- Recommendations for further work
 Exec Summary (Abstract)
  - Prob, Motivation, Context

  - Work performed

  - Results
    Conclusions
    Recommendations
Fault

\[ Z_{XFR} = j \cdot 333 \]
\[ V_{TH} = 0.333 \text{ p.u.} \]

\[ P_{\text{max}} = \frac{(1.2)(0.333)}{0.333} = 1.2 \text{ p.u.} \]

Tie Line Trips

\[ Z_{XFR} = j \cdot 0.6 \text{ p.u.} \]
\[ V_{TH} = 1.0 \]

\[ P_{\text{max}} = \frac{(1.2)(1.0)}{j \cdot 0.6} = 2.0 \text{ p.u.} \]
COHERENT MACHINES

SYSTEM SEPARATION

\[ t \]

\[ \delta_1 \]

\[ \delta_2 \]
$\rho_m = 1.5$

0 - S.S.
1 - Fault
2 - Clear
3 - Reclose