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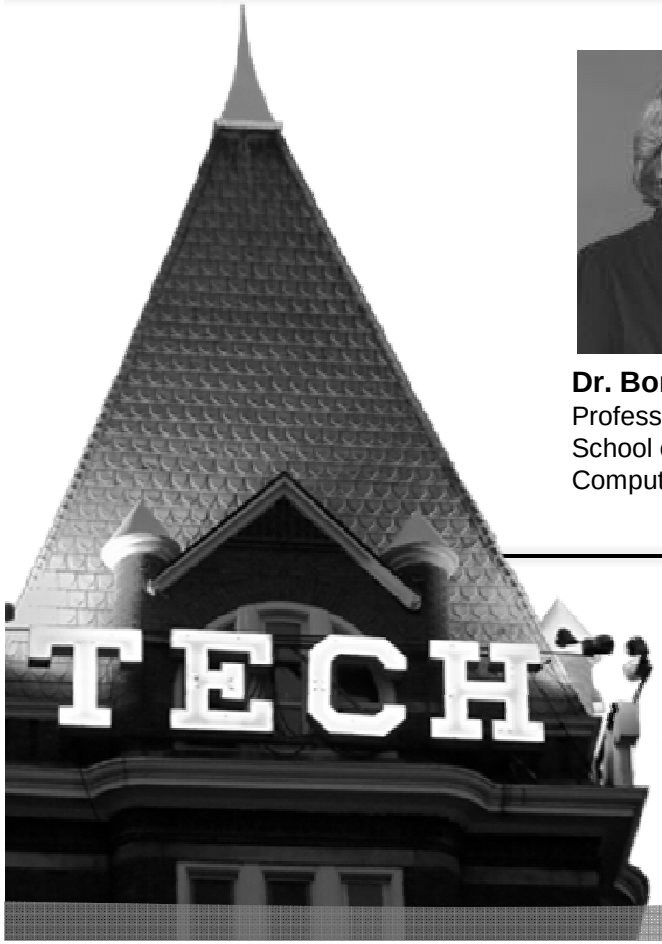

Linear Circuits

Dr. Bonnie H. Ferri
Professor and Associate Chair
School of Electrical and
Computer Engineering

An introduction to linear electric components and a study of circuits containing such devices.

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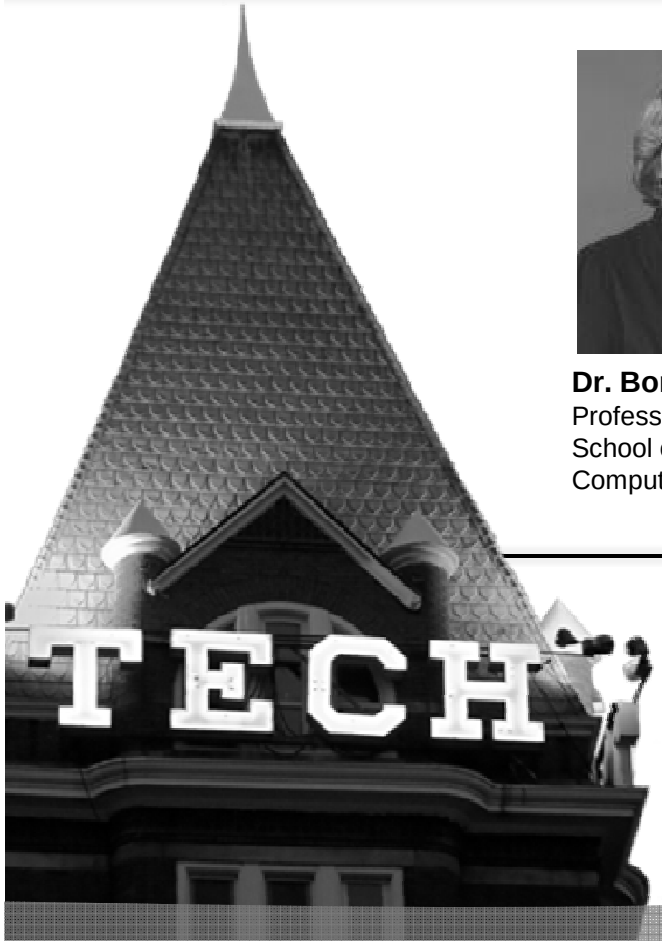

Lab Demo: Guitar String Frequency Spectrum

Dr. Bonnie H. Ferri
Professor and Associate Chair
School of Electrical and
Computer Engineering

Understanding and displaying the frequency content of signals

Module 4:

- Sinusoids and Phasors
- Impedance
- AC Circuit Analysis
- Transfer Functions
- Frequency Spectrum
- Frequency Response
- Filtering

Previous Class

- Introduced the frequency spectrum as a way of plotting the frequency content of signals

Lesson Objectives

- Demonstrate the use of a **spectrum analyzer**, a common measurement instrument for computing and displaying the frequency spectrum

Lab Demo: Guitar String Frequency Spectrum

Summary

- **Dynamic Spectrum Analyzer** is an instrument to measure and compute the frequency spectrum
- Guitar string produces a **fundamental frequency** tone and **harmonics**

Next Lesson

- Combine transfer function concepts with frequency spectrum to determine the frequency response of the circuit