



ECE 4350A Fall 2022

Electromagnetic & Microwave Applications

Location: VL C341

Schedule: T/Th 3:30-4:45p

Suggested Advanced Textbook: "Fields and Waves in Communication Electronics", S.Ramo, J.R. Whinery and T. Van Duzer, J. Wiley Inc., 1994

Suggested Preliminary Reading (Close to the Notes): "Fundamentals of Applied Electromagnetics", F.T. Ulaby et al., Prentice Hall Eds., any edition

Additional Reading: "Electromagnetics, Microwave Circuit and Antenna Design for Communications Engineering", P. Russer, Artech House, 2003

Instructor: [Prof. Manos M. Tentzeris](#)

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Office Hours: T 2:00-3:00p

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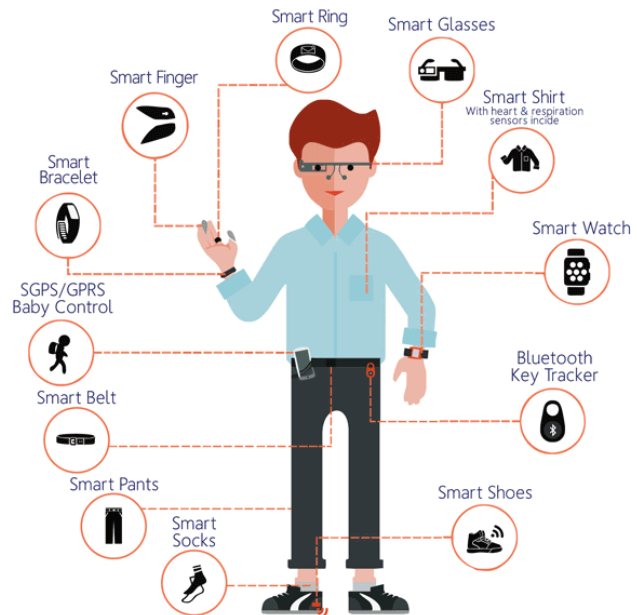
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Overview



- Transmission Lines
- Plane Waves
- Dielectric Interfaces
- Waveguides
- Cavities
- Microwave Circuits (Couplers, Filters)
- Antennas (Dipoles, Yagi-Uda, Log-Periodic, Arrays)
- Optical Waveguides, Optical Fibers
- Wireless Communication Standards and Devices
- Commercial CADs for EM/RF Applications
- Wireless communication platforms/Wireless Sensors
- Internet of Things/"Smart Skins"
- Large-Area Inkjet Printed RF Electronics
- RF Applications of Nanotechnology

E-Mail List

ece4350a@lists.gatech.edu

Grading Policy

● 10% Homework ● 25% QUIZ 1 ● 25% QUIZ 2 ● 40% FINAL ● 10% Group projects
[Bonus Points]

Homework Policy

Problems/Homeworks will be posted on Canvas and will be due during the class period on the assigned dates. Late Homework will not be accepted without justification.

Exams

There will be 2 (two) in-class exams on September 22 (Thursday) and November 1 (Tuesday). The final will take place on December 13 (Tuesday) from 2:40-5:30p.

Smith Charts

Students are required to obtain impedance ("Smith") charts at the bookstore. These will be used in the second and the third week of the class.

If you have questions or comments about this course, please send e-mail to etentze@ece.gatech.edu