EE579-PMP   **Spring 2017**   **3/24/2017**

Title: Antennas for Modern Wireless Devices
*** All class materials are located at "https://catalyst.uw.edu/". ***
Instructor: Yasuo Kuga   543-0478, ykuga@u.washington.edu
Class time: Monday   6 - 8:50 pm
Office hours: Monday 4:30-5:30pm, Rm430, EEB
PC Lab: Rm419 and Rm351
TA: Chenxin Su, suc4@uw.edu, TA OH: TBD
Classroom: EEB 037
Textbook
        Lecture notes and handout
        Microstrip and Printed Antenna Design, By Randy Bancroft
References:
        Electromagnetic Waves and Antennas, S. J. Orfanidis, 2004 (free, online)
        Microwave Engineering, D. Pozar
        Antenna theory and design Stutzman and Thiele 2nd ed
Computer Software: Ansoft Designer or HFSS (Remote Access)
                    PC located in Rm351/419
Course Outline:
This course covers the analysis and design of antennas which are often used in modern communication devices and radars. Students will be exposed to the antenna design methods and measurement techniques.

Course materials:
1. Introduction to antennas
        Definitions and radiation patterns
2. Review of TL and cavity resonators
3. Introduction to microstrip antennas (MSA)
4. Green's function technique applied for MSA
5. Circularly polarized MSA
6. Broadband and dual-band MSA
7. Array antennas and feeding network
8. Inverted-F antennas
9. Meanderline dipole and monopole antennas
10. Tapered slot antennas
11. Printed Yagi and bowtie antennas
12. Far- and near-fields antenna measurement techniques

Project and homework:
Six antenna design projects will be assigned. The final grade will be based on the projects. No exam.

Tapered and non-tapered series-fed patch array antenna (from 2016)