

September 16, 2009

Postgraduate course in Radio Engineering, fall term 2009
Telecommunication Laboratory, University of Oulu
Radio Science and Engineering, Helsinki University of Technology

Telecommunication Laboratory and Department of Radio Science and Engineering are arranging a postgraduate course on wireless communications and radio engineering emphasizing base station antennas. The course is based on a textbook: Zhi Ning Chen, Kwai-Man Luk: *Antennas for Base Stations in Wireless Communications*. McGraw-Hill, 2009.

The course is aimed for postgraduate students and also for students in their graduation phase specialized in telecommunications, electronics, and electrical engineering. Course extent is 5 credit points (to be confirmed later).

Completion of the course consists of the following parts:

- Seminar lectures given by the students
 - selected portion of the course book
 - lecture duration about one hour
 - one opponent (another student) for each lecture
 - opponent prepares 2-4 questions of the lecture topic in advance and pose them during the lecture
- Participation in lectures
- Exercises prepared by the students and /or supervisors
- Exam on the course book (the book cannot be at hand in the exam)
 - first exam will be in December 2009 followed by two additional exams in spring term 2010

Preliminary schedule:

- Course opening, October 1st, 2009 at 15 in lecture room TS487 (Oulu) and E220 (Espoo, ETA building, room Strömberg)
- Seminar lectures will be given in a period of 2-3 days or a week in November 2009 after a preparation period. One lecture period will be held in Espoo and one in Oulu.
 - Lecture sessions include *antenna measurement demos*
- Exam

Recommended preliminary knowledge: undergraduate courses in radio engineering and in antenna engineering.

Registration for the course: In the course opening or by email to the supervisors not later than September 30th. TKK students have to also register via the OODI system.

Course supervisors: Professor Pertti Vainikainen (Pertti.Vainikainen@tkk.fi) and Docent Taavi Hirvonen (taavi.hirvonen@elektrobit.com).