



European School of Antennas

**Fundamentals on Antennas:
The antenna as a communication
system building block**

October 19-23, 2015

**Universidad Carlos III de Madrid
(Charles the Third University of Madrid)**

Course organizers:

Magdalena Salazar-Palma, Daniel Segovia-Vargas



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Fundamentals on Antennas

Introduction:

From the European antenna community (i.e., ESoA & EurAAP) it is seen that there are other scientific and industrial communities that may find problems when dealing with antenna topics, for instance, in the development of global projects. The spectrum of these communities is quite broad: Microwave engineers, Communication or Radar (i.e. mobile communication) engineers, Signal Processing engineers, Terahertz engineers and other applications, i.e., bio or medical professionals. This antenna course is devoted to explain the fundamentals on antennas to those communities, and to offer them some help on dealing with antennas. In addition, application examples will be given, as well as industrial lectures on integrated antennas (i.e. mobile or GPS), base station antennas, space application antennas and terahertz antennas.

Contents:

- Introduction to antennas. The antenna from the signal processing point of view.
- Vocabulary on antennas: Antenna parameters and fundamentals on measurements.
- Elementary antennas I: Small antennas and resonant antennas. Application: integrated antennas for mobile communication systems and GPS.
- Fundamentals on antenna arrays. Application: arrays for base stations.
- Elementary antennas II: Aperture antennas. Application: on board antennas.
- Introduction to active antennas. Application: Terahertz antennas.

Lecturers:

Prof. Magdalena Salazar-Palma
Prof. Daniel Segovia-Vargas
Prof. L.E. García-Muñoz
Prof. L.E. García-Castillo
Prof. Antti Räisänen
Prof. Peter Hall
Lab. Teachers: Dr. Herraiz, Dr. Lamperez and Dr. Llorente

Course Info:

- 23 hrs of teaching
- 7 hrs of laboratory
- 10 hrs of personal exercises
- Prerequisites: basic physics and maths
- Availability: 30 students
- Credits: 2 ECTS

For further information: <http://www.esoa-web.org/courses.html>

Registration:

- Non-profit institution: 440€
 - Profit institution: 880€
 - Registration fee grants will be offered for up to 4 students
 - Please, note that COST VISTA also awards travel support grants for ESoA courses (1 grant/course)
 - **Deadlines**
 - Deadline for registration is 29th september 2015
 - Deadline for payment is 7th october 2015.
- For payment go through:
<http://hosting01.uc3m.es/c3reservas/>

Venue:

Universidad Carlos III, Campus Puerta de Toledo (just in Madrid downtown)
Ronda de Toledo, 1
28005 Madrid

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