MEMS-Based LIDAR System for Autonomous Vehicles

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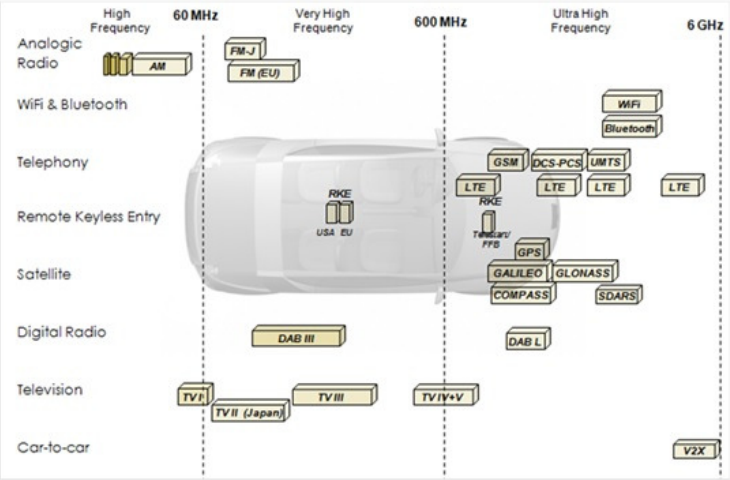
This year's iGP (Interdisciplinary Graduation Project) is the "Design and Implementation of an Autonomous Hybrid Vehicle". The Autonomous car will need to communicate with vehicles or infrastructure around it. It also needs to receive vital signals from all around. Accordingly, It will need antennas embedded for the bands of AM, FM, GPS, 3G, LTE, V2X (802.11p DSRC) DAB, Wifi, GNSS, SDARS [1].

For Students from the following Departments/Programs: ECE, COMM.



The project aims to build and test antenna/antennas that cover the required bands and conform to guidelines of performance, security, aerodynamics, style, ... Etc

Project activities

1. Set of lectures conducted by the project supervisor on antenna fundamentals and microwave measurements.
2. Literature survey on the current achievements in the project domain.
3. Design and simulate, using ANSYS tools (HFSS and ANSYS designer), a prototype.
4. Implement and characterize the prototype using the Lab facilities.

[1] http://www.ficosasmartconnectivity.com/advance-communications/antennas/

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