



## Information Technology - V.P. POSITION

### DESCRIPTION OF THE PHD PROGRAM

The PhD in Information Technology aims to research training in the areas of: (i) Computer Engineering; (ii) Telecommunication Engineering; (iii) Electronic and Electrical Engineering.

The Area involved in this research project has a renowned reputation in the field of Digital Communications, with special emphasis on Wireless, and in particular Satellite, Communications.

It received many grants from the European Space Agency and several international telecommunications companies. The outcomes of these projects had a significant impact on a few satellite standards currently in use. The Area has also strong academic links with several prestigious Universities worldwide. It has been awarded by many “best paper awards” and its members are serving as “Editors” of the main international journals in the field.

Further information can be found at <http://www.spadic.unipr.it>

### DESCRIPTION OF THE SCIENTIFIC FIELD & VISITING PROFESSOR PROFILE

In the field of telecommunications, the hottest topic that attracts the attention and that will keep the focus of the research activities and funding opportunities in the next 5 years are the terrestrial wireless networks of the 5th generation (5G). The 5G networks will allow the mobile terminals to have a 1000 times faster connectivity than the one they have today by using technology and algorithms that are still at their embryo stage. These networks will be integrated with satellite networks, as well. Regarding these last ones, the Engineering Department already disposes of an advanced research group (the so called SPADiC group) in the field. The collaboration with an expert in the 5G wireless networks would allow the group to significantly enlarge its competences.

### DESCRIPTION OF THE DIDACTIC ACTIVITIES OF THE VISITING PROFESSOR

A significant part of the H2020 funding is aimed at the 5G networks. There are even specific calls on the matter. The collaboration would allow the research group SPADiC to enlarge its competences towards the 5G terrestrial networks and have access to this type of funding.

**Period at the University of Parma: 4 weeks, possibly in two different 2-week periods, in the breaks during the semesters.**

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