



ERASMUS MUNDUS



Education and Culture DG



PHOTONICS - EUROPHOTONICS MASTER COURSE

PROPOSAL FOR A MASTER THESIS

Course 2013 –2014

**Laboratory : UPC-TSC, Campus Nord.
City, Country : Barcelona, Spain.**

Title of the master thesis : Microwave Photonic Filtering Techniques for on-board satellite applications

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Summary of the subject (maximum 1 page) :

Low-loss, broadband operation, low volume and weight, immunity to electromagnetic interferences, easy tunability and reconfigurability, are among the reasons supporting interest in photonic technologies for applications in the microwave and millimeter wave frequency range. Among these lies the narrow band filtering of microwave signals handled on-board satellites for earth observation and communications. In this Master Thesis, the goal is to review different techniques for microwave narrow band filtering and assess their suitability for applications relevant to on-board satellite applications focusing on specifications to build a practical breadboard for testing purposes.

Keywords : microwave photonic, narrowband RF filtering, satellite

Additional information :

- * Amount of the monthly allowance (if it is the case):
- * Required skills : We look for highly motivated students which seek to advance in their education working in a cutting-edge research and development application.
- * Miscellaneous : Possibility to continue with a PhD position within the research group.