DOCTORAL PROGRAM IN MICROSYSTEMS & MICROELECTRONICS

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RESEARCH PLAN - GUIDELINES

The goal of the PhD candidacy examination is to evaluate the overall competence of the student with respect to the proposed research subject, to judge if the PhD student has a sufficiently comprehensive understanding of the subject and the state-of-the-art, and if she/he has an initial strategy of attacking the research problems – which certainly can be revised during the later stages of research.

The research plan has to be sent to the Jury members and EDMI Office at least 10 days prior to the Candidacy exam.

- **Step 1** => Complete and download your Research Plan Cover Page from IS Academia
- **Step 2** => Get your Research Plan Cover Page signed
- **Step 3** => Write your Research Plan **(9-14 pages)** using the guidelines below:
- 1) Abstract (cover page): clearly describe the topic of the thesis, providing contextual information and short state-of-the-art, and answering the "what, why, and how": "what are you doing", "why it is important to perform this work" (motivations) and "how do you intend to make progress" (i.e., what do you intend to do to contribute to the issue and/or to improve on the state-of the-art).
- 2) Keywords
- **3) State-of-the-art (2-3 pages):** clearly describe the problem in details (building upon the introduction) and the state-of-the-art (describing previous work in the area, including the basis you will build your work upon). If necessary, this section can contain subsections like:
 - Problem
 - State-of-the-art
 - Motivations to further work in this area, including a smooth transition to the next section.
- **4) State of Research performed (2-3 pages):** A PhD thesis proposal is typically written one year after PhD enrollment. This is thus where you describe what you have done so far in the area described above and make reference to your contributions/publications/reports, etc. This section can contain several subsections addressing/describing different aspects of your preliminary work. While doing this, also try to clearly identify open issues that you should further address/investigate later (and as described in the next section).
- **5) Detailed Research Plan (3 pages):** clearly describe the research, development, evaluation and benchmarking work you intend to do during the next 3 years. You should split this section into different reasonable "tasks".

Show the importance of the results that you plan to obtain and the developments they can lead to:

- Which studies, analysis or investigations do you intend to perform to meet the objectives?
- How will the first phase be performed?
- How do you envisage the following phases?

Specify the methods you plan to use to meet the objectives:

- Methods directly applicable in the PhD work,
- Methods that can be used in collaboration with third parties (advice, services, etc.)
- Methods to be defined and developed.
- **6) Schedule (1 page):** provide a rough (tentative) schedule for the above tasks, not forgetting to include at least a 3-month slot at the end for the writing of the thesis.
- 7) References