

PhD In Information Technology

Research Area n. 2 - Title Electronics

Research Subject: Development of readout electronics for radiation detectors

| Scholarships and Financial support | |
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| Monthly net income of PhD scholarship (max 36 months) | €. 1.200 (In case of a change of the welfare rates during the three-year period, the amount could be slightly modified) |
| Number of scholarships | 1 |
| Beginning of PhD | 1/5/2017 |
| Deadline for application | 13/03/2017 |
| Context of the research activity | |
| Motivations and objectives of the research in this field | Goal of the research is the development of integrated electronics circuit for the readout of radiation detectors. The PhD student will be involved in one or more research projects of the team regarding the development of readout ASICs for X-ray and gamma ray detectors. Examples of applications range from nuclear physics (at accelerators), applied physics (synchrotron sources, analytical instrumentation for material analysis), space applications, medical applications and industrial applications. More informations at: http://home.deib.polimi.it/fiorini/thesis%20presentation%2006-05-16.pdf . |
| Methods and techniques that will be developed and used to carry out the research | The PhD student will get acquainted with CAD tools for the design of integrated circuits (schematic/layout) and experimental techniques for laboratory measurements. |
| Educational objectives | The PhD student will work in research projects carried out in a stimulating international framework and he will have the opportunity to attend international conference to present his work. |

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| Job opportunities | Recent PhD students graduated in our team have been successfully employed in national and international research institutions as well as in high-tech companies. |
| Composition of the research group | Number of Full Professors: 1 Number of Associated Professors:0 Number of Assistant Professors: 1 Number of Post-Docs: 2 Number of PhD students: 5 Number of contracted researchers:0 |
| Names of the research directors | prof. Carlo Fiorini |
| E-mail address, phone number and web-page | carlo.fiorini@polimi.it , phone: +39.02.23993733, http://home.deib.polimi.it/fiorini/didattica.html |
| List of Universities, Companies, Agencies and/or National or International Institutions that are cooperating in the research | 1. UCL 2. INFN 3. European XFEL 4. ESA 5. FBK |
| Additional support | |
| <u>Educational activities</u> (purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences): financial aid per PhD student per year | 2 nd year: max 1370,00 euro per student 3 rd year: max 1370,00 euro per student |
| <u>Teaching assistanship:</u> availability of funding in recognition of supporting teaching activities by the PhD student | There are various forms of financial aid for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations. |
| <u>Computer availability:</u> | 1 st year: <i>individual use</i> 2 nd year: <i>individual use</i> 3 rd year: <i>individual use</i> |
| <u>Desk availability:</u> | 1 st year: <i>individual use</i> 2 nd year: <i>individual use</i> 3 rd year: <i>individual use</i> |