

**Call for application for research scholarships  
for post-graduate international candidates**

**RESEARCH PROJECT N. 13**

**Title**

**Machine learning and HMI methods for the analysis and interpretation of images and other multi-dimensional data**

**Scientific responsible (name, surname, role)**

Fabrizio Lamberti, Associate Professor ([fabrizio.lamberti@polito.it](mailto:fabrizio.lamberti@polito.it))

**Short description of the research activity (max 250 words)**

The research is aimed to the design and development of tools for analyzing images and other multi-dimensional data by leveraging techniques belonging to the domain of machine learning and artificial intelligence as well as approaches and paradigms for knowledge representation. Attentions will be focused in particular on the study of “transparent” algorithms, capable to extract actionable information from data by making results easy to understand by a potentially heterogeneous set of target users through the adoption of innovative paradigms for interaction and visualization. Solutions developed will be applied and evaluated in different case studies, e.g., in the medical, industrial and social domains as well as in other application fields talked by the research group.

**Specific requirements (experiences, skills)**

Applicants should have previous experience in the field of machine learning. Skills in the area of image processing, graphics interfaces and parallel computing would be positively evaluated as well. Applicants should have a good knowledge of the main programming languages, with a specific focus on those used in the above domains.

**Website of the research group (if any)**

<http://grains.polito.it/>

**Keywords (min 3, max 6)**

Machine learning, data analysis, knowledge representation

**Research Area (max 1)**

Computer Engineering