



# PhD in INGEGNERIA DELL'INFORMAZIONE / INFORMATION TECHNOLOGY - 39th cycle

Research Area n. 1 - Computer Science and Engineering

**THEMATIC Research Field: FEDERATED TRUSTWORTHY DATA SHARING IN DATA  
ANALYTICS**

**Monthly net income of PhDscholarship (max 36 months)**

**€ 1400.0**

In case of a change of the welfare rates during the three-year period, the amount could be modified.

## Context of the research activity

**Motivation and objectives of the research in this field**

Data analytics is one of the main cornerstones in many enterprise architectures and data warehouses, data lakes, and, recently, data meshes are providing reliable and effective solutions. Nevertheless, there is still a lot of effort when data are taken from or offered to external organizations. In fact, even if enterprise data could be already valuable on its own, in many cases, combining it with external data sources would boost the value of the output, making data sharing a need in data analytics. At the same time, organizations are reluctant to share data, as they fear disclosing critical information. This calls for solutions that can safeguard data holders by regulating how data can be shared in a trusted way.

**Methods and techniques that will be developed and used to carry out the research**

The research conducted will be an experimental research based on the development of a prototype able to demonstrate the feasibility and the effectiveness of the proposed theoretical method. The research will take advantage of different case studies, and the related data, analysed in the TEADAL project.

**Educational objectives**

To understand the models and methods for big data analytics in the computing continuum. To learn how to define new models for specifying data-related policies. To



	understand the principles of adaptive system to provide data.
<b>Job opportunities</b>	The candidate, after concluding the Ph.D. study, can be qualified for data engineering-related positions with specific emphasis on privacy preservation, policy definition, data profiling.
<b>Composition of the research group</b>	1 Full Professors 3 Associated Professors 2 Assistant Professors 3 PhD Students
<b>Name of the research directors</b>	PROF PIERLUIGI PLEBANI

<b>Contacts</b>	
pierluigi.plebani@polimi.it	

<b>Additional support - Financial aid per PhD student per year (gross amount)</b>	
<b>Housing - Foreign Students</b>	--
<b>Housing - Out-of-town residents (more than 80Km out of Milano)</b>	--

<b>Scholarship Increase for a period abroad</b>	
<b>Amount monthly</b>	700.0 €
<b>By number of months</b>	6

<b>Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information</b>
<p><b>Educational activity:</b> The student will be encouraged to attend to courses at POLIMI or abroad in International Schools.</p> <p><b>Teaching assistantship:</b> 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.</p> <p><b>Computer and desk availability:</b> the student will be allowed to access facilities of the DEIB.</p>