



PhD in INGEGNERIA DELL'INFORMAZIONE / INFORMATION TECHNOLOGY - 38th cycle

Research Area n. 1 - Computer Science and Engineering

Number of scholarship offered	7
Department	DIPARTIMENTO DI ELETTRONICA, INFORMAZIONE E BIOINGEGNERIA

Description of the Research Area

The research in the Computer Science and Engineering Area of the PhD Programme in Information Technology at the Department of Electronics, Information and Bioengineering (DEIB) is organized along these lines:

- **System Architectures**, which deals with digital systems architecture and design methodologies for concurrent development of hardware and software components for embedded digital systems, including multi-core, reconfigurable and adaptive platforms.
- **Data, web, and society**: the research in this area addresses technologies, design methods, and tools for data management systems, information management and querying on the Web, and multimedia and multichannel communication.
- **Artificial intelligence and robotics**, devoted to the integration of Machine Learning, Computational Intelligence, Intelligent Data Analysis, Robotics, and Artificial Intelligence techniques for the development of intelligent systems and autonomous agents.
- **Advanced software architectures and methodologies**, which is focused on techniques, tools and frameworks for the development of complex software systems, characterized as distributed, pervasive, adaptive, reconfigurable, dynamic and critical.
- **Information Systems**, which deals with service-based and adaptive information systems, IT cost evaluation, and in particular green ICT and green software, information quality and security, and Web reputation, including semantic categorization and sentiment analysis of social media.

Further information:

- Research at the DEIB Department: <https://www.deib.polimi.it/eng/>
- PhD Programme in Information Technology (IT PhD): <https://dottoratoit.deib.polimi.it/>
- Computer Science and Engineering Section at DEIB: <https://www.deib.polimi.it/eng/computer-science-and-engineering>



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Research Area n. 1 - Computer Science and Engineering

OPEN SUBJECT Research Field: COMPUTER SCIENCE AND ENGINEERING

Monthly net income of PhDscholarship (max 36 months)

€ 1250.0

In case of a change of the welfare rates or of changes of the scholarship minimum amount from the Ministry of University and Research, during the three-year period, the amount could be modified.

Context of the research activity

Motivation and objectives of the research in this field

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	<p>distributed, pervasive, adaptive, reconfigurable, dynamic and critical.</p> <ul style="list-style-type: none"> • System Architectures, which deals with digital systems architecture and design methodologies for concurrent development of hardware and software components for embedded digital systems, including multi-core, reconfigurable and adaptive platforms.
Methods and techniques that will be developed and used to carry out the research	<p>Research focuses both on theoretical models and methods to support design of applications, software, and hardware systems. The strong connection with leading companies makes the mix between theory and application one of the strengths of our PhD.</p>
Educational objectives	<p>We are aimed at developing specific competence, autonomy, research methodology and skills, in an interdisciplinary environment. Laboratory activity is usually required to finalize the research. The student is also encouraged to spend a period of study abroad.</p>
Job opportunities	<p>Career development is possible both in research, in academic and private institutions, and in production, in Italy and abroad. Start-ups from research results are also encouraged. Employment in this area provides plenty of opportunities.</p>
Composition of the research group	<p>19 Full Professors 44 Associated Professors 19 Assistant Professors 127 PhD Students</p>
Name of the research directors	<p>Any faculty member can act as research director</p>

Contacts
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Additional support - Financial aid per PhD student per year (gross amount)			
	1st year	2nd year	3rd year
Housing - Foreign Students	1500.0 € per student	1000.0 € per student	1000.0 € per student
max number of financial aid available: 4, given in order of merit ..			
Housing - Out-of-town residents (more than 80Km out of Milano)	--		

Scholarship Increase for a period abroad	
Amount monthly	625.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information

EDUCATIONAL ACTIVITIES (purchase of study books and material, including computers, funding for participation in courses, summer schools, workshops and conferences):
 financial aid per PhD student
 5.095,96 Euro per student

TEACHING ASSISTANTSHIP: 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.

COMPUTER AVAILABILITY:
 1st year: Yes
 2nd year: Yes
 3rd year: Yes

DESK AVAILABILITY:
 1st year: Yes



2nd year: Yes

3rd year: Yes