



PhD in INGEGNERIA DELL'INFORMAZIONE / INFORMATION TECHNOLOGY - 40th cycle

Research Area n. 2 - Electronics

**THEMATIC Research Field: HIGH-SPEED ADCS WITH LARGE TIME-INTERLEAVING
FACTOR FOR MM-WAVE TRANSCEIVERS**

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	The research activity concerns the area of mixed signal integrated circuit design, with particular focus on high rate ADC, multi giga-sample/s . The project target is to explore the design of large interleaving factor (8 or larger) SAR ADC, for moderate resolution (10-12 bits). The key challenge is to negligibly degrade the performance of the single ADC, when interleaved.
Methods and techniques that will be developed and used to carry out the research	The analysis will be carried out using system theory and dedicated tools for system analysis. Then, the functionality and performance of the new conceived system will be demonstrated in a chip. Finally, the test chip will be experimentally verified.
Educational objectives	In this field, the student will be educated in different areas such as system analysis and verification, analogue and digital microelectronics design, chip assembly, laboratory measurements.
Job opportunities	Analog and mixed-signal designer for major semiconductor companies.
Composition of the research group	4 Full Professors 1 Associated Professors 5 Assistant Professors 10 PhD Students



Name of the research directors	Prof. Carlo Samori
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Contacts	
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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	700.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p><u>EDUCATIONAL ACTIVITIES</u> (purchase of study books and material, including computers, funding for participation in courses, summer schools, workshops and conferences): financial aid per PhD student. 5.707,20 Euro per student</p> <p><u>TEACHING ASSISTANTSHIP</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.</p> <p><u>COMPUTER AVAILABILITY</u>: 1st year: Yes 2nd year: Yes 3rd year: Yes</p>