

## Annual Report 2006

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**Ciclo:** XX  
**Year (completed: 1, 2 or 3):** 2  
**Supervisor:** Angelo Rivetti

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### Graduate School Courses:

<i>Code</i>	<i>Title</i>	<i>Teacher</i>	<i>Hours</i>	<i>Test done</i>
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### Course from other Graduate Schools:

<i>School</i>	<i>Course</i>	<i>Teacher</i>	<i>Hours</i>	<i>Test done</i>
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### Undergraduate Courses (laurea magistrale):

<i>Title</i>	<i>Teacher</i>	<i>Hours</i>	<i>Test done</i>
1. Corso di Fisica dei Semiconduttori	Prof. Ettore Vittone	50	Si

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### Summer schools, international schools:

<(Title, Place, Webpage, # days, Written relation) Respectively>

1. XVI Giornate di Studio sui Rivelatori 2006, Villa Gualino,  
<http://www.gsr.unito.it/orario2006.html>, 4, Si
2. CERN Inverted School of Computing 2006, CERN,  
<http://csc.web.cern.ch/CSC/2006/iCSC2006/iCSC2006.htm>, 3, Si

### Conferences, workshops:

<(Title, Place, Webpage, # days, Written relation) Respectively>

1. IEEE PRIME 2006, Ph.D. Research in Microelectronics and Electronics, Otranto (Lecce), Italy, <http://ims.unipv.it/prime2006/>, 6, Si
  2. 12th Workshop on Electronics for LHC and Future Experiments, 25-29 September 2006, Valencia SPAIN,  
<http://indico.cern.ch/conferenceTimeTable.py?confId=574>, 5, Si
  3. 4th Eurasian Conference, Nuclear Science & Its Applications, 31 Oct - 3 Nov / 2006, Baku/Azerbaijan,  
<http://www.taek.gov.tr/tudnaem/ec4/index.html>, 4, Si
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### Visits and stages:

<i>Institution</i>	<i>Place</i>	<i>Starting date</i>	<i># days</i>
1. CDR for GBT of SLHC, Design Review	CERN	10-Sep-2006	2

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### Research activity:

*Give a brief description of the research activity*

Analog VLSI Design :

- 1 - Development of rad-hard detector read-out ASICs

2 - Modelling and development of rad-hard burst-mode-capable Clock and Data Recovery (CDR) circuit for Gb/s applications

Related Software Work :

1 - From-scratch simulator codes for ideal architecture comparison

2 - Development of Genetic/Evolutionary Algorithms (GA & EA) for behavioural model & analog circuit optimization

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### ***Publications***

*<(Authors, Title, Journal, Number, Page, Year) Respectively>*

1. O. Cobanoglu, A. Rivetti, G. Mazza, M. Chiosso, D. Panzieri, "CMAD", a Full Custom ASIC, for the Upgrade of COMPASS RICH-1, 12th Workshop on Electronics for LHC and Future Experiments Conference Proceedings, -, -, 2006
  2. O. Cobanoglu, A. Rivetti, G. Mazza, Embedded D/A Converters for High Energy Physics Instrumentation, 4th Eurasian Conference, Nuclear Science & Its Applications Conference Proceedings, -, -, 2006
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