

## Application to join the RD50 Collaboration - Answers to the Questionnaire

### 1. Name of the institution and contact person

Please indicate the full address as well as a telephone number and e-mail address for the contact. (Link to your web-page is appreciated.)

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### 2. Names of group members and fraction of their time devoted to RD50 activities?

Please indicate the percentage of their time (Full Time Equivalent) dedicated to RD50 activities. The total manpower involved should reach at least 1 FTE (including students).

There are several parallel activities in Turin. Here I list the people that are working with me on the INFN-Gruppo V activity on the development of ultra-fast silicon detector.

N. Cartiglia 30%  
R. Cirio, 30%  
V. Monaco, 10%  
R. Bellan, 10%  
A. Staiano. 20%  
R. J. Wheadon 15%  
1-2Students 50%

### 3. Current research activities?

The silicon activities in Torino are:

3D detectors for the CMS upgrade  
Ultra-fast silicon detector  
VLSI chip design

### 4. Field of interest within the RD50 collaboration?

We join to pursue the study of ultra-fast detectors and associated electronics.

We have asked INFN Gruppo V to start financing ultra-fast silicon detectors, and they will do it.

For the electronics, we can provide the current prototypes developed for NA62 and supports.

Active involvement of our VLSI team (Rivetti, Mazza) will depend on funding.

## 5. Available resources (Instrumentation, irradiation facilities etc.)

Torino has been active in Silicon detectors for a while:

- probe stations
- manual and automatic wire bonders
- various IV, CV... devices
- clean rooms (now not in service)
- Fast Oscilloscopes and lasers
- VLSI laboratory