

***“MAKE: LEARN: SHARE: EUROPE”***

**Open School Unit in Turin (Collegio Einaudi)**

**09 June 2017 14.00-18.00**

**10 June 2017 9.00-14.00**

**Total hours: 9**

*I part: Introduction to quantum computing*

**Trainer:** Salvatore Carusotto

**Programme:**

- Principles of quantum mechanics, Hilbert space, Bloch sphere, QuBits, quantum registers
- Understanding physical laws and linear algebra related to quantum computing
- Slides

*II part: Experimental aspects and quantum gates*

**Trainer:** Salvatore Carusotto

**Programme:**

- Linear operators, Quantum gates, applications ( brief speech about Deutsch and Shor algorithms), experimental aspects and problems (entanglement ,Trapped Ions and NMR)
- Understanding what are the possible applications of quantum computing and the experimental problems
- Slides