

## Curriculum Vitae

**Sandro Centro** was born in Reggio Emilia (Italy) on 28/02/41.

**Full Professor** of Experimental Physics, at Dipartimento di Fisica e Astronomia dell'Università di Padova, since 1987.

Full Professor “in quiescenza” since 01/10/2011, holds teaching and research contracts both with University, Studioso Senior, and INFN. He also associated to Centro “E. Fermi”, Roma.



## Scientific activities

SC is active in the field of instrumentation for High Energy Physics since 1968, both for experiments with bubble chambers, in the early period, and for experiments with electronic techniques.

He was responsible, from **1970** to **1973**, for the construction of an automatic scanning machine for bubble chamber pictures PEPR (Precision Encoding & Pattern Recognition), in collaboration with M.I.T. and Oxford Dept. of Physics.

Since **1980** he was participating to the UA1 experiment of Carlo Rubbia, that discovered the intermediate vector bosons  $Z^0$  and  $W$ .

From **1984** to **1990** he was responsible of the electronics for the UA1 upgrading programs (muon detector and e-m calorimeter).

He is spokesperson, since 1987, of the Padova group participating to the ICARUS (*Imaging Cosmic And Rare Underground Signals*), <http://icarus.lngs.infn.it>, collaboration headed by C. Rubbia.

In the framework of this project he is responsible of the electronics of the 600 tons liquid Argon TPC (Time Projection Chamber) installed at INFN (Istituto Nazionale di Fisica Nucleare) Gran Sasso laboratory in **2008** and running from 2010 to 2012 on the CNGS neutrino beam.

Since **2003** he is deputy spokesman of the experiment.

In the framework of LHC he has participated to various R&D programs for detectors and VLSI electronics.

From **1990** to **1994** he was in the DRDC (Detector Research & Development Committee) at CERN for evaluating LHC proposals.

From **1994** to **1997** SC was member of LERB (LHC Electronics Review Board) of CERN that coordinates the electronics activities for LHC experiments.

Since **1997** SC was responsible for a four year project funded by EEC, for the development of a Cardiac Imaging Chamber after an idea of George Charpak, 1992 Nobel laureate.

He was responsible in **2003** for a research project on liquid Argon TPC, funded by Italian Ministry of Research and University (MIUR) with **200K€**, coordinating groups from Universities of Naples, L'Aquila, Pavia, and Padova. The project continued in **2005** with addition of Milan University and funded by MIUR with **372K€**.

The project evolved toward large mass liquid Argon detectors implementation in **2007** and SC was coordinating groups from Pavia, L'Aquila and Padova with a MIUR fund of **245K€**.

Recently SC has started an R&D project funded by University of Padua, Regione del Veneto, and **Centro Fermi** on Concentrated PhotoVoltaic (CPV) solar energy and eventually in 2010 he was among the founders (President) of AtemEnergia Srl, <http://www.atemitalia.it/fotovoltaico.html>, spin-off of University of Padua, participated by University with a 5% share.

Since 2014 SC is deputy of the WA-104 collaboration (Improving the ICARUS T600 Liquid Argon Time Projection Chamber (LAr TPC) in order to prepare for its operation at shallow neutrino depths) in view of the transferring of Icarus T600 to FNAL to act as far detector in the Short Base-Line Neutrino program.

### **Visiting positions**

Paid Research Associate from **1980** to **1983** at CERN.

Unpaid Research Associate at MIT (Boston) from **1990** to **1994**.

Unpaid Research Associate at CERN (Geneva) from **1968** to **present**.

### **Managing function**

From **10/2000** to **03/2015** SC was member of CERN Finance Committee as *Industrial Liaison Officer* (ILO) for *Italian industry* at CERN. Since **03/2003** SC has been appointed as member of the *External Network for Technology Transfer* from CERN to Italian Industry. In **10/2008** SC has been appointed as Chairman of the ***I.L.O. Forum*** at CERN. Since **10/2013** is ILO for European Spallation Source (ESS).

**Papers** The scientific activity of SC is documented in more than 200 papers. In **1992** he was in charge to write the item "Circuiti Logici" for Enciclopedia delle Scienze Fisiche Treccani.

*Padova 05.06.2017*



*Sandro Centro*