
Curriculum

Prof. Alberto Maria Messineo: CV

Academic Positions

- In 1987: Master in Physics (University of Pisa).
- In 1992: Ph.D. in Physics (University of Pisa).
- From 1992 to 29/12/2014: Assistant Professor at the Faculty of SMFN of the University of Pisa.
- From 29/12/2014: Associate Professor at the Department of Physics "E. Fermi" of the University of Pisa.

Research Activities

His research activities are focussed on the field of the Experimental Physics of Elementary Particles and Fundamental Phenomena, and on the field of Medical Physics. He worked on the development of particle detectors with innovative design, on the design and operation of large experimental apparatus and on the analysis of experimental data for the study of elementary particles properties.

Chronology

- 1986–2000: a member of the ALEPH experiment (e + e⁻ collider LEP, CERN).
- 1988–1992: a member of the project RADIN, research in Medical Physics (INFN–CSN5).
- Since 1994: a member of the CMS experiment (pp collider LHC, CERN).
- 1996–2002: a member of the ROSE–RD48 collaboration (CERN).
- Since 2002: a member of the RD50 collaboration (CERN).
- 2003–2006: a member of the project SMART (INFN–CSN5).

Topics of Research activity

ALEPH experiment (e + e⁻ collider LEP CERN, CH).

In the Aleph collaboration, he has been involved in the development, construction and operation of the hadron calorimeter and chambers for μ mesons detection. In the experiment upgrade, he took part in the upgrade of the vertex detector. He took part in the measurement of the τ lepton lifetime, produced in the decay of the Z_0 . He has contributed to the development of an original and innovative method of analysis, known as Impact Parameter Sum (IPS).

CMS experiment (pp collider LHC CERN, CH).

In the CMS experiment, he worked on the complex tracking system made by silicon micro–strips detectors. In the early CMS phase, he also studied the potential reach of CMS for the detection of the Higgs boson in the channel $pp \rightarrow HW$.

- Research activities during CMS RUN1.

He was involved in the installation and commissioning and data taking of the tracker in the CMS experimental apparatus.

- Upgrade Phase I (early 2016)

He is the team leader of INFN Pisa laboratories, for the construction activities of the pixel detector, technical coordinator for the Italian INFN project of Upgrade Phase I and also the responsibility of the pixel sensors hybridization process.

- Upgrade Phase II (2022–2023)

Prof. Messineo has been the coordinator and responsible for the working group dedicated to the development of sensors for the Phase II tracker and member of CMS Upgrade Steering Committee.

In 2010 he developed the first prototypes of silicon micro–strips detectors designed to provide the charged particle track position, flight direction and le ν –1 trigger. Since 2014, he is involved in the RD_Fase2 project, funded by INFN CSN1, for the design of silicon pixel detectors of CMS Phase II.

Collaborations ROSE (RD48, CERN), RD50 (CERN) and the SMART project (INFN–CSN5)

In RD48 and RD50 prof. Messineo has worked on the development of semiconductor detectors for experiments at high luminosity colliders. Since 2002 he is the RD50 Team Leader of the Pisa research group and is a member of the RD50 Collaboration Board.

Research in Applied Physics (Medical field)

In the Medical Physics research field, prof. Messineo has been a member on the RADIN project for the development of silicon microstrip sensors optimized for the detection of X–ray in the diagnostic range.

Publications

Prof. Messineo is a co–author of ~1291 publications (IsiWebOfScience database). Its H–index is 94, evaluated by IsiWebOfScience.