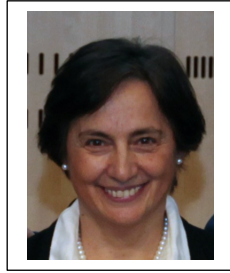


**Chiara Mariotti**  
**INFN Torino (I)**  
 chiara.mariotti@cern.ch



**Curriculum Vitae  
 et studiorum**

### **Education:**

- 10 July 1987: Laurea in Physics at the Torino University with marks 110/110 Cum Laude.
- October 1991: PhD in physics at the Torino University.

### **Contracts:**

- February 1992 - March 1993: INFN post-Doc at Istituto Superiore di Sanità, Roma.
- Since June 1993: INFN researcher.
- October 1996 - September 2002: Staff-Member at CERN in the EP division.
- Since March 2002: senior-researcher in INFN-Torino
- 2003 - 2010: lecturer at the Physics Institute of Torino University in “Advance Particle Physics”
- October 2011 – December 2012: Scientific Associate at CERN
- 2013: Scientific Eligibility to the Full Professor position.
- Since May 2023: Adjunct professor in the Physics Department at Boston University

### **Awards**

**2018 EPS (European Physical Society) Emmy Noether Distinction for Women in Physics.** “For her outstanding contributions to the discovery and characterization of the Higgs boson, for her leading role as founder and coordinator of the LHC-wide Higgs Cross Section Working Group, and for her impressive capacities and achievements in outreach, in particular towards the young generation of physicists.”

Since September 2021 **Fellow of the European Academy of Science (EURASC)**

### **Coordination and responsibilities in the CMS Experiment and LHC**

- *Sept. 2021 – Aug 2024: Deputy chair of the CMS Publication Committee.*
- *Jan. 2010 - March 2017: Co-coordinator and founder of the LHC Higgs Cross Section Working Group, LHCHSWG.*
- *Jan. 2011- Dec. 2013: Co-coordinator and founder of the LHC Higgs Combination Group, LHCHCG.*
- *March 2012- Dec. 2013: Co-convener of the CMS physics group “Higgs combination and properties”.*
- *Feb. 2011- Feb. 2012: Co-convener of the CMS physics group “Higgs  $\rightarrow$  ZZ”.*
- *Jan. 2008– Dec 2009: Co-convener of the “CMS Higgs Physics Analysis Group”.*
- *2003– 2016: Deputy group leader of the Torino-CMS group.*
- *ITN HiggsTools (2014-2017): Co-responsible for the Work Package WP1.*

### **Physics analyses in the CMS experiment**

- Measurement of the Higgs couplings with bosons and fermions.
- Measurement of the Higgs mass.
- Measurement of the total width of the Higgs.

- Search for the Higgs boson, discovery and then measurement of the properties in the  $H \rightarrow ZZ \rightarrow 4l$  channel.
- Measurement of  $Zbb \rightarrow 4l$  and  $tt \rightarrow 4l$  processes.
- Measurement of the  $gg \rightarrow ZZ / qq \rightarrow ZZ$  ratio.
- Measurement of the  $ZZ \rightarrow 4l$  cross section.
- EWSB: VV-scattering.
- $Z \rightarrow 2\mu$ : determination of the muon moment scale and moment resolution.

### Hardware in CMS

- 2001 – 2005 : CMS – Muon Chamber (test and installation).
- 1998 - 2000 : CMS – Silicon Tracker (R&D).

### Coordination and participation in working groups at LHC

- LHCHXSWG: *co-founder* and *co-coordinator* of the groups
- LHC Higgs Combination WG: *co-founder* and *co-coordinator* of the group
- LHC@TSP: from LHC to Tera Scale Physics: to define the research strategy in Europe. *Coordinator* of the EWSB group.
- LHC2FC: From LHC to Future collider: *coordinator* of the Higgs boson group.
- MCWS: workshop on Monte Carlo's, physics and simulations at the LHC: *coordinator* of the group “Experimental studies”.
- HERA and the LHC: A Workshop on the implications of HERA for LHC physics. VV scattering group.
- Workshop on CP Studies and Non-Standard Higgs Physics: VV scattering group.

### Coordination and responsibilities in the DELPHI experiment at LEP

- *June 1999 - May 2008*: DELPHI Physics Coordinator.
- *June 1999 - May 2008*: Member of the DELPHI coordination and DEC (DELPHI Executive Committee) as Physics Coordinator.
- *1998 – 2002*: Coordinator of the analyses of the DELPHI CERN-EP group.
- *1994 – 2003*: Co-coordinator of the b-tag task in DELPHI.
- *1994 – 1998*: Co-coordinator of “Rb ( $Z \rightarrow bb$ )” in DELPHI.
- DELPHI Data-taking coordinator in 1998.
- Co-coordinator of the DELPHI FORUM in 1997, 1998 and again in 2001.

### Physics analyses in the DELPHI experiment

- Higgs boson search.
- Search of new physics in the final state with 4 jets.
- $Z\gamma\gamma$ : Z symmetric double radiative decay.
- b-tagging at LEP2.
- Measurement of Rb (Z partial width in b quarks).
- Measurement of nb (multiplicity of weakly decaying b hadrons).
- Measurement of gbb (gluon splitting in bb).
- b-tagging for electroweak precise measurements.

## Hardware in DELPHI

- 1992-2000: DELPHI Silicon Tracker
- 1992-1996: DELPHI VFT: R&D

## Coordination and participation in working groups at LEP

- LEP Higgs working group.
- Higgs Physics at LEP2.
- The LEP and SLD Electro-Weak Heavy Flavor Working Group.

## Physics analyses in the NMC experiment – PhD (1987–1992)

- Beam Momentum Station Calibration.
- Measurement of the Gluon Structure Function Misura della funzione di struttura del gluone.
- Coherent, quasi-elastic and inelastic di  $J/\Psi$  production

## Master thesis in the E760 experiment (1886–1887):

Central and Forward Electromagnetic Calorimeter: Design, Monte Carlo simulation and construction

## SCIENTIFIC COMMITTEES

- Since 2022: expert member of the scientific committee STARTING GRANT of SNSF (Suisse National Science Foundation).
- Since 2022: expert member of FNRS, Fund for Scientific Research - (Belgium)
- Since July 2021 : expert member of the International Scientific Council (CSI) of the “Physique des 2 Infinis” - P2IO in France.
- Since 2021: in the physics jury of the Portugal-CERN PhD grant
- Since 2020 : expert member of the scientific committee FLARE (Funding Large international REsearch projects) of the SNSF (Suisse National Science Foundation).
- Feb. 2020 – Sept. 2020: expert member of the review committee HCERES (Haut Conseil de l’Evaluation de la Recherche et de l’Enseignement Supérieur) in France for the CEA (Commissariat à l’énergie atomique et aux énergies alternatives).
- Aug. 2019 – Jan. 2020: expert member of the review committee HCERES (Haut Conseil de l’Evaluation de la Recherche et de l’Enseignement Supérieur) in France for the Particle Physics Laboratory LAPP in Annecy.
- Since 7/2019: expert member of the Scientific and Technical Council of the Particle Physics Department (CSTD DPhP) at IRFU/CEA – Saclay, France.
- Since 2019 : expert member of the scientific committee ECCELLENZA of SNSF (Suisse National Science Foundation).
- Oct. 2017 - July 2020: expert member of the scientific committee ANR (Agence National de la Recherche) in France.
- Since 2013 reviewer of scientific project for the ERC, at the European Research Council.
- 2013 – 2017 reviewer of scientific project for the ANR.

## Editorial boards

- Since 2021 : Member of the *Editorial Board* of “Reports on Progress in Physics”
- Since 2017 : Member of the *Editorial Board* of “IJMPA/MPLA”

## Lecturer at Torino University

- 2003 -- 2010: Teaching the course of “Advance Particle Physics” for the Master in Fundamental Interactions, at the Physics University of Torino. The argument is “Electroweak Interaction in the Standard Model and the experimental tests” (<http://www.to.infn.it/~mariotti/particelle2.html>).

## Lecturer in international and national schools

- May 2019 – May 2023, Politecnico Milano, “How did we discovered the Higgs Boson”
- 9 July 2021, YETI - Durham, “The making of the Standard Model at LEP”
- 1-4 April 2019, University of Oslo, Spring workshop on nuclear and particle physics 2019, “Electroweak unification and the Higgs boson”
- 9-12 April 2018, University of Oslo, Spring workshop on nuclear and particle physics 2018, “Neutral current and unification” and “The Higgs boson”.
- January 2013, Durham University (England), YETI 2013 school, “The discovery of the new boson at LHC”.
- October 2012, Bad-Libenzel, Germania – physics school: “Higgs theory and searches”.
- August 2012, at the Cargese 2012 summer school: “Across the TeV frontier with the LHC”, lessons on “Higgs theory and searches”.
- July 2012, MCnet-LPCC summer school at CERN, lesson on “MC for Higgs”.
- June 2012, Agorà Scienza, Torino, “The elementary particle physics and the search of the Higgs Boson at the CERN laboratory in Geneva”.
- January 2012, Durham University (England), YETI 2012 school, lessons on Higgs searches at LHC.
- October 2011, Freiburg University, LPPP 2012 School, Lessons on “Results from LHC”
- May 2003, PhD school of Parma University, “The Standard Model from the LEP success, through the Tevatron to LHC”.

## Organization of conferences

- 4 July 2022: Organizer of the Scientific Symposium to celebrate the 10<sup>th</sup> anniversary of the Higgs Boson discovery
- Member of the International Advisory Committee of Higgs Hunting (Orsay, France) from 2020.
- Member of the International Advisory Committee of “Charged 2012”, “Charged 2014” in Uppsala and “Charged 2021” (online).
- Member of the International Advisory Committee of LHC Days in Split (Split, Croat) in 2014, 2016, 2018, 2020 and 2022.
- Member of Scientific Program of LHCP, New York 2014.
- Organizer of the workshop Higgs Couplings: 2012 a Tokio, 2013 a Freiburg, 2016 a SLAC, 2017 ad Heidelberg, 2018 a Tokio, 2019 ad Oxford.
- Organizer of the workshop Higgs Couplings 2014 a Torino.
- Organization of the WG1 of the LHC2TSP workshop (dedicated to the definition of the European Strategy for Physics research) (August 2011 at CERN , November 2011 in Orsay, March 2012 at CERN).
- LHC Higgs Cross Section Working Group: organization of the regular workshop: April 2010 in Freiburg, July 2010 at CERN, November 2010 in Bari, May 2011 in BNL, Nov 2011 in Orsay, May 2012 at CERN, June 2014 at CERN, January 2015 at CERN, July 2015 al CERN, January 2016 al CERN, July 2016 al CERN.
- Member of the International Advisory Committee of “Physics at LHC and beyond” conference, 2014, Quy-Nhon (Viet Nam).
- Convener of the WG1 of LHC2TSP (for the European Strategy in high energy physics) Workshop in August 2011 at CERN, November 2011 at Orsay, March 2012 at CERN, and editor of the final document.
- EPS-HEPP Conference 2011, Grenoble (F), Convener of the “Higgs and new physics” parallel session.
- November 2009, Torino (I), organization of a workshop on Higgs search at LHC, towards a foundation of the “LHC Higgs Cross Section Working Group”.
- February 2009, The LHC2FC workshop at the CERN Theoretical Department. Convener of the Higgs working group.
- June 2008, The SUSY08 conference in Korea. Convener of the Higgs parallel session.

- 2006-2008 co-organizer of the series of workshops MCWS (Workshop on Montecarlo, physics and simulation at LHC) in Frascati.
- Organisation of the IFAE (Incontri di Fisica delle Alte Energie) conference (scientific program and logistic) in Torino, April 2004.
- 2002 - 2015, member of the scientific committee of IFAE.
- April 2002, Parma IFAE: Convener of the ElectroWeak parallel Session.
- July 1999, Tampere, EPS-HEP'99: Convener of the Parallel Session "Heavy flavour and B factories".

### Presentations at international and national conferences

- August 2022, Vienna, SSP2022, invited plenary talk "*Recent Higgs boson analysis results*"
- July 2022, Bologna, ICHEP 2022, invited plenary talk "*Higgs results: from discovery to precision physics*"
- 26 Aug 2021, Milano, summary talk of the *Multi Boson Interaction Conference*.
- 20 Sept 2019, Edinburgh, invited talk at the Peter Higgs's 90<sup>th</sup> birthday celebration: "*The story of a discovery: how we found the long-sought-after Higgs boson*".
- April 2017, Invited plenary speaker at DIS2017, England, "Higgs boson physics at LHC"
- Bad Honnef, 17 October 2016. 625 WE-Heraeus-Seminar on "*The High-Energy LHC – Interplay between Precision Measurements and Searches for New Physics*"
- 39 Johns Hopkins workshop, Gothenburg (Sweden), August 2015, invited talk: "*Recent results on Higgs physics from Atlas and CMS*"
- ITN HiggsTool, first annual meeting: Freiburg (Germany) 15 April 2015, "*Higgs boson: latest results*"
- London Royal Society, 22-23 January 2014, invited talk, "*Vector Boson scattering at LHC*".
- Spaatind 2014, Scandinavian Conference, 2-7 gennaio 2014, invited talk, "*Higgs Boson measurements*".
- September 2013, Madrid, "Why  $m_H=126$  GeV?" workshop, invited talk on the LHC results on the Higgs boson.
- Nobel Academy Symposium on physics at the Large Hadron Collider, Krusenberg, May 2013, invited talk on "*Non SM Higgs searches*".
- Invited talk at the DESY Theory Workshop "*Lessons From The First Phase of The LHC*", September 2012, on "Searches for the Standard Model Higgs Boson -experimental status"
- Invited talk at the MG13, Marcel Grossman meeting in Stockholm, 6 July 2012 to present the discovery of the new boson.
- 4 July 2012: Round table at "Lindau Nobel Laureate Meeting" with Prof Rubbia, Prof Veltman, Prof Gross and Prof Smoot on the new discovery at CERN.
- Invited talk at the "Origin of Mass 2012" conference in Stockholm on "*SM Higgs searches in CMS*"
- Invited talk at the "24<sup>th</sup> Rencontre de Blois" conference in June 2012 on "*Higgs searches in CMS*"
- September 2011, "Higgs Days in Santander", talk on the news and future of the LHC H XS WG.
- April 2011 at CERN at LPCC workshop, talk on the results from the LHC H XS WG
- March 2011 at CERN, at the PDF4LHC workshop, talk on the results from the LHC H XS WG
- September 2010, at "LHC Days in Split", invited talk: "*Atlas and CMS Higgs searches*".
- July 2010, "Higgs Hunting" in Orsay, invited talk: "*Review of cross-section and BR, the LHC Higgs task force*"
- May 2010, "Loopfest IX" in Stony Brook, USA, invited talk: "*Results from the LHC*".
- April 2010, IPPP Durham, UK, "Exploring the origin of mass: a new dawn" workshop, invited talk on "*Higgs boson searches at the LHC*".
- April 2010, Freiburg, Germany, "1<sup>st</sup> workshop of the LHC Higgs Cross Section working group", introductory talk about the scope of the group.
- September 2009, Santander, Spain, "Higgs days in Santander" workshop, presentation on the "*SM Higgs search in the CMS experiment*".
- June 2009 FNAL, talk on: "*Prospect for the Higgs search at CMS*", at the Vector Boson Fusion Workshop.
- February 2009, Summary talk of the Higgs working group for the "LHC2FC" workshop at the CERN Theoretical Department.
- June 2003, Pisa. First Italian meeting on ATLAS and CMS Physics. Round Table on the futures of these meetings.
- April 2003, Lecce, IFAE. Talk on the "*Final LEP results on the Higgs search*".
- July 2002, Amsterdam, ICHEP 2002, "*Final results on the search for the Standard Model Higgs at LEP.*"
- August 2000, Invited talk at XXVIII SLAC Summer Institute, SSI-2000 – SLAC, "Search for new particles at LEP2".
- July 2000, Invited talk at Physics in Collision 2000, PICXX – Lisbon, "*Search for the Higgs boson at LEP*".

- March 2000, CERN - LEP-Committee: Presentation on the *Recent physics results of the DELPHI experiment*.
- July 1998, Montpellier, QCD'98: Talk on the measurement of the *Cross section of the  $Z \rightarrow 4b$  and extraction of the gluon splitting rate into  $b$  quarks*.
- April 1998, Napoli, "Na-LEP": Talk on the *Super-symmetric Higgs searches at LEP*.
- August 1997, Jerusalem, EPS-HEP'97: "*The measurement of  $R(uds)$ ,  $R(c)$  and  $R(b)$  at LEP and SLD*"
- April 1997, Pisa, "Pi-LEP": Round-table on the problematic of the  $R(b)$  measurement.
- April 1997, Pisa, "Pi-LEP": Talk on the  *$b$ -tagging method in DELPHI for the Higgs boson search*.
- April 1996, Padova, "Pad-LEP": Round-table on the ALEPH 4-jets events at  $E_{cm} \sim 133$  GeV.
- September 1995, Talloire, WIN'95. Talk on the *LEP and SLD measurements of  $R(b)$  and  $R(c)$* .
- April 1995, Genova, "Ge-LEP". Talk on the *LEP and SLD measurements of  $R(b)$  and  $R(c)$* .
- February 1995, "Wire Chamber Conference", Presentation of the *DELPHI Very Forward Tracker*.
- April 1994, ECT-Trento, "International workshop on the parton structure of nucleon and nuclei", Talk on the *NMC results on  $J/\Psi$  quasi-elastic production and test of Colour Transparency models*.
- July 1993, Isola d'Elba, "Electron Nucleon Scattering". Talk on the *NMC results on  $J/\Psi$  quasi-elastic production and test of Colour Transparency models*.
- September 1991, Vladivostok (Russia), "Relativistic Nuclear Dynamics", Talk on *NMC results on  $J/\Psi$  production, gluon structure function and Colour Transparency phenomena*.
- July 1991, Geneva, LP-HEP'91, "*Results from  $J/\Psi$  production in muon interactions from the NMC experiment*"
- October 1990, Perugia, "Congressino di Fenomenologia". Talk on the *NMC results on  $J/\Psi$  production on  $H_2$ ,  $D_2$ ,  $Sn$  and  $C$  targets*.
- September 1990, ICTP-Trieste, "Workshop on Hadronic Physics with High Energy Electron Beams". Talk on the *NMC results on  $J/\Psi$  production on  $Sn$  and  $C$  targets*.
- March 1990, Strasbourg, "Spring Meeting of Nuclear Physics Section". Talk on  *$J/\Psi$  production on  $H_2$ ,  $D_2$  and extraction of the gluon structure function*.

## Seminars

- 31 March 2023, Colloquium at the PSI laboratory in Switzerland on " "
- 29 June 2019, Torino, for the EPS prize (2018 EPS Emmy Noether Distinction for women in physics): "The story of a discovery : How we found the long-sought-after Higgs boson".
- 17 May 2018, key-note speaker for physics at the first meeting of the Swiss PostDoc, at the Geneva University, <http://unige.ch/apdu/postdoc-days/program/> : "The story of a discovery : How we found the long-sought-after Higgs boson".
- 22 Oct 2013, Torino, for the Nobel Prize in Physics 2013: "How we found the Higgs boson"
- CERN PH Seminar, 15 April 2013 : "Recent results on Higgs studies at CMS".
- 27 November 2012, Torino Italy, workshop on the LHC discovery: "Higgs hunting: the adventure of particle physics"
- 8 March 2012, Colloquium at the PSI laboratory in Switzerland on " SM Higgs searches at Atlas and CMS"
- 13 Jan 2012, Torino University, seminar on the SM Higgs search at LHC
- Torino University, February 2011, "The LHC Higgs Cross Section working group: first results and future work".
- February 2002, Seminar in Karlsruhe on "Status of the Standard Model and possible improvements for LHC"
- March 2001, Roma, Italian INFN High Energy Committee: Presentation of the recent LEP physics results.
- November 2000, Torino: Seminar on the results of the Higgs boson search at LEP.
- July 1997, CERN, ALEPH meeting: Presentation of the DELPHI recent results.
- 11 December 1995, CERN, CERN-PPE seminar: "Measurement of  $R(b)=\Gamma(bb)/\Gamma(had)$  with the DELPHI detector at LEP."
- Septembre 1995, LAPP - Annecy Le Vieux. Seminar on the LEP and SLD measurements of  $R(b)$  and  $R(c)$ .
- May 1992, University College of London, Seminar on NMC results.
- May 1992, Oxford University Seminar on the results from the NMC experiment.
- May 1992, Rutherford Laboratory (RAL), Seminar on NMC results.
- March 1991, SISSA -Trieste, seminar on NMC results.
- January 1990, Seminar at Istituto Superiore di Sanita', Roma, on NMC results.
- April 1990, seminar at Free University of Amsterdam on NMC results on  $J/\Psi$  production on  $H_2$  and  $D_2$  and extraction of the gluon structure function

## Outreach and Art&Science

### Shows and films:

- Centre Pompidou in Metz from November 2021, LumaDays in Arles September 2021, Biennale of art and science in Barcellona June 2021, Biennale of contemporary art in Taipei November 2020 – March 2021: Film and sculpture “MASS”. Main actor of the movie, with Michel Mayor (Nobel prize 2019) . <https://arts.cern/mass>, <https://arts.cern/article/taipei-biennial-2020>
- 11 Feb 2020, HEM (Haut École de Musique, Geneva), 15 Jan. 2020 Neuchatel théâtre, 23 June 2019 CMS - LHC, 22 June 2019 Fête de la musique, Geneva, 21 June 2019 CERN GLOBE, “Subatomic Desire”. Co-author of an operetta with music written from the sonification of CMS Higgs boson events, with images and improvisation, on the Standard Model physics and on the CMS experiment.
- With Serena Dandini, *National Geographic Science Festival*, Roma, 11 April 2019: “Fisiche, Femminile Plurale” <https://www.youtube.com/watch?v=gGseKFi7UMA>

### Coordination:

- EPS-2019 a Ghent: co-coordinator the outreach day.
- Jan 2018 – Dec 2019: coordinator and co-founder of the group ORIGIN. It aims to raise awareness on physics through art, organizes exhibitions of physics&art, workshops for primary and secondary school students, collaborations with universities and schools of art and music, collaborations with established artists. Participants: ATLAS, CMS, LHCb, Ligo-Virgo, Muographer, Perimeter institutes ...
- March 2017- Dec 2019: *chair* of the “art@CMS” steering committee\_ which aims to raise awareness of CMS physics through art, and organizes exhibitions of physics and art, workshops for primary and secondary school students, collaborations with universities and schools of art and music, collaborations with artists.

### Conferences and Seminars:

- 1 July 2022, Swiss Physical Society, Women in physics – Career symposium. Talk about my career.
- 20-22 Jan. 2020, Oslo, Artistic research Week 2020. KHIO Oslo National Academy of the Arts. Seminar title: “*Perception of time and distortion of time*”.
- May 2019 and June 2021: 2 hours classes at the Politecnico of Milano for the course: “Communicate the research” on the Higgs boson discovery at CERN.
- June 2017: organization of a 1 week-long visit at CERN and a seminar at the CERN GLOBE of Hélène Langevin-Joliot (grad-daughter of Pierre and Marie Curie, daughter of Irene and Frederick Joliot-Curie).
- July 2014 CERN, POPscience – stage of poets at CERN: “How we discovered the Higgs boson”.
- Researcher night, FNAC, Geneva, Setpt. 2014 – scientific coffee on the Higgs boson.
- Théâtre de la Madeleine, 26 Sept 2014, with Hubert Reeves, Etienne Kleis, Michel Mayor , “Le Big Bang, Higgs, les exoplanetes... et moi?”
- Round table on “Imagine Science” with several movie directors, CERN Globe, 20 marzo 2012.
- Academy of Science, Wien, Austria, 31 Oct. 2013, for the Nobel Prize for Physics 2013: “*How we found the Higgs boson*”
- 28 Oct. 2013, Torino, Rotary club, for the Nobel Prize for Physics 2013: “*How we found the Higgs boson*”
- 25 Oct. 2012, Milano, colloquium on the discovery of the Higgs boson, with the writer Bruno Arpaia, for 150<sup>th</sup> anniversary of the Politecnico and of the “Piccolo Teatro” of Milano.
- 11 Feb. 2011, Biblioteca Archimede, Torino, presentation of the book of the writer Bruno Arpaia, “*L’energia del vuoto*”.
- May 2008, Politecnico of Milano, “*The symmetry breaking: from the theory to the search of new particles at CERN*”.
- May 2005 Torino, at the National Museum of Cinema, introduction of two movies about CERN for the “Year of Physics” celebration.
- Feb. 2004, Torino, “I Giovedì Scienza al Teatro Colosseo”, seminar for the 50 years anniversary of CERN “*From the quark to WWW, 50 years at CERN between particle physics and Internet*”.

### Outreach: Physics and Music

- 15 Sept. 2019, *CERN Open Days*: concert with sonification compositions.
- Sept. 2017, EUCAS 2017 conference, “*Superconducting magnets*”: sonification of the training and quenching cycles of super-conductive magnets.

- 16 Feb. 2017, “*Sound for health*” ICTR-PHE, Geneva: participation as a musician and demonstrator in the talk of D. Vicinanza.
- “*Histoire d’une découverte*”: video to explain the Higgs sonification in 4 leptons in CMS, at CERN. The music and video were prepared for the final diploma of flute studies in France.  
<https://videos.cern.ch/record/2160885>
- 28 Oct. 2015, Celebration of the end of the year of light, Balaxert, Geneva: interpreter of the sonification of LHC data for a high luminosity run
- 29 Sept. 2014, CERN, Music and video for the 60 years anniversary of CERN  
<https://www.youtube.com/watch?v=gPmQcviT-R4>

#### Master-class, Open-data, seminars in the schools

- December 2022, December 2021: Master Class for “Les mains dans la pâte”, French physics professor association.
- March 2022, March 2021, Feb 2021: CMS Master Class in Italy and Geneva
- Feb. 2022, Feb. 2018, Feb. 2017: several seminars in primary and secondary schools in France and Switzerland for the “International days of Women in Science”
- Nov. 2017 – Dec. 2018: Collaboration with the “Ecole Supérieure d’Art du Nord-Pas de Calais/Dunkerque-Tourcoing” for an art exhibition about physics  
Catalogue: <http://prist-esanpdc.fr/?p=445>

#### School at work:

- Since 2017 I am a tutor for Italian high school students, who come one week at CERN to learn how to analyze CMS OPEN-DATA.

#### Lectures to Italian High School Teachers at CERN

- Oct 2013, Sept 2014, Nov 2014, Nov 2015, Oct 2016, Nov 2016, Oct 2017, Nov 2017, March 2018, Nov 2018, Nov 2019, June 2022, March 2023, Nov 2023: 5 hours classes on “Particle detectors and the Higgs boson discovery”
- Sept. 2015, Sept. 2016, Aug. 2017, Oct 2018: 5 hours classes on “Precision physics and searches of new particles”

#### TV interview:

- 27 may 2017: interview on France 3 (about CERN and music): <http://france3-regions.francetvinfo.fr/auvergne-rhone-alpes/suisse-boson-musical-partition-particule-dieu-1263345.html>

#### Article for the EPS JOURNAL

- Nov. 2019: “*The Story of a Discovery: How we found the long-sought-after Higgs Boson*”, by Chiara Mariotti, Europhysics News 50/5-6, 2019, p. 24-28

#### Article for the CERN COURIER

- Sept. 2019, “*LEP’s Electroweak Leap*”, by A.Blondel, C.Mariotti, M.Pieri, P.Wells.  
<https://cds.cern.ch/record/2689203/files/CERNCourier2019SepOct-digitalaedition.pdf>

#### Article for ASIMMETRIE (of INFN)

- N8, June 2009, “*L’assedio all’Higgs, Una sfida che continua da un quarto di secolo, dal Lep a Lhc*”.  
<https://www.asimmetrie.it/index.php/component/content/article/99-asimmetrie-8/244-1-assedio-all-higgs>

#### Guide for visitors in CMS