



# Paolo Gandini

Primo ricercatore, infn sezione di Milano  
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## EDUCATION

October 2012	<b>D. Phil. in Particle Physics (Experiment: LHCb)</b> Balliol College, University of Oxford, UK
October 2008	<b>Master Degree in Particle Physics (Experiment: BaBar)</b> Università degli Studi di Milano, IT, Grade: 110/110 cum Laude
October 2006	<b>Bachelor Degree in Physics (Experiment: ATLAS)</b> Università degli Studi di Milano, IT, Grade: 110/110 cum Laude

## ACADEMIC POSITIONS

- Abilitazione Scientifica Nazionale (Sett Concorsuale 02/A1 - II Fascia - 3° Quadrim)  
Validity from 20/09/2022 to 20/09/2032.
- Member of the Doctoral Council of the Physics Department (UNIMI)  
From academic year 2021 to present.

01/2023 - present	Primo Ricercatore, Istituto Nazionale di Fisica Nucleare, Sezione di Milano, IT
07/2017 - 12/2022	Ricercatore, Istituto Nazionale di Fisica Nucleare, Sezione di Milano, IT
01/2015 - 07/2017	Postdoctoral Research Assistant, University of Oxford, UK
07/2016 - 07/2017	Junior Research Fellowship, St. Cross College, Oxford, UK
01/2013 - 01/2015	Postdoctoral Research Associate, Syracuse University, US
10/2012 - 12/2012	Research Assistant, University of Oxford, UK

## SCIENTIFIC ROLES

- I am a member of the LHCb Collaboration at CERN since 2009.
- I am a founding member of the ALADDIN collaboration (established in 2024).

2022 - present	Deputy P.I. of the Milan LHCb group
01/2022 - 12/2024	Responsible of Upstream Tracker (LHCb upgrade): ONLINE monitoring
01/2020 - 10/2021	LHCb speakers' bureau, member of the speaker committee
03/2018 - 12/2021	Responsible for Upstream Tracker (LHCb upgrade) front-end production
01/2016 - 10/2017	Convener of the Central Exclusive Production Group (LHCb)
01/2015 - 12/2018	Expert of the Herschel detector (Trigger, Maintenance, Operation, Performance)
01/2015 - 10/2017	Convener of the Common Tools and Systematic Group (LHCb)
2013 - 2014	Responsible for Upstream Tracker simulation for the LHCb upgrade
2013 - 2015	Responsible for Upstream Tracker testbeams at CERN

## AWARDS & GRANTS

09/2019	<b>Ettore Pancini Prize, Italian Physical Society (SIF) € 5,000</b> Awarded to a young researcher per year, who has obtained significant results in the field of experimental particle/nuclear physics. Mention: award for his determinant contribution to the activities of the LHCb experiment at CERN, in particular for his measurements on spectroscopy and CP violation.
03/2013	<b>Springer Thesis Prize (Springer) € 500</b> Thesis nominated as an outstanding PhD thesis by the University of Oxford. Published in Springer Theses - the best of the best, ISBN 978-3-319-01029-8
2009 – 2012	<b>JT Hamilton Scholarship in Physics (3 years)</b> , Balliol College, Oxford
2022 – 2023	<b>Progetto Interesse Nazionale: PRIN 202277EWLW</b> Project name: Experiment for DIPOle moments of short-lived heavy fermions at LHC (EDIPO) Amount: Total €231,298.00 (contributo MUR €209,587.00). Role: Research Unit Leader (INFN): assegnato alla research unit €123,789.00 (MUR 113,083.00). Duration: 2 years.
August 2018	<b>Young researcher fund, INFN, IT</b> Project: GLULI. Amount: €20,000 Role: PI. Duration: 2 years.
03/2016 Declined	<b>Marie Curie individual fellow at University of Milan, EU</b> Project: GLUEBALLS. Amount: €168,277.20 Role: PI. Duration: 2 years. Declined due to incompatibility with the INFN position
04/2016 Declined	<b>Ernest Rutherford Fellowships at University of Cambridge, STFC, UK</b> Project: Glueballs, Oddballs and Hybrids. Amount: £ 559,687.00 Role: PI. Duration: 5 years. Declined due to incompatibility with the INFN position

## SELECTED PUBLICATIONS

I am a member of the LHCb Collaboration and in its author list from 2009. I am author of all of its physics and upgrade publications and technical documents. I am reviewer of public and internal LHCb documents. I am regular reviewer for international peer-reviewed journals (**e.g APS for Phys. Rev. Lett., Elsevier and other journals**).

This list includes only a selection of publications and public documents in which I have been involved as a major/contact contributor.

2024	The ALADDIN proto-collaboration: Neri, N. and others. Advancements in techniques for measuring dipole moments of short-lived particles at the LHC <a href="#">NIMA 169875</a> (2024) DOI: <a href="https://doi.org/10.1016/j.nima.2024.169875">https://doi.org/10.1016/j.nima.2024.169875</a>
2024	The ALADDIN proto-collaboration. ALADDIN: An Lhc Apparatus for Direct Dipole moments INvestigation. Letter Of Intent <a href="#">CERN-LHCC-2024-01, LHCC-I-041</a> . <a href="https://arxiv.org/abs/10.17181/CERN.2G4V.0YAO">10.17181/CERN.2G4V.0YAO</a>
2024	LHCb Collaboration: Aaij, R. and others. The LHCb Upgrade I <a href="#">JINST 19 P05065</a> DOI: <a href="https://doi.org/10.1088/1748-0221/19/05/P05065">10.1088/1748-0221/19/05/P05065</a>
2023	LHCb Collaboration: Aaij, R. and others. Observation of new baryons in the $\Xi_b^- \pi^+ \pi^-$ and $\Xi_b^0 \pi^+ \pi^-$ systems. <a href="#">Phys. Rev. Lett. 131, 171901</a> ePrint: <a href="https://arxiv.org/abs/2307.13399">2307.13399</a> DOI: <a href="https://doi.org/10.1103/PhysRevLett.131.171901">10.1103/PhysRevLett.131.171901</a>
2022	Beteta, C. and others. The SALT, readout ASIC for silicon strip sensors of upstream tracker in the upgraded LHCb. <a href="#">Sensors (2022) 22(1) 107</a> DOI: <a href="https://doi.org/10.3390/s22010107">10.3390/s22010107</a>
2020	LHCb Collaboration: Aaij, R. and others. Measurement of $CP$ observables in $B^\pm \rightarrow D^{(*)} h^\pm$ decays using two-body $D$ final states <a href="#">JHEP 04 (2021) 81</a> ePrint: <a href="https://arxiv.org/abs/2012.09903">2012.09903</a> DOI: <a href="https://doi.org/10.1007/JHEP04(2021)081">10.1007/JHEP04(2021)081</a>

2020	LHCb Collaboration: Aaij, R. and others. Observation of a new baryon state in the $\Lambda_b^0 \pi^+ \pi^-$ mass spectrum. <a href="#">JHEP 06 (2020) 136</a> ePrint: <a href="#">2002.05112</a> DOI: <a href="#">10.1007/JHEP06(2020)136</a>
2019	LHCb Collaboration: Aaij, R. and others. Observation of new resonances in the $\Lambda_b^0 \pi^+ \pi^-$ system. <a href="#">PRL 123 (2019) 15, 152001</a> ePrint: <a href="#">1907.13598</a> DOI: <a href="#">10.1103/PhysRevLett.123.152001</a>
2019	LHCb Collaboration: Aaij, R. and others. Observation of two resonances in $\Lambda_b^0 \pi^\pm$ and precise measurement of $\Sigma_b^\pm$ and $\Sigma_b^{*\pm}$ properties. <a href="#">PRL 122 (2019) 1, 012001</a> ePrint: <a href="#">1809.07752</a> DOI: <a href="#">10.1103/PhysRevLett.122.012001</a>
2018	LHCb Collaboration: Aaij, R. and others. Search for beautiful tetraquarks in the $\Upsilon(1S) \mu \mu$ invariant-mass spectrum. <a href="#">JHEP 10 (2018) 086</a> ePrint: <a href="#">1806.09707</a> DOI: <a href="#">10.1007/JHEP10(2018)086</a>
2018	LHCb Collaboration: Aaij, R. and others. Central exclusive production of $J/\psi$ and $\psi(2S)$ mesons in pp collisions at $\sqrt{s} = 13$ TeV. <a href="#">JHEP 10 (2018) 167</a> ePrint: <a href="#">1806.04079</a> DOI: <a href="#">10.1007/JHEP10(2018)167</a>
2018	Akiba, K. and others. The HeRSChel detector: high-rapidity shower counters for LHCb. <a href="#">JINST 13 (2018) 04, P04017</a> ePrint: <a href="#">1801.04281</a> DOI: <a href="#">10.1088/1748-0221/13/04/P04017</a>
2017	LHCb Collaboration: Aaij, R. and others. Measurement of CP observables in $B^\pm \rightarrow D(*)K^\pm$ and $B^\pm \rightarrow D(*)\pi^\pm$ decays. <a href="#">PLB 777 (2018) 16-30</a> ePrint: <a href="#">1708.06370</a> DOI: <a href="#">10.1016/j.physletb.2017.11.070</a>
2017	LHCb Collaboration: Aaij, R. and others. $\chi_{c1}$ and $\chi_{c2}$ resonance parameters with the decays $\chi_{c1,c2} \rightarrow J/\psi \mu^+ \mu^-$ . <a href="#">PRL 119 (2017) 22, 221801</a> ePrint: <a href="#">1709.04247</a> DOI: <a href="#">10.1103/PhysRevLett.119.221801</a>
2016	LHCb Collaboration: Aaij, R. and others. Measurement of the properties of the $\Xi_b^*$ baryon. <a href="#">JHEP 05 (2016) 161</a> ePrint: <a href="#">1604.03896</a> DOI: <a href="#">10.1007/JHEP05(2016)161</a>
2016	LHCb Collaboration: Aaij, R. and others. Measurement of the CKM angle $\gamma$ from a combination of LHCb analyses <a href="#">JHEP 12 (2016) 087</a> ePrint: <a href="#">1611.03076</a> DOI: <a href="#">10.1007/JHEP12(2016)087</a>
2015	LHCb Collaboration: Aaij, R. and others. Evidence for the strangeness-changing weak decay $\Xi_b \rightarrow \Lambda_b^0 \pi^-$ <a href="#">PRL 115 (2015) 24, 241801</a> ePrint: <a href="#">1510.03829</a> DOI: <a href="#">10.1103/PhysRevLett.115.241801</a>
2015	Abba, A. and others. Testbeam studies of pre-prototype silicon strip sensors for the LHCb UT upgrade project <a href="#">NIM.A 806 (2016) 244-257</a> ePrint: <a href="#">1506.00229</a> DOI: <a href="#">10.1016/j.nima.2015.10.031</a>
2014	LHCb Collaboration: Aaij, R. and others. Measurement of the $\bar{B}_s^0$ meson lifetime in $D_s^+ \pi^-$ decays. <a href="#">PRL 113 (2014) 17, 172001</a> ePrint: <a href="#">1407.5873</a> DOI: <a href="#">10.1103/PhysRevLett.113.172001</a>
2014	LHCb Collaboration LHCb Tracker Upgrade Technical Design Report <a href="#">CERN-LHCC-2014-001, LHCb-TDR-015</a> , ISBN:9789290833970
2013	P. Gandini. Book: Observation of CP Violation in $B^\pm \rightarrow DK^\pm$ Decays Springer Theses - the best of the best ISBN 978-3-319-01029-8, DOI: <a href="#">10.1007/978-3-319-01029-8</a>
2013	LHCb Collaboration: Aaij, R. and others. Measurement of the CKM angle $\gamma$ from a combination of $B \rightarrow Dh$ analyses. <a href="#">PLB 726 (2013) 151-163</a> ePrint: <a href="#">1305.2050</a> DOI: <a href="#">10.1016/j.physletb.2013.08.020</a>

2013	M. Adinolfi and others. Performance of the LHCb RICH detector at the LHC. <a href="#">EPJC 73 (2013) 2431</a> ePrint: <a href="#">1211.6759</a> DOI: <a href="#">10.1140/epjc/s10052-013-2431-9</a>
2012	LHCb Collaboration: Aaij, R. and others. Observation of CP violation in $B^\pm \rightarrow DK^\pm$ decays <a href="#">PLB 712 (2012) 203-212</a> e-Print: <a href="#">1203.3662</a> DOI: <a href="#">10.1016/j.physletb.2012.04.060</a>
2009	BaBar Collaboration: Aubert, B. and others. Observation and polarization measurement of $B^0$ meson decay to $a_1^+(1260) a_1^-(1260)$ decay <a href="#">PRD 80 (2009) 092007</a> ePrint: <a href="#">0907.1776</a> DOI: <a href="#">10.1103/PhysRevD.80.092007</a>

## TEACHING & SUPERVISION

I have been tutor (exerciser) in two colleges at University of Oxford, teaching Particle Physics for third year students. I am involved in the supervision of several Master and PhD students. I co-tutor students for engineering master degree theses.

2024-2025	Line manager of 2+ postdocs
2024	Supervisor of Master student in Nuclear Engineering (external)
2020	Bachelor Student supervisor, Università degli Studi di Milano, IT
2019	DOE-INFN summer exchange program 2019: supervisor
2018	Series of seminars about Flavour Physics, Università degli Studi di Milano, IT
2017	Tutor: 3 <sup>rd</sup> Year Particle Physics, St Peter's College, Oxford, UK
2016 - 2017	Tutor: 3 <sup>rd</sup> Year Particle Physics, Keble College, Oxford, UK

## OUTREACH - (TERZA MISSIONE INFN)

2023	<b>Progetto Nuvoletta (portable cloud chamber)</b>
2022 – present	<b>Progetto Lab2go (<a href="https://web.infn.it/lab2go/">https://web.infn.it/lab2go/</a>)</b> Referente della sezione INFN di Milano. Activities in several schools of the city (e.g Liceo Donatelli-Pascal, Piero Bottoni, etc). Il progetto PCTO – LAB2GO è finalizzato alla valorizzazione dei laboratori, dei musei delle scuole secondarie superiori.
2021	<b>INFN course on Streaming Platforms for science</b> Course on science communication for Youtube and other streaming services.
2020	<b>Physics and Communication - Outreach in the EU grants</b> Course of science communication organized by INFN for outreach in international grants. Organized by INFN.
07/2016	<b>Scientific Fair: Antimatter Matters (Summer Science Exhibition 2016)</b> Dates: 4 July - 10 July 2016. Location: Royal Society, London. <a href="http://antimatter-matters.org/">http://antimatter-matters.org/</a> Stall at the Summer Science Exhibition organized by the Royal Society, visited by more than 10k persons. This stand has been touring the UK for several national science festivals.
2013 – present	<b>CERN and LHCb official guide</b> Official guide at CERN and the LHCb experiment Part of the organization of the CERN Open Days during long shut-down1 (LHCb)
2010	<b>Lectures series “Building a Business”, at Said Business School, Oxford</b> Series of lectures on how to make start-up companies/patents and attract investors when working in academia. Organized by the University of Oxford for students and postdoc in the Science field.
08/2009	<b>BRIGHT CONFERENCE 2009, University of Milan.</b> Participant and member of the organizing committee.

08/2008

**BRIGHT CONFERENCE 2008 University of Helsinki.**  
Member of the Italian Delegation of Università degli studi di Milano.

## CONFERENCES, SEMINARS & POSTERS

13th Nov 2024

Plenary Talk at WIFAE, Bologna, IT  
Title: "Spectroscopy of new heavy baryons"  
<https://agenda.infn.it/event/41047/contributions/243663/>

3rd Jun 2024

Plenary talk at LHCP2024, Boston, USA  
Title: "Hadron spectroscopy and hadron-hadron interaction" (all LHC experiments)  
<https://indico.cern.ch/event/1253590/contributions/5814187/>

3rd Jun 2024

Parallel talk at LHCP2024, Boston USA  
Title: "Heavy flavor spectroscopy studies at LHCb" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/1253590/contributions/5839207/>

8th Nov 2023

Invited talk at WPCF 2023, Catania, Italy  
Title: "LHCb on technical aspects how to search and find resonances"  
<https://agenda.infn.it/event/33324/contributions/214266/>

1st Jun 2023

Invited talk at the workshop Physics of Heavy Baryons, Munich, Germany  
Title: "New heavy baryons from LHCb" on behalf of the LHCb Collaboration  
<https://indico.ph.tum.de/event/7286/contributions/7394/>

25th Apr 2023

CERN Seminar, CERN  
Title: "A decade of spectroscopy at LHCb" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/1231803/>

27th Mar 2023

Plenary talk at Moriond QCD, La Thuile, Italy  
Title: "Heavy flavour spectroscopy at LHCb" on behalf of the LHCb Collaboration  
<https://cds.cern.ch/record/2854788>

16th May 2022

Parallel talk at LHCP, Taipei (online)  
Title: "Exotic hadrons at LHC (experiment)", CINCO talk (all LHC experiments)  
<https://indico.cern.ch/event/1109611/contributions/4773228/>

7th Sep 2021

Workshop PWA/ATHOS, Bristol, UK (online)  
Title: "Hadron Spectroscopy at LHCb" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/885396/contributions/4373558/>

19th Aug 2021

Parallel Talk at Lomonosov Conference, Moscow, Russia (online)  
Title: "Spectroscopy at LHCb" on behalf of the LHCb Collaboration  
[https://lomcon.ru/files/20LomCon/presentations/19Au\\_A/Gandini.pdf](https://lomcon.ru/files/20LomCon/presentations/19Au_A/Gandini.pdf)

22nd Jan 2020

Plenary talk at the International Winter Meeting on Nuclear Physics, Bormio, Italy  
Title: "Hadron Physics in LHCb" on behalf of the LHCb Collaboration  
<https://indico.mitp.uni-mainz.de/event/191/contributions/3200/>

21st May 2019

Parallel talk at LHCP, Puebla, Mexico  
Title: "Recent results on heavy flavor production" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/687651/contributions/3429071/>

20th May 2019

Plenary talk at LHCP, Puebla, Mexico  
Title: "CP violation in beauty and charm" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/687651/contributions/3399010/>

20th Sep 2018

Poster at TWEPP2018, Antwerp, Belgium  
Title: "A novel 4D fast track finding system using precise space and time information"  
<https://indico.cern.ch/event/697988/contributions/3056083/>

7th July 2018

Parallel talk at ICHEP2018, Seoul, Korea  
Title: "Searches for exotic baryonic states at LHCb" on behalf of the LHCb Collaboration  
<https://indico.cern.ch/event/686555/contributions/2960198/>

6th July 2018	Poster at ICHEP2018, Seoul, Korea Title: Central Exclusive Production at LHCb on behalf of the Herschel group <a href="https://indico.cern.ch/event/686555/contributions/2960196/">https://indico.cern.ch/event/686555/contributions/2960196/</a>
6th Jun 2017	Plenary talk at FPCP2017, Prague, Czech Republic Title: "Overview of hadron flavour production" on behalf of the LHCb Collaboration <a href="https://indico.cern.ch/event/586719/contributions/2531265/">https://indico.cern.ch/event/586719/contributions/2531265/</a>
23rd Mar 2016	Plenary talk at Moriond QCD, La Thuile, Italy Title: "Heavy flavour spectroscopy at LHCb" on behalf of the LHCb Collaboration <a href="https://moriond.in2p3.fr/QCD/2016/WednesdayMorning/Gandini.pdf">https://moriond.in2p3.fr/QCD/2016/WednesdayMorning/Gandini.pdf</a>
23rd Jul 2015	Parallel Talk at EPS2015, Vienna, Austria Title: "Central exclusive meson production at LHCb" on behalf of the LHCb Collaboration <a href="https://indico.cern.ch/event/356420/contributions/1764245/">https://indico.cern.ch/event/356420/contributions/1764245/</a>
14th Jul 2014	Plenary Talk at Beauty2014, Edinburgh, UK Title: "Lifetimes of B hadrons" on behalf of the LHCb Collaboration <a href="https://indico.cern.ch/event/308116/contributions/1679423/">https://indico.cern.ch/event/308116/contributions/1679423/</a>
17th Jul 2014	Poster at Beauty2014, Edinburgh, UK Title: "LHCb Upstream Tracker" <a href="https://indico.cern.ch/event/308116/contributions/1679398/">https://indico.cern.ch/event/308116/contributions/1679398/</a>
15th Oct 2013	Plenary Talk at Implications workshop of LHCb measurements, CERN Title: "Experimental overview of the CKM unitarity triangle angle" on behalf of the LHCb Collaboration, joint meeting with the theory community <a href="https://indico.cern.ch/event/255380/timetable/?view=lhcb_meeting">https://indico.cern.ch/event/255380/timetable/?view=lhcb_meeting</a>
18th Jul 2013	Parallel Talk at EPS2013, Stockholm, Sweden Title: "Measurements of $B \rightarrow DK$ decays to constrain the CKM unitarity triangle angle" on behalf of the LHCb Collaboration <a href="https://indico.cern.ch/event/218030/contributions/451038/">https://indico.cern.ch/event/218030/contributions/451038/</a>
4th Apr 2012	Plenary Talk at IoP Joint HEPP and APP Meeting 2012, London, UK (National Meeting) Title: "Observation of CP violation in $B \rightarrow DK$ decays at LHCb" representative of the LHCb collaboration in the UK hep community <a href="https://indico.cern.ch/event/175304/contributions/1439378/">https://indico.cern.ch/event/175304/contributions/1439378/</a>
21st Feb 2012	Plenary Talk at Lake Louise Winter Institute , Lake Louise, Alberta, Canada Title: "Observation of CP violation in $B \rightarrow DK$ decays" on behalf of the LHCb Collaboration <a href="https://cds.cern.ch/record/1422422">https://cds.cern.ch/record/1422422</a>
Jun 2010	Plenary Talk at IoP meeting and LHCb-UK physics meeting, Glasgow, UK Title: "ADS modes with $B \rightarrow DK$ "
30th Jul 2009	Parallel Talk at DPF2009, Wayne State University, Detroit, US Title: "Charmless hadronic B decays into Vector, Axial Vector and Tensor states at BaBar" on behalf of the BaBar collaboration Parallel Talk at DPF2009, Wayne State University, Detroit
Sep 2008	Talk at XCIV National Congress of SIF, Italian Physical Society, Genova, Italy Title: "Experimental Measurements of the angles of the Unitary Triangle"
	<b>CONFERENCE ORGANIZING COMMITTEE</b>
18 Sep 2024	Organizer of the 4th ALADDIN & TWOCRYST workshop, Valencia, Spain <a href="https://indico.ific.uv.es/event/7688/">https://indico.ific.uv.es/event/7688/</a>
28th Mar 2023	Convener of QCD Session at Moriond QCD, La Thuile, Italy <a href="https://cds.cern.ch/record/2854788">https://cds.cern.ch/record/2854788</a>
1st Feb 2023	LHCb-Italia (national meeting) Head of the organizing committee: <a href="https://indico.cern.ch/event/1239781/overview">https://indico.cern.ch/event/1239781/overview</a>

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October 2016

Converner of the LHCb/theory Implication Workshop  
Organization of the session “Not only flavour: precision measurements and new physics”

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