

Paolo Gandini

Born: Milan, Italy, 01/08/1984
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Education

Oct 2012	D.Phil. in Experimental Particle Physics Balliol College, University of Oxford Thesis title: Observation of CP Violation in $B^\pm \rightarrow DK^\pm$ decays (LHCb) Supervisor: Dr Malcolm John, University of Oxford
Oct 2008	Master of Science in Physics Università degli Studi di Milano, Milan – <i>Grade 110/110 cum Laude</i> Thesis title: BF measurement of the B^0 meson decay to $a_1^+(1260) a_1^-(1260)$ (BaBar) Supervisor: Prof. Fernando Palombo (University of Milan, INFN Milan)
Oct 2006	Bachelor of Science in Physics Università degli Studi di Milano, Milan – <i>Grade 110/110 cum Laude</i> Thesis title: Research of SUSY particles in di-lepton decays with ATLAS detector at LHC Supervisor: Prof. F. Ragusa (University of Milan, INFN Milan)

Academic Positions

Jul 2017–present	Ricercatore INFN (Staff), IT
Jul 2016–Jul 2017	Junior Research Fellow at StCross College, Oxford, UK
Jan 2015–Jul 2017	PostDoctoral Research Assistant at University of Oxford, UK
Jan 2013–Jan 2015	PostDoctoral Research Associate at Syracuse University, US
Oct 2012–Dec 2012	Research Assistant at University of Oxford, UK

Scientific Roles

I have and have had several responsibilities in the LHCb Collaboration (Calorimeter, Convener, Trigger). I am also member of the LHCC forward WG (LHCb). During my period in BaBar, I served as PID expert. I am also member of the TimeSpot INFN project, where I have duties in the 4D tracking work package.

2018–present	Responsible for Upstream Tracker hybrid mechanical production and testing
Jan 2016–Oct 2017	Convener of the Central Exclusive Production Group at LHCb
Jan 2015–Dec 2018	Expert of the Herschel detector
Jan 2015–Oct 2017	Convener of the Common Tools and Systematic Group at LHCb
2013–2014	Responsible for Upstream Tracker simulation for the LHCb upgrade

Awards & Grants

2019	“Ettore Pancini” Prize, awarded by the Italian Physical Society (SIF) to a young researcher (below 35y) who has obtained significant results in the field of experimental particle or 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
2018	Fondo per giovani vincitori concorso INFN, euro 20,000, awarded (start date: 01/09/2018)
2016	Marie Curie individual fellow at University of Milan, euro 168,277.20 awarded but declined due to incompatibility with the INFN position (won at the same time)
2016	Ernest Rutherford Fellowships at University of Cambridge, STFC, pound 559,687.00 interview declined due to incompatibility with the INFN position (won at the same time)
Oct 2016	Junior Research Fellowship (3 years) at St. Cross College, Oxford. Awarded.
Mar 2013	Ph.D. thesis nominated as an outstanding Ph.D. thesis by the University of Oxford, UK published by Springer in “Springer Theses - the best of the best”, ISBN 978-3-319-01029-8
2009–2012	JT Hamilton Scholarship in Physics (3 years), Balliol College, Oxford

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 (total of 482 papers and 27878 citations). I am an active reviewer of public and internal LHCb documents.

I am also reviewer for several peer-reviewed journals (Phys. Rev. Lett.). I will list here only a selection of publications, in which I have been involved as a main/major contributor. Conference proceedings and conference notes are not listed.

- 2020 Aaij, R. and others.
Observation of a new baryon state in the $\Lambda_b^0 \pi^+ \pi^-$ mass spectrum.
[submitted to JHEP] [arxiv:2002.08858]
- 2019 Aaij, R. and others.
Observation of new resonances in the $\Lambda_b^0 \pi^+ \pi^-$ system.
[PRL 123, 152001 (2019)] [arXiv:1907.13598]
- 2019 Aaij, R. and others.
Observation of two resonances in the $\Lambda_b^0 \pi^\pm$ systems and precise measurement of Σ_b^\pm and $\Sigma_b^{*\pm}$ properties.
[PRL 122, 012001 (2019)] [arXiv:1809.07752]
- 2018 Aaij, R. and others.
Search for beautiful tetraquarks in the $\Upsilon(1S) \mu\mu$ invariant-mass spectrum.
[JHEP 10 (2018) 086] [arXiv:1806.09707]
- 2018 Aaij, R. and others.
Central exclusive production of J/ψ and $\psi(2S)$ mesons in pp collisions at $\sqrt{s} = 13$ TeV.
[JHEP 10 (2018) 167] [arXiv:1806.04079]
- 2018 Akiba, K. and others.
The HeRSChel detector: high-rapidity shower counters for LHCb.
[JINST 13 (2018) no.04, P04017] [arXiv:1801.04281]
- 2017 Aaij, R. and others.
Measurement of CP observables in $B^\pm \rightarrow D(*)K^\pm$ and $B^\pm \rightarrow D(*)\pi^\pm$ decays
[PLB 777 (2018), 16-30] [arXiv:1708.06370]
- 2017 Aaij, R. and others.
Precise measurement of the χ_{c1} and χ_{c2} resonance parameters with the decays $\chi_{c1,2} \rightarrow J/\psi \mu^+ \mu^-$.
[PRL 119 (2017), 221801] [arXiv:1709.04247]
- 2016 Aaij, R. and others.
Measurement of the properties of the Ξ_b^* baryon
[JHEP 1605 (2016) 161] [arXiv:1604.03896]
- 2015 Aaij, R. and others.
Evidence for the strangeness-changing weak decay $\Xi_b \rightarrow \Lambda_b^0 \pi^-$
[PRL 115, 241801 (2015)] [arXiv:1510.03829]
- 2015 Abba, A. and others.
Testbeam studies of pre-prototype silicon strip sensors for the LHCb UT upgrade project.
[NIM A: 806 (2016)] [arXiv:1506.00229]
- 2014 Aaij, R. and others.
Measurement of the B_s^0 meson lifetime in $D_s^+ \pi^-$ decays.
[PRL 113, 172001] [arXiv:1407.5873]
- 2013 Aaij, R. and others.
Measurement of the CKM angle γ from a combination of $B \rightarrow Dh$ analyses.
[PLB 726 (2013) 151] [arXiv:1305.2050]
- 2013 M. Adinolfi and others.
Performance of the LHCb RICH detector at the LHC.
[EPJC 73 (2013) 2431] [arXiv:1211.6759]
- 2012 Aaij, R. and others.
Observation of CP violation in $B^\pm \rightarrow DK^\pm$ decays.
[PLB 712 (2012), 203-212] [arXiv:1203.3662]
- 2009 Aubert, B. and others.
Observation and polarization measurement of B^0 meson decay to $a_1^+(1260) a_1^-(1260)$ decay.
[PRD 80, 092007 (2009)] [arXiv:0907.1776]

Teaching & Supervising

I have been tutor in several colleges in Oxford teaching Particle Physics for third year students. I am also involved in the day-to-day supervision of several PhD students.

- 2019 Day to day supervision Americana
- 2018 Series of seminars about Flavour Physics (Universita Studi di Milano)
- 2017 Tutor - 3rd Year Particle Physics - StPeter College
- 2016-2017 Tutor - 3rd Year Particle Physics - Keble College
- 2016 PhD student supervisor in the LHCb Oxford group

Outreach (Terza Missione)

I have always been passionate about Outreach, as this is the best way to make sure that people outside the scientific community will benefit indirectly from the work done at the department. I take my responsibility in public events seriously. I have been an official CERN guide since 2013, with regular underground visits to LHCb during my time spent in Geneva (including the CERN open days). I have been one of the key organisers of the 2016 Royal Society Exhibition stall “Antimatter matters”. I created a demo in order to explain CP violation and its application to an audience with no scientific background. This exhibition is now tour the country at science festivals.

2016	Organiser of the Royal Society Exhibition: “antimatter matters”, Royal Society, London.
2013-2014	CERN and LHCb guide
Jan 2011	“Phystat 2011 Workshop at CERN”, Geneva 17 th – 20 th January 2011
Jan 2011	“TMVA Workshop at CERN”, 21 st January 2011, CERN, Geneva
2009-2010	Lecture series “Building a Business 2009-10”, November 2009 - February 2010, at Said Business School, Oxford
Aug 2009	“BRIGHT CONFERENCE 2009”, University of Milan. Participant and member of the organizing committee
Aug 2008	“BRIGHT CONFERENCE 2008”, University of Helsinki, 14 th – 17 th August 2008, as a member of the Italian delegation of Università degli studi di Milano.
2013-present	Member of Fonderia Oxford, www.fonderia.org (Italian think-tank on politics)
2012-present	Demonstrator for STFC in public scientific fairs

Conferences

Jan 2020	Plenary talk at Bormio2020, Italy title “Hadron Physics in LHCb”
May 2019	Parallel talk at LHCP, Puebla, Mexico title “Recent results on heavy flavor production and spectroscopy with LHCb”
May 2019	Plenary talk at LHCP, Puebla, Mexico title “CP violation in beauty and charm”
Sep 2018	Poster at TWEPP2018, Antwerp, Belgium title “A novel 4D fast track finding system using precise space and time information of the hit”
Aug 2018	Parallel talk at ICHEP2018, Seoul, Korea title “Searches for exotic baryonic states at LHCb”
Jun 2017	Plenary talk at FPCP2017, Prague CZ title “Overview of hadron flavour production”
Oct 2016	Converner of the LHCb/theory Implication Workshop Session “Not only flavour: precision measurements and new physics searches in the forward region”
Mar 2016	Plenary talk at Moriond QCD title “Heavy flavour spectroscopy at LHCb”
Jul 2015	Parallel Talk at EPS2015 title “Central exclusive meson production at LHCb”
Jul 2014	Plenary Talk at Beauty2014, Edinburgh, UK title: “Lifetimes of B hadrons”
Oct 2013	“Implications of LHCb measurements and future prospects”, CERN, talk on “Experimental overview of the CKM unitarity triangle angle γ ”
Jul 2013	Parallel Talk at EPS2013 with title “Measurements of $B \rightarrow DK$ decays to constrain the CKM unitarity triangle angle γ at LHCb”
Apr 2012	Talk at the IoP Joint HEPP and APP Meeting 2012 with title “Observation of CP violation in $B^\pm \rightarrow DK^\pm$ decays at LHCb”
Feb 2012	Talk at “Lake Louise Winter Institute”, Lake Louise, Alberta, Canada. 19 th – 25 th February 2012, on behalf of the LHCb Collaboration with title: “Observation of CP violation in $B^\pm \rightarrow DK^\pm$ decays”
Jun 2010	Talk at “IoP meeting and LHCb-UK physics meeting”, Glasgow 3 rd – 4 th June 2010, with title: “ADS modes with $B^\pm \rightarrow D^0(K\pi)K^\pm$ ”
Jul 2009	Talk at DPF2009, “2009 Meeting of the Division of Particles and Fields of the American Physical Society”, Wayne State University, Detroit MI, 26 th – 31 st July 2009, with title “Charmless hadronic B decays into Vector, Axial Vector and Tensor final states at BaBar”
Sep 2008	Talk at XCIV National Congress of SIF, Italian Physical Society, Genova 22 th – 27 th September 2008, with title “Experimental Measurements of the angles of the Unitary Triangle”