

Curriculum Vitae

PERSONAL INFORMATION

Family name, First name: Serrano Justine

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Nationality: French

• EMPLOYMENT AND EDUCATION

- 2010 - present CNRS researcher scientist at the Centre de Physique des Particules de Marseille (CPPM), France, working on the LHCb experiment.
- 2008 - 2010 Post-doctorate at the Centre de Physique des Particules de Marseille (CPPM), France, working on the LHCb experiment.
- 2005 - 2008 PhD : Study of the $D_s \rightarrow K+K-e+\nu$ decay in the Babar experiment, located at the Stanford Linear Accelerator Center, in California, USA.
Laboratoire de l'accélérateur linéaire, Université Paris 11, Orsay, FRANCE
PhD advisor: [Patrick Roudeau](#)
- 2004-2005 Master in fundamental physics ('Fields, particles, matter') of the University Paris 7, France

• PRIZES, DISTINCTIONS AND GRANTS

- 2017 Georges Charpak prize of the French Scientific Academy
- 2015-2018 PI of the ANR JCJC 'Sorbet'
- 2012 Bronze medal of CNRS

• MAJOR COLLABORATIONS

- 2008-present Member of the LHCb collaboration (~1200 members), CERN, Switzerland.
- 2015-present Member of the 'rare decays' subgroup of the Heavy Flavor Averaging Group (43 members), <http://www.slac.stanford.edu/xorg/hflav/index.html>.
- 2005-2008 Member of the Babar collaboration (~500 members), SLAC, USA.

• MAJOR PUBLICATIONS

1. Babar collaboration, Study of the $D_s^+ \rightarrow K^+K^-e^+\nu$ decay channel, Phys. Rev. D78 (2008) 051101, arXiv:0807.1599.
2. LHCb collaboration, Search for the rare decays $B_s^0 \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$, Phys. Lett. B 699 (2011) 330-340, arXiv:1103.2465.
3. LHCb collaboration, Search for the rare decays $B_s^0 \rightarrow \mu^+\mu^-$ and $B^0 \rightarrow \mu^+\mu^-$, Phys. Lett. B 708 (2012) 55-67, arXiv:1112.1600.
4. LHCb collaboration, Differential branching fraction and angular analysis of the decay $B^0 \rightarrow K^{*0}\mu^+\mu^-$, JHEP 08 (2013) 131, arXiv:1304.6325.

5. LHCb collaboration, First evidence for the decay the $B_s^0 \rightarrow \mu^+ \mu^-$, Phys. Rev. Lett. 110 (2013) 021801, arXiv:1211.2674.
6. LHCb collaboration, Measurement of the $B_s^0 \rightarrow \mu^+ \mu^-$ branching fraction and search for $B^0 \rightarrow \mu^+ \mu^-$ decays at the LHCb experiment, Phys. Rev. Lett. 111 (2013) 101805, arXiv:1307.5024.
7. CMS and LHCb collaborations, Observation of the rare $B_s^0 \rightarrow \mu^+ \mu^-$ decay from the combined analysis of LHCb and CMS data, Nature 522 (2015) 68, arXiv:1411.4413.
8. LHCb collaboration, Search for the decays $B_s^0 \rightarrow \tau^+ \tau^-$ and $B^0 \rightarrow \tau^+ \tau^-$, Phys. Rev. Lett. 118 (2017) 251802, arXiv:1703.02508.
9. Heavy Flavour Averaging Group *et al.*, 'Averages of b-hadron, c-hadron, and tau lepton properties as of summer 2016', Eur. Phys. J. C77 (2017) 895, arXiv:1612.07233, Dec. 2016.

- **MAJOR ORAL COMMUNICATIONS**

1. EPS-HEP 2017, July 2017, Venice, Italy: Rare decays and exotic states in quark flavour physics, invited plenary talk.
2. CKM Workshop, December 2016, Mumbai, India : Working group 3 experimental summary, plenary talk.
3. LISHEP, August 2015, Manaus, Brazil : Rare decays in search for beyond standard model physics at LHCb, plenary talk.
4. Les Rencontres de Physique de la Vallée d'Aoste, February 2014, La Thuile, Italy : Latest results on rare decays at LHCb, plenary talk.
5. Rencontres du Vietnam : Windows on the Universe, August 2013, Quy Nhon, Vietnam : Rare decays of beauty and charm hadrons at LHCb, parallel talk.
6. Lattice, June 2012, Cairns, Australia : Recent results from LHCb, invited plenary talk.
7. EPS-HEP 2011, July 2011, Grenoble, France : Search for the very rare decays $B_s/d \rightarrow \mu^+ \mu^-$ at LHCb, parallel talk.
8. CKM Workshop, September 2010, Warwick, UK : Charm semileptonic decays at the B factories, parallel talk.
9. Physics at the LHC, June 2010, Hamburg, Germany : results and prospects for di-muon final states at LHCb, plenary talk.
10. QCD, July 2008, Montpellier, France : Recent results on semileptonic decays at Babar, plenary talk.
11. Joint Meeting of Pacific Region Particle Physics Communities (DPF2006), November 2006, Honolulu, Hawaii, USA : Leptonic and semileptonic D decays at Babar, parallel talk.

- **SUPERVISION OF STUDENTS AND POSTDOCTORAL FELLOWS**

- 2016 - 2019 Co-supervision of one PhD student
 2015 - 2017 Supervision of one Post-doctorate funded with the ANR 'Sorbet' grant.
 2009 - 2016 Supervision of seven undergraduates students

- **TEACHING ACTIVITIES AND OUTREACH**

- 2005 - 2008 Teaching assistant: optic and computing practical work for a total of 64 hours per year, 3rd year of university, Université Paris 11 Orsay, France
 2014-present Participation to the LHCb masterclasses
 2011,2013 Outreach seminars on antimatter at CPPM
 2016 Organisation of an outreach evening during the conference 'BEAUTY'

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2016 Convener of the working group 'Rare B, D, K decays' of the 2016 CKM workshop, Mumbai, India
- 2016 Member of local organization committee for the 16th International Conference on B-Physics at Frontier Machines ('BEAUTY 2016'), Marseille, FRANCE
- 2015 Organization of the session 'Rare decays' for the workshop 'Implications of LHCb measurement and future prospects', CERN, Switzerland

- **INSTITUTIONAL RESPONSIBILITIES**

- 2017-present Convener of the working group 'Interplay of quark and lepton flavour' of the research group 'Intensity frontier' gathering about 60 French experimentalists and theorists.
- 2016-present Elected member of section 01 of the CNRS National committee
- 2012-2017 Elected member of the laboratory council, CPPM.
- 2014 Member of the selection committee for a faculty position in particle physics at the Université Paris 7 – Denis Diderot, France.
- 2013 Member of the selection committee for a faculty position in particle physics at the Université Paris 6 – Pierre et Marie Curie, France.

- **COMMISSIONS OF TRUST**

- 2017 Evaluator of the thesis defense of Olcyr Sumensary, Laboratoire de Physique Théorique, Orsay, France.
- 2014-2016 Editorial Board member of the LHCb collaboration (followed the internal editorial process of 31 publications)
- 2009-present Reviewer for the international journal 'Physical Review D'