

# Guillaume Falmagne

*PhD in particle physics*





## Education and experience

- from April 2022 **Postdoctoral researcher**, Subatech (IMT Atlantique, CNRS), Nantes,  
*Continuing work on partonic energy loss in the quark-gluon plasma*, supervisor: François ARLEO
- 2018–2022 **PhD in particle physics**, Laboratoire Leprince-Ringuet, École Polytechnique (Institut Polytechnique de Paris), *Observation of the  $B_c^+$  meson in heavy ion collisions with the CMS detector; Partonic energy loss in the quark-gluon plasma*, supervisors: Raphaël GRANIER DE CASSAGNAC, François ARLEO.  
(defended Dec. 2021)
- 2018 – 2021 **Teaching assistant**, École Polytechnique (Institut Polytechnique de Paris), Bachelor 2 and Master 1
- 2017–2018 **2nd year of Master in High Energy Physics**, École Polytechnique (Université Paris-Saclay), *summa cum laude*, includes **5-month research internship**, same context as PhD (feasibility study)
- end 2016 – jun 2017 Volunteering and cultural [experience](#) in South America and Eastern Europe.
- 2015 – end 2016 **12-month research internship**, CERN (Geneva, Switzerland),  $\Lambda_b^0$  production asymmetry measurements at 7 and 8 TeV with the LHCb detector at the LHC, supervisor: Sascha STAHL.
- 2013–2015 **Bachelor's degree and first year of Master in Fundamental Physics**, École Normale Supérieure de Cachan (Paris-Saclay) and Université Pierre et Marie Curie (Paris 6), *normalien with full funding*.
- 2015 **4-month research internship**, SLAC National Accelerator Laboratory (Stanford University), *Matching NNLO predictions to parton showers for Z/W-Higgs production in the SHERPA generator. Multi-scale improved NLO jet clustering (MINLO)*, supervisors: Lance DIXON, Stefan HOECHE.
- 2014 **2-month research internship**, Laboratoire Leprince-Ringuet, École Polytechnique, *Unfolding the resolution of the CMS detector in the measurement of bottomonium suppression in the quark-gluon plasma*, supervisor: Raphaël GRANIER DE CASSAGNAC.
- 2011–2013 Classes préparatoires in Mathematics and Physics, Lycée Henri Poincaré (Nancy, France)

## Main publications

- 2021 **Observation of the  $B_c^+$  meson in PbPb and pp collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, CMS collaboration, A. M. Sirunyan et al., [arXiv:2201.02659v1](#), accepted for publication in PRL
- 2021 **Observation of a  $\Lambda_b - \bar{\Lambda}_b$  production asymmetry in proton–proton collisions at  $\sqrt{s} = 7$  and 8 TeV**, LHCb collaboration, R. Aaij et al., [JHEP10 \(2021\) 060](#)
- 2019 **Quenching of hadron spectra in XeXe and PbPb collisions at the LHC**, François Arleo, Guillaume Falmagne, Proceedings of Hard Probes 2018, [PoS 075](#)
- 2019–2021 **Author of all papers from the CMS Collaboration**
- 2015 **Les Houches 2015: Physics at TeV Colliders Standard Model Working Group Report**, J.R. Andersen et al., [arXiv:1605.04692](#)

## Scientific talks

- 2021 **CERN-LHC Seminar**, [online \(recording available\)](#)
- 2021 Rencontres QGP France, [Étretat](#) (France)
- 2021 **9th Edition of Large Hadron Collider Physics Conference (LHCP)**, [online \(recording available\)](#)
- 2021 **19th International Conference on Strangeness in Quark Matter (SQM)**, [online](#)  
 Published proceedings: [EPJ Web of Conferences 259](#), 12011 (2022)
- 2021 **14th International Workshop on Heavy Quarkonium (QWG)**, [online](#)
- 2020 Journées CMS-France, [online \(restricted access\)](#)
- 2019 Journées de Rencontre des Jeunes Chercheurs, [Moulin-Mer](#) (France)  
 Published proceedings: C. Armand et al., [JRJC 2019 Book of Proceedings](#), p.88
- 2019 **GdR Intensity Frontier Workshop**, [Sommières](#) (France)  
 And plenary summary talk about the  $B_c$  [parallel session](#)
- 2019 Rencontres QGP France, [Étretat](#) (France)
- 2018 **International Conference on Hard Probes**, [Aix-les-Bains](#) (France)  
 Published proceedings: Guillaume Falmagne (CMS Collaboration), Hard Probes 2018 Proc., [PoS 143](#)