

# Alejandro Celis

## Publications in Refereed Journals

1. *Higgs boson pair production in non-linear Effective Field Theory with full  $m_t$ -dependence at NLO QCD*,  
G. Buchalla, M. Capozzi, A. Celis, G. Heinrich and L. Scyboz,  
JHEP 1809 (2018) 057 [arXiv:1806.05162].
2. *Anomalies in Bottom from new physics in Top*,  
J. E. Camargo-Molina, A. Celis, D. A. Faroughy,  
Phys.Lett. B784 (2018) 284-293 [arXiv:1805.04917].
3. *WCxf: an exchange format for Wilson coefficients beyond the Standard Model*,  
J. Aebischer et al.,  
Comput.Phys.Commun. 232 (2018) 71-83. [arXiv:1712.05298].
4. *Complete One-Loop Renormalization of the Higgs-Electroweak Chiral Lagrangian*,  
G. Buchalla, O. Cata, A. Celis, M. Knecht, C. Krause,  
Nucl.Phys. B928 (2018) 93-106. [arXiv:1710.06412].
5. *Gauge-invariant implications of the LHCb measurements on Lepton-Flavour Non-Universality*,  
A. Celis, J. Fuentes-Martin, A. Vicente, J. Virto.,  
Phys. Rev. D96 (2017) no.3, 035026. [arXiv: 1704.05672].
6. *DsixTools: The Standard Model Effective Field Theory Toolkit*,  
A. Celis, J. Fuentes-Martin, A. Vicente, J. Virto.,  
Eur. Phys. J. C77 (2017) no.6, 405. [arXiv: 1704.04504].
7. *Yukawa enhancement of Z-mediated New Physics in  $\Delta S = 2$  and  $\Delta B = 2$  Processes*,  
C. Bobeth, A. J. Buras, A. Celis and M. Jung,  
JHEP 1707 (2017) 124. [arXiv: 1703.04753].
8. *Scalar contributions to  $b \rightarrow c(u)\tau\nu$  transitions*,  
A. Celis, M. Jung, Xin-Qiang Li, A. Pich,  
Phys. Lett. B771 (2017) 168-179. [arXiv: 1612.07757].
9. *Patterns of Flavour Violation in Models with Vector-Like Quarks*,  
C. Bobeth, A. J. Buras, A. Celis and M. Jung,  
JHEP 1704 (2017) 079. [arXiv: 1609.04783].
10. *Dirac Dark Matter and  $b \rightarrow s\ell^+\ell^-$  with U(1) gauge symmetry*,  
A. Celis, W.-Z. Feng, M. Vollmann,  
Phys. Rev. D95 (2017) no.3, 035018. [arXiv: 1608.03894].
11. *Standard Model Extended by a Heavy Singlet: Linear vs. Nonlinear EFT*,  
G. Buchalla, O. Cata, A. Celis, C. Krause,  
Nucl. Phys. B917 (2017) 209-233. [arXiv: 1608.03564].
12. *Phenomenology of an  $SU(2) \times SU(2) \times U(1)$  model with lepton-flavour non-universality*,

- S. M. Boucenna, A. Celis, J. Fuentes-Martin, A. Vicente, J. Virto,  
JHEP 1612 (2016) 059. [arXiv: 1608.01349].
13. *Non-abelian gauge extensions for B-decay anomalies*,  
S. M. Boucenna, A. Celis, J. Fuentes-Martin, A. Vicente, J. Virto,  
Phys. Lett. B760 (2016) 214-219. [arXiv: 1604.03088].
  14. *Comment on "Analysis of General Power Counting Rules in Effective Field Theory"*,  
G. Buchalla, O. Cata, A. Celis, C. Krause,  
arXiv: 1603.03062.
  15. *Stringy explanation of  $b \rightarrow s\ell^+\ell^-$  anomalies*,  
A. Celis, W.-Z. Feng, D. Lust,  
JHEP 1602 (2016) 007. [arXiv: 1512.02218].
  16. *Fitting Higgs Data with Nonlinear Effective Theory*,  
G. Buchalla, O. Cata, A. Celis, C. Krause,  
Eur. Phys. J. C 76 (2016) no.5, 233. [arXiv: 1511.00988].
  17. *Family nonuniversal  $Z'$  models with protected flavor-changing interactions*,  
A. Celis, J. Fuentes-Martin, M. Jung, H. Serodio,  
Phys. Rev. D92 (2015) 1, 015007. [arXiv: 1505.03079].
  18. *Note on Anomalous Higgs-Boson Couplings in Effective Field Theory*,  
G. Buchalla, O. Cata, A. Celis, C. Krause,  
Phys. Lett. B750 (2015) 298-301. [arXiv: 1504.01707].
  19. *Flavour-changing top decays in the aligned two-Higgs-doublet model*,  
G. Abbas, A. Celis, X-Q. Li, J. Lu, A. Pich,  
JHEP 1506 (2015) 005. [arXiv: 1503.06423].
  20. *A class of invisible axion models with FCNCs at tree level*,  
A. Celis, J. Fuentes-Martin, H. Serodio,  
JHEP 1412 (2014) 167. [arXiv: 1410.6218].
  21. *An invisible axion model with controlled FCNCs at tree level*,  
A. Celis, J. Fuentes-Martin, H. Serodio,  
Phys. Lett. B741 (2015) 117-123. [arXiv: 1410.6217].
  22. *Effective Aligned 2HDM with a DFSZ-like invisible axion*,  
A. Celis, J. Fuentes-Martin, H. Serodio,  
Phys. Lett. B737 (2014) 185-190. [arXiv: 1407.0971].
  23. *Model discriminating power of lepton flavor violating  $\tau$  decays*,  
A. Celis, V. Cirigliano, E. Passemar,  
Phys. Rev. D89 (2014) 095014. [arXiv: 1403.5781].
  24. *Towards a general analysis of LHC data within two-Higgs-doublet models*,  
A. Celis, V. Ilisie, A. Pich,  
JHEP 1312 (2013) 095. [arXiv: 1310.7941].
  25. *Lepton flavor violation in the Higgs sector and the role of hadronic  $\tau$ -lepton decays*,  
A. Celis, V. Cirigliano, E. Passemar,  
Phys. Rev. D89 (2014) 013008. [arXiv: 1309.3564].

- 26. *LHC constraints on two-Higgs doublet models*,  
A. Celis, V. Ilisie, A. Pich,  
JHEP 1307 (2013) 053. [arXiv: 1302.4022].
- 27. *Sensitivity to charged scalars in  $B \rightarrow D^{(*)}\tau\nu$  and  $B \rightarrow \tau\nu$  decays*,  
A. Celis, M. Jung, X.-Q Li, A. Pich,  
JHEP 1301 (2013) 054. [arXiv: 1210.8443].
- 28.  *$K \rightarrow \pi\pi$  Decays in  $SU(2)$  Chiral Perturbation Theory*,  
J. Bijnens, A. Celis,  
Phys. Lett. B680 (2009) 466-470. [arXiv: 0906.0302].