Curriculum Vitae

1. Greg Landsberg, Thomas J. Watson Sr. Professor of Physics

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2. Education:

State University of New York at Stony Brook
M.S. in Physics, 1992; Ph.D. in Physics, 1994
Ph.D. Thesis topic: "Test of Standard Model of Electroweak Interactions by Measuring Anomalous $ZZ\gamma$ and $Z\gamma\gamma$ Couplings".
Advisor: P. Grannis

Moscow Physical Technical Institute
B.S. in Physics, 1989

3. Professional Appointments:

CERN Associate	
Organisation Européenne pour la Recherche Nucléaire (CERN)	2019–2020
Thomas J. Watson, Sr. Professor of Physics	
Brown University	since 2014
Professor of Physics	
Brown University	2008–2014
Guest Scientist	
Fermi National Accelerator Laboratory	January–May 2006
Associate Professor of Physics	
Brown University	2003–2008
Assistant Professor of Physics	
Brown University	1998–2003
Research Associate	
Fermi National Accelerator Laboratory	1995–1998

4. Publications and talks:

Work Under Review

1. A. Tumasyan *et al.* [CMS Collaboration], *"Search for new physics in the τ lepton plus missing transverse momentum final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2212.12604.
2. [CMS Collaboration], *"Search for top squarks in the four-body decay mode with single lepton final states in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2301.08096.
3. [CMS Collaboration], *"First measurement of the forward rapidity gap distribution in pPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 8.16 TeV,"* arXiv:2301.07630.
4. [CMS Collaboration], *"K^0_S and $\Lambda(\overline{\Lambda})$ two-particle femtoscopic correlations in PbPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV,"* arXiv:2301.05290.
5. [CMS Collaboration], *"Measurement of the electroweak production of $W\gamma$ in association with two jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2212.12592.
6. [CMS Collaboration], *"Measurement of the $B^0_\mathrm{S}\to\mu^+\mu^-$ decay properties and search for the $B^0\to\mu^+\mu^-$ decay in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2212.10311.
7. [CMS Collaboration], *"Search for long-lived particles using out-of-time trackless jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2212.06695.
8. [CMS Collaboration], *"Measurement of the dependence of the hadron production fraction ratio $f_\mathrm{s}/f_\mathrm{u}$ on B meson kinematic variables in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2212.02309.
9. [CMS Collaboration], *"Measurements of azimuthal anisotropy of nonprompt D^0 mesons in PbPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV,"* arXiv:2212.01636.
10. [CMS, TOTEM Collaborations], *"Search for high-mass exclusive $\gamma\gamma\to$ WW and $\gamma\gamma\to$ ZZ production in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2211.16320.
11. [CMS Collaboration], *"Search for boosted Higgs boson decay to a charm quark-antiquark pair in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2211.14181.
12. [CMS Collaboration], *"Search for supersymmetry in final states with a single electron or muon using angular correlations and heavy-object identification in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2211.08476.
13. [CMS Collaboration], *"Measurement of the jet mass distribution and top quark mass in hadronic decays of boosted top quarks in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2211.01456.
14. [CMS Collaboration], *"Azimuthal correlations in z+jets events in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2210.16139.
15. [CMS Collaboration], *"Measurements of jet multiplicity and jet transverse momentum in multijet events in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2210.13557.
16. [CMS Collaboration], *"Search for medium effects using jets from bottom quarks in PbPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV,"* arXiv:2210.08547.
17. [CMS Collaboration], *"Azimuthal anisotropy of dijet events in PbPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV,"* arXiv:2210.08325.
18. [TOTEM, CMS Collaborations], *"Proton reconstruction with the CMS-TOTEM precision proton spectrometer,"* arXiv:2210.05854.
19. [CMS Collaboration], *"Search for a heavy composite Majorana neutrino in events with dilepton signatures from proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2210.03082.

20. [CMS Collaboration], *"Search for new heavy resonances decaying to WW, WZ, ZZ, WH, or ZH boson pairs in the all-jets final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2210.00043.
21. T. Bose *et al.*, *"Report of the topical group on physics beyond the standard model at energy frontier for Snowmass 2021,"* arXiv:2209.13128.
22. [CMS Collaboration], *"Search for pair production of vector-like quarks in leptonic final states in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2209.07327.
23. [CMS Collaboration], *"Search for exotic Higgs boson decays $H \rightarrow AA \rightarrow 4\gamma$ with events containing two merged diphotons in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2209.06197.
24. [CMS Collaboration], *"Search for new physics using effective field theory in 13 TeV pp collision events that contain a top quark pair and a boosted Z or Higgs boson,"* arXiv:2208.12837.
25. [CMS Collaboration], *"Measurement of the Higgs boson inclusive and differential fiducial production cross sections in the diphoton decay channel with pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.12279.
26. [CMS Collaboration], *"Search for pair-produced vector-like leptons in final states with third-generation leptons and at least three b quark jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.09700.
27. [CMS Collaboration], *"Measurement of the cross section of top quark-antiquark pair production in association with a W boson in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.06485.
28. [CMS Collaboration], *"Search for CP violation in tth and th production in multilepton channels in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.02686.
29. [CMS Collaboration], *"Searches for additional Higgs bosons and for vector leptoquarks in $\tau\tau$ final states in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.02717.
30. [CMS Collaboration], *"Measurement of the $\mathrm{t\bar{t}}$ charge asymmetry in events with highly Lorentz-boosted top quarks in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.02751.
31. [CMS Collaboration], *"Search for the exotic decay of the Higgs boson into two light pseudoscalars with four photons in the final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.01469.
32. [CMS Collaboration], *"Measurement of inclusive and differential cross sections for single top quark production in association with a W boson in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.00924.
33. [CMS Collaboration], *"Search for the Higgs boson decay to a pair of electrons in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2208.00265.
34. G. Landsberg, *"Higgs turns 10: the childhood story,"* arXiv:2207.07019.
35. [CMS Collaboration], *"Measurement of the top quark pole mass using $\mathrm{t\bar{t}}$+jet events in the dilepton final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2207.02270.
36. [CMS Collaboration], *"Search for direct pair production of supersymmetric partners of τ leptons in the final state with two hadronically decaying τ leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2207.02254.
37. [CMS Collaboration], *"Search for a charged Higgs boson decaying into a heavy neutral Higgs boson and a W boson in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2207.01046.
38. [CMS Collaboration], *"Search for nonresonant Higgs boson pair production in the four leptons plus two b jets final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.10657.

39. [CMS Collaboration], *"Search for Higgs boson pairs decaying to WWWW, WW$\tau\tau$, and $\tau\tau\tau\tau$ in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.10268.
40. [CMS Collaboration], *"Search for resonant and nonresonant production of pairs of dijet resonances in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.09997.
41. [CMS Collaboration], *"Search for nonresonant Higgs boson pair production in final state with two bottom quarks and two tau leptons in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.09401.
42. [CMS Collaboration], *"Measurements of the Higgs boson production cross section and couplings in the W boson pair decay channel in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.09466.
43. [CMS Collaboration], *"Probing heavy Majorana neutrinos and the weinberg operator through vector boson fusion processes in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.08956.
44. [CMS Collaboration], *"Precision measurement of the Z boson invisible width in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.07110.
45. [CMS Collaboration], *"Observation of τ lepton pair production in ultraperipheral lead-lead collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV,"* arXiv:2206.05192.
46. [CMS Collaboration], *"Search for Higgs boson decays into Z and J/ψ and for Higgs and Z boson decays into J/ψ or Υ pairs in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.03525.
47. [CMS Collaboration], *"Observation of same-sign WW production from double parton scattering in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2206.02681.
48. [ATLAS, CMS Collaborations], *"Combination of inclusive top-quark pair production cross-section measurements using ATLAS and CMS data at $\sqrt{s}$ = 7 and 8 TeV,"* arXiv:2205.13830.
49. [CMS Collaboration], *"Search for electroweak production of charginos and neutralinos at $\sqrt{s}$ =13 TeV in final states containing hadronic decays of WW, WZ, or WH and missing transverse momentum,"* arXiv:2205.09597.
50. [CMS Collaboration], *"Search for long-lived particles decaying to a pair of muons in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.08582.
51. [CMS Collaboration], *"Search for CP violating top quark couplings in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.07434.
52. [CMS Collaboration], *"Search for heavy resonances and quantum black holes in eμ, eτ, and $\mu\tau$ final states in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.06709.
53. [CMS Collaboration], *"Search for nonresonant pair production of highly energetic Higgs bosons decaying to bottom quarks,"* arXiv:2205.06667.
54. [CMS Collaboration], *"Observation of electroweak W^+W^- pair production in association with two jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.05711.
55. [CMS Collaboration], *"Search for Higgs boson decay to a charm quark-antiquark pair in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.05550.
56. [CMS Collaboration], *"Measurement of the mass dependence of the transverse momentum of lepton pairs in Drell-Yan production in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.04897.
57. [CMS Collaboration], *"CMS PYTHIA 8 colour reconnection tunes based on underlying-event data,"* arXiv:2205.02905.
58. [CMS Collaboration], *"Measurement of differential cross sections for the production of a Z boson in association with jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.02872.

59. [CMS Collaboration], *"Search for CP violation using $\mathrm{t\bar{t}}$ events in the lepton+jets channel in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.02314.
60. [CMS Collaboration], *"Search for narrow resonances in the b-tagged dijet mass spectrum in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2205.01835.
61. [CMS Collaboration], *"Strange hadron collectivity in pPb and PbPb collisions,"* arXiv:2205.00080.
62. [CMS Collaboration], *"Azimuthal correlations within exclusive dijets with large momentum transfer in photon-lead collisions,"* arXiv:2205.00045.
63. [CMS Collaboration], *"Search for light Higgs bosons from supersymmetric cascade decays in pp collisions at $\sqrt{s}$ =13 TeV,"* arXiv:2204.13532.
64. [CMS Collaboration], *"Two-particle azimuthal correlations in γp interactions using pPb collisions at $\sqrt{s_{NN}}$ = 8.16 TeV,"* arXiv:2204.13486.
65. [CMS Collaboration], *"Measurements of Higgs boson production in the decay channel with a pair of τ leptons in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2204.12957.
66. [CMS Collaboration], *"Search for Higgs boson decays to a Z boson and a photon in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2204.12945.
67. [CMS Collaboration], doi:10.1016/j.physletb.2022.137392.
68. [CMS Collaboration], *"Reconstruction of decays to merged photons using end-to-end deep learning with domain continuation in the CMS detector,"* arXiv:2204.12313.
69. A. Albert *et al.*, *"Displaying dark matter constraints from colliders with varying simplified model parameters,"* arXiv:2203.12035.
70. G. Bernardi *et al.*, *"The future circular collider: a summary for the US 2021 Snowmass process,"* arXiv:2203.06520.
71. A. Tumasyan *et al.* [CMS Collaboration], *"Observation of triple J/ψ meson production in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2111.05370.

Refereed Publications with Primary Contribution

1. [CMS Collaboration], *"A portrait of the Higgs boson by the CMS experiment ten years after the discovery,"* arXiv:2207.00043,
   Nature **607**, 60 (2022), doi:10.1038/s41586-022-04892-x. (*76 citations*)
2. S. Cerci *et al.*, *"FACET: A new long-lived particle detector in the very forward region of the CMS experiment,"* arXiv:2201.00019,
   JHEP **22**, 110 (2022), doi:10.1007/JHEP06(2022)110. (*21 citations*)
3. A. Tumasyan *et al.* [CMS Collaboration], *"Observation of B_s^0 mesons and measurement of the B_s^0/B^+ yield ratio in PbPb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV,"* arXiv:2109.01908,
   Publication: Phys. Lett. B **829**, 137062 (2022), doi:10.1016/j.physletb.2022.137062. (*7 citations*)
4. A. Tumasyan *et al.* [CMS Collaboration], *"Measurement of prompt open-charm production cross sections in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:2107.01476,
   JHEP **11**, 225 (2021), Publication: JHEP **11**, 225 (2021), doi:10.1007/JHEP11(2021)225. (*4 citations*)
5. A. Tumasyan *et al.* [CMS Collaboration], *"Search for $W\gamma$ resonances in proton-proton collisions at $\sqrt{s}$ = 13 TeV using hadronic decays of Lorentz-boosted W bosons,"* arXiv:2106.10509,
   Publication: Phys. Lett. B **826**, 136888 (2022), doi:10.1016/j.physletb.2022.136888. (*4 citations*)

6. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of a new excited beauty strange baryon decaying to $\Xi_b^- \pi^+ \pi^-$,"* arXiv:2102.04524,
Publication: Phys. Rev. Lett. **126**, 252003 (2021), doi:10.1103/PhysRevLett.126.252003. (*25 citations*)
7. B. Acar *et al.* [CMS HGCAL Collaboration], *"The DAQ system of the 12,000 channel CMS high granularity calorimeter prototype,"* arXiv:2012.03876,
JINST **16**, T04001 (2021), doi:10.1088/1748-0221/16/04/T04001. (*7 citations*)
8. A.M. Sirunyan *et al.* [CMS Collaboration], *"Angular analysis of the decay $B^+ \to K^*(892)^+ \mu^+ \mu^-$ in proton-proton collisions at $\sqrt{s} = 8$ TeV,"* arXiv:2010.13968,
Publication: JHEP **04**, 124 (2021), doi:10.1007/JHEP04(2021)124. (*19 citations*)
9. A.M. Sirunyan *et al.* [CMS Collaboration], *"Measurement of $B_c(2S)^+$ and $B_c^*(2S)^+$ cross section ratios in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2008.08629,
Publication: Phys. Rev. D **102**, 092007 (2020), doi:10.1103/PhysRevD.102.092007. (*17 citations*)
10. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for the lepton flavor violating decay $\tau \to 3\mu$ in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2007.05658,
Publication: JHEP **01**, 163 (2021), doi:10.1007/JHEP01(2021)163. (*15 citations*)
11. A.M. Sirunyan *et al.* [CMS Collaboration], *"Measurement of the CP-violating phase ϕ_s in the $B_s^0 \to J/\psi\, \phi(1020) \to \mu^+ \mu^- K^+ K^-$ channel in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2007.02434,
Phys. Lett. B **816**, 136188 (2021), doi:10.1016/j.physletb.2021.136188. (*31 citations*)
12. A.M. Sirunyan *et al.* [CMS Collaboration], *"Inclusive search for highly boosted Higgs bosons decaying to bottom quark-antiquark pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2006.13251,
Publication: JHEP **12**, 085 (2020), doi:10.1007/JHEP12(2020)085. (*40 citations*)
13. A.M. Sirunyan *et al.* [CMS Collaboration], *"Performance of the CMS level-1 trigger in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2006.10165,
Publication: JINST **15**, P10017 (2020), doi:10.1088/1748-0221/15/10/P10017. (*264 citations*)
14. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of the $B_s^0 \to X(3872)\phi$ decay,"* arXiv:2005.04764,
Publication: Phys. Rev. Lett. **125**, 152001 (2020), doi:10.1103/PhysRevLett.125.152001. (*29 citations*)
15. A.M. Sirunyan *et al.* [CMS Collaboration], *"Measurement of the $\Upsilon(1S)$ pair production cross section and search for resonances decaying to $\Upsilon(1S)\mu^+\mu^-$ in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2002.06393,
Publication: Phys. Lett. B **808**, 135578 (2020), doi:10.1016/j.physletb.2020.135578. (*54 citations*)
16. A.M. Sirunyan *et al.* [CMS Collaboration], *"Study of excited Λ_b^0 states decaying to $\Lambda_b^0 \pi^+ \pi^-$ in proton-proton collisions at $\sqrt{s} = 13$ TeV,"* arXiv:2001.06533,
Publication: Phys. Lett. B **803**, 135345 (2020), doi:10.1016/j.physletb.2020.135345. (*42 citations*)
17. A.M. Sirunyan *et al.* [CMS Collaboration], *"Measurement of the χ_{c1} and χ_{c2} polarizations in proton-proton collisions at $\sqrt{s} = 8$ TeV,"* arXiv:1912.07706,
Publication: Phys. Rev. Lett. **124**, 162002 (2020), doi:10.1103/PhysRevLett.124.162002. (*18 citations*)

18. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dijet resonances using events with three jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1911.03761,
Publication: Phys. Lett. B **805**, 135448 (2020), doi:10.1016/j.physletb.2020.135448. (*20 citations*)
19. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of the $\Lambda_b^0 \to J/\psi\Lambda\phi$ decay in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1911.03789,
Phys. Lett. B **802**, 135203 (2020), doi:10.1016/j.physletb.2020.135203. (*15 citations*)
20. A.M. Sirunyan *et al.* [CMS Collaboration], *"Measurement of properties of $B_s^0 \to \mu^+\mu^-$ decays and search for $B^0 \to \mu^+\mu^-$ with the CMS experiment,"* arXiv:1910.12127,
Publication: JHEP **04**, 188 (2020), doi:10.1007/JHEP04(2020)188. (*106 citations*)
21. A.M. Sirunyan *et al.* [CMS Collaboration], *"Study of J/ψ meson production from jet fragmentation in pp collisions at $\sqrt{s}$ = 8 TeV,"* arXiv:1910.01686 [hep-ex],
Phys. Lett. B **804**, 135409 (2020), doi:10.1016/j.physletb.2020.135409. (*16 citations*)
22. A.M. Sirunyan *et al.* [CMS Collaboration], *"Calibration of the CMS hadron calorimeters using proton-proton collision data at $\sqrt{s}$ = 13 TeV,"* arXiv:1910.00079,
Publication: JINST **15**, P05002 (2020), doi:10.1088/1748-0221/15/05/P05002. (*13 citations*)
23. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1909.04114,
Phys. Rev. D **100**, 112007 (2019), doi:10.1103/PhysRevD.100.112007. (*46 citations*)
24. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1908.01713,
Publication: JHEP **03**, 025 (2020), doi:10.1007/JHEP03(2020)025. (*41 citations*)
25. A.M. Sirunyan *et al.* [CMS Collaboration], *"Study of the $B^+ \to J/\psi\overline{\Lambda}p$ decay in proton-proton collisions at $\sqrt{s}$ = 8 TeV,"* arXiv:1907.05461,
JHEP **12**, 100 (2019), doi:10.1007/JHEP12(2019)100. (*16 citations*)
26. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for low-mass quark-antiquark resonances produced in association with a photon at $\sqrt{s}$ = 13 TeV,"* arXiv:1905.10331,
Phys. Rev. Lett. **123**, 231803 (2019), doi:10.1103/PhysRevLett.123.231803. (*35 citations*)
27. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of two excited B_c^+ states and measurement of the B_c^+(2S) mass in pp collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1902.00571,
Phys. Rev. Lett. **122**, 132001 (2019), doi:10.1103/PhysRevLett.122.132001. (*96 citations*)
28. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter produced in association with a single top quark or a top quark pair in proton-proton collisions at $\sqrt{s}$ = 13 TeV,"* arXiv:1901.01553,
JHEP **03**, 141 (2019), doi:10.1007/JHEP03(2019)141. (*56 citations*)
29. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of single top quark production in association with a Z boson in proton-proton collisions at $\sqrt{s}$ =13 TeV,"* arXiv:1812.05900,
Publication: Phys. Rev. Lett. **122**, 132003 (2019), doi:10.1103/PhysRevLett.122.132003. (*83 citations*)
30. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter in events with a leptoquark and missing transverse momentum in proton-proton collisions at 13 TeV,"* arXiv:1811.10151,
Publication: Phys. Lett. B **795**, 76 (2019), doi:10.1016/j.physletb.2019.05.046. (*11 citations*)

31. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in proton-proton collisions at* $\sqrt{s} = 13\,TeV$*,"* arXiv:1811.06562,
Eur. Phys. J. C **79**, 280 (2019), doi:10.1140/epjc/s10052-019-6730-7. (*60 citations*)
32. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for low-mass resonances decaying into bottom quark-antiquark pairs in proton-proton collisions at* $\sqrt{s}$ *= 13 TeV,"* arXiv:1810.11822,
Phys. Rev. D **99**, 012005 (2019), doi:10.1103/PhysRevD.99.012005. (*51 citations*)
33. T. Abe *et al.* [LHC Dark Matter Working Group Collaboration], *"LHC dark matter working group: next-generation spin-0 dark matter models,"* arXiv:1810.09420,
Phys. Dark Univ. **27**, 100351 (2020), doi:10.1016/j.dark.2019.100351. (*117 citations*)
34. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for new physics in final states with a single photon and missing transverse momentum in proton-proton collisions at* $\sqrt{s}$ *= 13 TeV,"* arXiv:1810.00196,
Publication: JHEP **02**, 074 (2019), doi:10.1007/JHEP02(2019)074. (*46 citations*)
35. A.M. Sirunyan *et al.* [CMS Collaboration], *"Observation of Higgs boson decay to bottom quarks,"* arXiv:1808.08242,
Phys. Rev. Lett. **121**, 121801 (2018), doi:10.1103/PhysRevLett.121.121801. (*433 citations*)
36. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for resonances in the mass spectrum of muon pairs produced in association with b quark jets in proton-proton collisions at* $\sqrt{s}$ *= 8 and 13 TeV,"* arXiv:1808.01890,
JHEP **11**, 161 (2018), doi:10.1007/JHEP11(2018)161. (*40 citations*)
37. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for narrow* $H\gamma$ *resonances in proton-proton collisions at* $\sqrt{s}$ *= 13 TeV,"* arXiv:1808.01257,
Phys. Rev. Lett. **122**, 081804 (2019), doi:10.1103/PhysRevLett.122.081804. (*8 citations*)
38. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter particles produced in association with a top quark pair at* $\sqrt{s}$ *= 13 TeV,"* arXiv:1807.06522,
Publication: Phys. Rev. Lett. **122**, 011803 (2019), doi:10.1103/PhysRevLett.122.011803. (*47 citations*)
39. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for heavy Majorana neutrinos in same-sign dilepton channels in proton-proton collisions at* $\sqrt{s} = 13$ *TeV,"* arXiv:1806.10905,
Publication: JHEP **01**, 122 (2019), doi:10.1007/JHEP01(2019)122. (*97 citations*)
40. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter produced in association with a Higgs boson decaying to* $\gamma\gamma$ *or* $\tau^+\tau^-$ *at* $\sqrt{s}$ *= 13 TeV,"* arXiv:1806.04771,
JHEP **09**, 046 (2018), doi:10.1007/JHEP09(2018)046. (*51 citations*)
41. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for narrow and broad dijet resonances in proton-proton collisions at* $\sqrt{s} = 13$ *TeV and constraints on dark matter mediators and other new particles,"* arXiv:1806.00843,
JHEP **08**, 130 (2018), doi:10.1007/JHEP08(2018)130. (*208 citations*)
42. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for black holes and sphalerons in high-multiplicity final states in proton-proton collisions at* $\sqrt{s} = 13$ *TeV,"* arXiv:1805.06013,
JHEP **11**, 042 (2018), doi:10.1007/JHEP11(2018)042. (*34 citations*)
43. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for narrow resonances in the b-tagged dijet mass spectrum in proton-proton collisions at* $\sqrt{s}$ *= 8 TeV,"* arXiv:1802.06149,
Phys. Rev. Lett. **120**, 201801 (2018), doi:10.1103/PhysRevLett.120.201801. (*51 citations*)
44. A.M. Sirunyan *et al.* [CMS Collaboration], *"Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at* $\sqrt{s} = 13$ *TeV,"*

arXiv:1801.08427,
JHEP **06**, 027 (2018), doi:10.1007/JHEP06(2018)027. (*65 citations*)

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104. S. Abachi *et al.* [D0 Collaboration], *"Measurement of B^0 - $\bar{B}^0$ mixing using dimuons at D0,"* preprint Fermilab-Conf-95-209-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), doi:10.2172/96956, http://inspirehep.net/record/413349/files/fermilab-conf-95-209.pdf.
105. S. Abachi *et al.* [D0 Collaboration], *"Inclusive muon and b quark production cross-sections in $p\bar{p}$ collisions at $\sqrt{s}$ = 1.8 TeV,"* preprint Fermilab-Conf-95-208-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), http://inspirehep.net/record/413349/files/fermilab-conf-95-208.pdf.
106. S. Abachi *et al.* [D0 Collaboration], *"Inclusive dimuon and b quark production cross-sections in $p\bar{p}$ collisions at $\sqrt{s}$ = 1.8 TeV,"* preprint Fermilab-Conf-95-207-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), doi:10.2172/102430, http://inspirehep.net/record/413349/files/fermilab-conf-95-207.pdf.
107. S. Abachi *et al.* [D0 Collaboration], *"J/ψ production in $p\bar{p}$ collisions at $\sqrt{s}$ = 1.8 TeV,"* preprint Fermilab-Conf-95-205-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), doi:10.2172/113957, http://inspirehep.net/record/413349/files/fermilab-conf-95-205.pdf.
108. S. Abachi *et al.* [D0 Collaboration], *"Transverse energy distributions within jets in $p\bar{p}$ collisions at $\sqrt{s}$ = 1.8 TeV,"* preprint Fermilab-Conf-95-204-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed.

J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), http://inspirehep.net/record/413349/files/fermilab-conf-95-204.pdf.

109. S. Abachi *et al.* [D0 Collaboration], *"Search for light top squarks with the D0 detector,"* preprint Fermilab-Conf-95-187-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), http://inspirehep.net/record/413349/files/fermilab-conf-95-187.pdf.
110. S. Abachi *et al.* [D0 Collaboration], *"Search for first and second generation leptoquarks at D0,"* preprint Fermilab-Conf-95-184-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), http://inspirehep.net/record/413349/files/fermilab-conf-95-184.pdf.
111. S. Abachi *et al.* [D0 Collaboration], *"Color coherent radiation in multi - jet events from $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV,"* preprint Fermilab-Conf-95-182-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), http://inspirehep.net/record/413349/files/fermilab-conf-95-182.pdf.
112. S. Abachi *et al.* [D0 Collaboration], *"Measurement of the upsilon cross-section at D0 using dimuons,"* preprint Fermilab-Conf-95-206-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), doi:10.2172/102428, http://inspirehep.net/record/413349/files/fermilab-conf-95-206.pdf.
113. S. Abachi *et al.* [D0 Collaboration], *"Search for squarks and gluinos in $p\bar{p}$ collisions at the D0 detector,"* preprint Fermilab-Conf-95-193-E, in Proc. Intern. Europhysics Conf. on High-energy Physics, HEP 95, Brussels, Belgium, 27 Jul – 2 Aug, 1995, ed. J. Lemonne, C. Vander Velde, F. Verbeure. World Scientific, New Jersey (1996), doi:10.2172/100265, http://inspirehep.net/record/413349/files/fermilab-conf-95-193.pdf.
114. G.L. Landsberg [D0 Collaboration], *"Search for anomalous $ZZ\gamma$ and $Z\gamma\gamma$ couplings with D0,"* in Proc. Intern. Symp. on Vector Boson Interactions WGZ95, UCLA, Los Angeles, CA, USA, Feb. 1–3, 1995, ed. U. Baur, S. Erede, T. Muller, AIP Conf. Proc. **350**, 382 (1995), doi:10.1063/1.49322, http://inspirehep.net/record/394478/files/fermilab-conf-95-061.pdf.
115. G.L. Landsberg, *"Test of the standard model of electroweak interactions by measuring the anomalous $ZZ\gamma$ and $Z\gamma\gamma$ couplings,"* preprint Fermilab-Thesis-1994-11 (1994), doi:10.2172/1423688, http://inspirehep.net/record/385901/files/fermilab-thesis-1994-11.PDF.
116. S. Abachi *et al.* [D0 Collaboration], *"Search for the top quark with the D0 detector at the Fermilab collider,"* in Proc. 16th Intern. Symposium on Lepton and Photon Interactions, LP 93, Ithaca, NY, USA, Aug 10–15, 1993, ed. P.S. Drell, D.L. Rubin, AIP Conf. Proc. **302**, 479 (2008), doi:10.1063/1.45484.
117. U. Baur, S. Errede and G.L. Landsberg, *"Rapidity correlations in $W\gamma$ production at the Tevatron,"* hep-ph/9307355,
in Proc. Workshop on Physics at Current Accelerators and the Supercollider, Argonne, IL, USA, Jun 2–5, 1993, ed. J.L. Hewett, A.R. White, D. Zeppenfeld, p. 311 (1993).
118. G.L. Landsberg [D0 Collaboration], *"D0 opportunities in measuring the $VV\gamma$ couplings,"* in Proc. Workshop on Physics at Current Accelerators and the Supercollider, Argonne, IL,

USA, Jun 2–5, 1993, ed. J.L. Hewett, A.R. White, D. Zeppenfeld, p. 303 (1993), https://inis.iaea.org/collection/NCLCollectionStore/_Public/25/067/25067792.pdf

119. U. Baur *et al.*, *"Electroweak physics at current accelerators and the supercollider,"* hep-ph/9309318,
in Proc. Workshop on Physics at Current Accelerators and the Supercollider, Argonne, IL, USA, Jun 2–5, 1993, ed. J.L. Hewett, A.R. White, D. Zeppenfeld, p. 271 (1993).
120. B. Gomez *et al.* [D0 Collaboration], *"E823 (D0 upgrade): magnetic tracking,"* preprint Fermilab-Proposal-0823 (1993), http://inspirehep.net/record/362587/files/fermilab-proposal-0823.PDF.
121. D. Alde *et al.* [IHEP-LAPP-LANL-IISN Collaboration], *"Model independent measurement of BR($\omega \to \rho\gamma$),"* preprint IFVE-93-29 (1993), https://lib-extopc.kek.jp/preprints/PDF/1993/9308/9308078.pdf.
122. G.L. Landsberg, *"Investigation of the $\omega\pi^0$ system (GAMS results),"* Sov. Phys. Dokl. **37**, 94 (1992).
123. G.L. Landsberg, *"GAMS: survey of 0^{++} and 2^{++} states,"* in Proc. Fourth Intern. Conf. on Hadron Spectroscopy, HADRON '91, College Park, MD, USA, Aug 12–16, 1991, ed. S. Oneda, D.C. Peaslee, World Scientific, New Jersey, p. 371 (1992).
124. G.L. Landsberg [GAMS Collaboration], *"GAMS results on the $\omega\pi^0$ and $\omega\eta$ systems,"* in Proc. Fourth Intern. Conf. on Hadron Spectroscopy, HADRON '91, College Park, MD, USA, Aug 12–16, 1991, ed. S. Oneda, D.C. Peaslee, World Scientific, New Jersey, p. 12 (1992).
125. G.L. Landsberg, *"PHENIX: universal virus recoverer,"* preprint IFVE-90-122 (1990), https://lib-extopc.kek.jp/preprints/PDF/1991/9102/9102352.pdf
126. G.L. Landsberg, *"Computer viruses and some methods of their disarming,"* preprint IFVE-90-121 (1990), https://lib-extopc.kek.jp/preprints/PDF/1991/9101/9101579.pdf.

Invited and Plenary Talks

"Searches for BSM particles including BSM Higgs", KRUGER 2022 International Conference, 4–9 Dec 2022, Johannesburg (South Africa).

"Recent B Physics Results from CMS (and Beyond)," MITP Workshop Flavour of BSM in the LHC Era, 10–21 Oct 2022, Mainz (Germany).

"Experimental Searches at the LHC," DESY2022: DESY Theory Workshop: Higgs, Flavor and Beyond, 27–30 Sep 2022, DESY, Hamburg (Germany).

"Fragmentation fractions and $b \to sll$ transitions," Vietnam Flavour Physics Conference 2022, 14–20 Aug 2022, Qui Nhon (Vietnam).

"Recent results and prospects in flavour physics from CMS" FPCapri2022: 8th Workshop on Theory, Phenomenology and Experiments in Flavour Physics, 11–13 Jun 2022, Anacapri (Italy).

"Semileptonic b Decays in CMS," Challenges in Semileptonic B Decays, 19–23 Apr 2022, Barolo (Italy).

"Lepton Universality: ATLAS/CMS Measurements," APS April 2022: American Physical Society April Meeting 2022, 9–12 Apr 2022, New York (United States).

"Higgs Turns 10: the Childhood Years", 56th Rencontres de Moriond QCD and High Energy Interactions, 19–26 Mar 2022, La Thuile (Italy).

"Flavorful Physics Highlights from ATLAS and CMS, talk at the Portorož 2021 Workshop "Physics of Flavourful Universe", September 2021, Portorož (Slovenia).

"Searches for New Physics with FACET-: Forward-Aperture CMS ExTension", University of Manchester Virtual Seminar, May 2021.

"Searches for New Physics with FACET-: Forward-Aperture CMS ExTension", Fermilab LPC Virtual Seminar, January 2021.

"2020 Highlights from ATLAS and CMS, talk at DAE-HEP 2020 Virtual Conference, December 2020.

"BSM Searches at the LHC", Lectures at the 15th Fermilab-CERN Virtual Hadron Collider Physics Summer School HCPSS 2020, August 2020.

"Searches for Dark Matter in ATLAS and CMS, 3rd World Summit on Exploring the Dark Side of the Universe, March 2020, Pointe-a-Pitre, Guadeloupe (France)

"Heavy-Flavor Physics in CMS, 2020 Lake Louise Institute in Particle Physics, February 2020, Lake Louise, Alberta (Canada)

"Flavor and BSM Physics with CMS Parked Data", BBSM2019, 15th Rencontres du Vietnam, Qui Nhon, Vietnam, September, 2019.

"Studies of (Pseudo)Scalars in CMS", Scalars 2019, Warsaw, Poland, September 2019.

"CMS Opportunities with Parked Data", 7th International Workshop on are Semileptonic Decays, Lyon, France, September 2019.

"Opportunities in Flavor and BSM Physics with CMS Parked Data", Seattle Heavy-Quark Physics Workshop, Seattle, USA, August 2019.

"Opportunities in Flavor and BSM Physics with CMS Parked Data", Imperial College Workshop "Finding New Physics with Ten Billion b Hadrons," London, UK, May, 2019.

"Opportunities in Flavor and BSM Physics with CMS Parked Data", MIAPP Workshop "Beyond the Standard Model with Precision Flavour Experiments," Munich, Germany, May 2019.

"Quest for Dark Matter at Colliders and Beyond", Colloquium, 54th Rencontres de Moriond on QCD and Strong Interactions, La Thuile, Italy, March 2019.

"Heavy-Flavor Spectroscopy in ATLAS and CMS", 54th Rencontres de Moriond on QCD and Strong Interactions, La Thuile, Italy, March 2019.

"Recent Highlights from the CMS Experiment", 57th International Winter Meeting on Nuclear Physics, Bormio, Italy, January 2019.

"Quest for Dark Matter at Colliders and Beyond", DESY Colloquium, Hamburg, Germany, October 2018.

"New Ideas in Searches for New Physics at the LHC", Brandeis University Colloquium, Waltham, MA, USA, October 2018.

"Searches for New Physics in CMS: from Pheno to Amplitudes", AMPHEP 2018 Workshop, Mainz, Germany, August 2018.

"Recent CMS Results with Focus on New Physics Searches", FPCapri 2018 Workshop, Anacapri, Italy, June 2018.

"Searches for SUSY at CMS", Aspen Winter Conference on Particle Physics, Aspen, CO, USA, March 2018.

"Searches for Dark Matter at CMS", Lake Louise Winter Institute, Lake Louise, Canada, February 2018.

"Scalar Physics in CMS" Scalars 2017 Conference, Warsaw, Poland, November 2017.

sl "Searches for SUSY in CMS" CORFU 2017 Workshop on SM and Beyond, Corfu, Greece, September 2017.

"Searches for Dark Matter in CMS" 2nd CMS Workshop on Physics at HL-LHC, Varna, Bulgaria, August 2017.

"Recent Results from Searches fro New Physics in CMS" CERN-CKC Workshop, JeJu Island, Korea, June 2017.

"Exotica searches in ATLAS and CMS" ALPS 2017 Conference, Obergurgl, Austria, April 2017.

"Searching for SUSY in CMS" KSU Physics Dept. HEP Seminar, February 2017.

"Searching for Dark Matter at the LHC" KSU Physics Dept. Colloquium, February 2017.

"CMS Exotica Searches, beyond the low-hanging fruit" 2016 CMS Exotica Workshop, Zurich, December 2016.

"Recent CMS Results on Dark Matter Searches" The LHC Awakens: a New Energy Frontier Workshop, Aspen, August 2016.

"Physics at the LHC" 2016 Mitchell Workshop on Collider, Dark Matter, and Neutrino Physics, College Station, TX, May 2016.

"Simplified Models of Dark Matter++: Experimental Considerations" Imperial College Brainstorming Workshop, London, May 2016.

"Recent CMS Achievements" SCALARS 2015, Dec 2015, Warsaw, Poland.

"Recent Results from CMS" Joint UMD/Johns Hopkins Seminar, December 2015.

"Lectures on New Physics Searches at the LHC" Traunkirchen School on Particle Physics, Sep. 2015, Traunkirchen, Austria.

"Recent Results from CMS" International School on Particle Physics, June 2015, Erice, Italy

"New Physics Searches at ATLAS and CMS" PHENO 2015, May 2015, Pittsburgh, PA.

"Moving Beyond Effective Field Theory in Dark Matter Searches at the LHC", Moriond 2015, March 2015, LaThuile, Italy.

"Exotica Searches in ATLAS and CMS" BNL Experimental Particle Physics Seminar, Jan 22, 2015, Upton, NY.

"Moving beyond the Effective Field Theory in Dark Matter Searches at the LHC," Miami 2014 International Conference, Dec 17-23, 2014, Ft. Lauderdale, FL.

"CMS: Past, Present, and Future" Kruger2014: Third Biennial Workshop on Discovery Physics at the LHC, 1-6 Dec, 2014, Skukuza, South Africa.

"Boosted SUSY and compositeness and preparation for 100 TeV (CMS and ATLAS)" Naturalness 2014 Workshop, 14-17 Nov, 2014, Weizmann Institute of Science, Rehovot, Israel.

"Lectures on New Physics Searches at the LHC" Benasque School on Particle Physics "Taller de Altas Energías 2014," Sep. 14-27, 2014, Benasque, Spain.

"Status of CMS Experiment" Split2014: LHC Days in Split, 29 Sep-4 Oct, 2014, University of Split, Split, Croatia.

"Searches for New Physics" 9th Hadron Collider Physics Summer School, August 11-22, 2014, Batavia, IL.

"Mono-Mania or New Ideas in Dark Matter Searches at Colliders" Aspen Workshop "Model Building in the LHC Era," August 3-31, 2014, Aspen, CO; Imperial College Brainstorming Workshop on Dark Matter Searches, May 22-23, 2014, London, UK; Fermilab LPC Seminar, April 17, 2014.

"Recent Higgs Boson Results from the LHC" 54th Cracow School of Theoretical Physics, June 12-24, 2014, Zakopane, Poland.

"Status of Higgs Searches at the LHC and Future Higgs Prospects" WHEPP13 Workshop on High Energy Physics and Phenomenology, Dec 12-21, 2013, Puri, India.

"Status of the CMS Experiment" International Symposium on Higgs Boson Physics, Aug 12-16, 2013, Beijing, China.

"Higgs Bosons in the Standard Model and Beyond" EPS-HEP 2013 International Conference, July 18-24, 2013, Stockholm, Sweden.

"LHC: Past, Present, and Future" International conference on string theory, Jun 24-29, 2013, Seoul, Korea.

"LHC: Past, Present, and Future" Rencontres de Blois on "Particle Physics and Cosmology", May 26-31, 2013, Blois, France.

"Physics Highlights at CMS" Korean Physical Society 2013 Spring Meeting, 24-26 Apr 2013, Daejeon, Korea.

"Discovery of the Higgs (?) Boson at the LHC," Brown University Colloquium, October 10, 2012.

"Status of High-Energy Physics in Summer 2012," invited talk at the VIIIth Rencontres du Vietnam "Beyond the Standard Model in Particle Physics," July 15–21, 2012, Qui Nhon, Vietnam.

"Quantum Gravity at the LHC: What we Learned So Far," invited talk at the MPNS COST Action MP0905 "Black Holes in the Violent Universe," April 24–26, 2012, Valetta, Malta.

""Search for New Physics at CMS," invited talk at "SiD2011: SID Collaboration Workshop," 14–16 Dec 2011, Menlo Park, CA.

"Search for the Standard Model Higgs Boson in CMS," SLAC Experimental Seminar, December 14, 2011, Menlo Park, CA.

""The Future of CMS BSM searches," invited talk at the "Interpreting LHC Discoveries: Interpreting LHC Discoveries" Workshop, 31 Oct-25 Nov 2011, The Galileo Galilei Institute for Theoretical Physics (GGI), Firenze, Italy.

"Modern Constraints on TeV Gravity,' Caltech Seminar, October 10, 2011, Pasadena, CA.

"Modern Constraints on TeV Gravity,' LBNL Research Progress Meeting, September 29, 2011, Berkeley, CA.

"Modern Constraints on TeV Gravity,' SLAC Experimental Seminar, September 27, 2011, Menlo Park, CA.

"Overview of New Physics Searches at CMS," plenary talk at BLV2011: 2011 Workshop on Baryon & Lepton Number Violation, 22-24 Sep 2011, Gatlinburg, TN.

"Search for Physics Beyond the Standard Model in CMS," Fermilab Wine & Cheese Seminar, Batavia, IL, February 25, 2011.

"Results on Exotica from CMS," CERN EP/PP Seminar, January 24, 2011, Geneva, Switzerland.

"Searches for New Physics with Early CMS Data," plenary talk at the Aspen Winter 2010 Conference "The Revolution in Particle Physics is Here!," January 17–23, 2010, Aspen, CO.

"Unliocking Mysteries of the Universe at the LHC," invited Physics Faculty Seminar, Brown University, November 2009; University of Rhode Island Colloquium, December 2009; SUNY Buffalo Colloquium, February 2010.

"Physics with the CMS Detector – a Pedagogical Overview," plenary talk at the 4th High-Energy Physics Conference HEP MAD '09, Antananarivo, Madagascar, August 21–28, 2009.

"Collider Searches for Black Holes (Particularly at CMS)," plenary talk at the Hengstberger Symposium "Extra Dimensions and Mini Black Holes," Heidelberg, Germany, July 24–25, 2009.

"Accelerator Searches for Extra Dimensions and Black Holes," plenary talk at the Black Holes VII Theory and mathematical aspects Workshop, Banff, Canada, May 9–15, 2009.

"Searches for Extra Dimensions at the LHC," plenary talk at the XXIVth Lake Louise Winter Institute, Lake Louise, Canada, February 15–21, 2009.

"Discovering Extra Dimensions and Black Holes at the LHC," invited talk at the Lisbon LIP/CFTP Seminar, November 2008; DESY Particle Physics Seminar, Hamburg, January 2010; DESY Particle Physics Seminar, Zeuthen, January 2010; University of Massachusetts, Amherst Colloquium, February 2010.

"Discovering New Physics with Early LHC Data," invited OleMiss Colloquium, April 2008; Bradley University Colloquium, November 2008; University of Arizona Colloquium, April 2009.

"Discovering New Physics with Early LHC Data," plenary talk at the LoopFest VII Workshop on Radiative Corrections for the LHC and ILC, Buffalo, May 14–16, 2008.

"Searches for New Physics with Early LHC Data: Strategies and Challenges," plenary talk at the "Physics of the Large Hadron Collider Workshop," Kavli Institute, Santa Barbara, February 4 – June 6, 2008.

"Experimental Summary," invited summary talk at the Aspen Winter 2008 Conference "Revealing the Nature of Electroweak Symmetry Breaking," Aspen, January 14–19, 2008.

"Early Searches in CMS," invited talk at the International Workshop "Standard Model and Beyond in the LHC Era," Valparaiso, Chile, January 7–12, 2008.

"Experimental Searches for Extra Dimensions," Academic Lecture series at Fermilab, November 1–8, 2007.

"Out-of-this-World Physics: Probing Quantum Gravity in the Lab," invited talk at the Experimental Search for Quantum Gravity Workshop at the Perimeter Institute, Waterloo, Canada, November 4–9, 2007.

"Searches for Extra Dimensions and Black Holes at Colliders," invited talk at the 13th Lomonosov Conference on Elementary Particle Physics, Moscow, Russia, August 23–29, 2007.

"Experimental Signatures for Extra Dimensions," invited talk at the 31st John Hopkins Workshop "Physics at the LHC — A Challenge for Theory and Experiment," Heidelberg, Germany, August 2–4, 2007.

"BSM Searches at the LHC," 4th Four Seas Conference, Iasi, Romania, May 29 – June 3, 2007.

"Out-of-this-World Physics: Black Holes at Future Colliders," invited talk at the 2007 STScI Spring "BLACK HOLES" Symposium, Baltimore, April 23–26, 2007.

"Search for non-Standard-Model Higgs at the Tevatron," invited talk at the XLII Rencontres de Moriond on QCD and Hadronic Interactions, La Thuile, Italy, 17–24 March 2007.

"Beyond the Standard Model: Seeking the Unknown," invited lectures at the International Summer School on High Energy Physics: Standard Model and Beyond, Mugla, Turkey, September 25–30, 2006.

"Seeking Unknown at the Tevatron," PHENO06 Conference, Madison, May 2006; LISHEP06 Conference, Rio de Janeiro, April 2006.

"LHC, the First Three Years: Before the Champagne?" Aspen 2005 Summer Workshop, August 2005; UC Berkeley Theoretical Physics Seminar, December 2005.

"Beyond Supersymmetry: Finding New Physics at Colliders," Snowmass Workshop, August 2005.

"Search for Extra Dimensions at Colliders," Tev4LHC Workshop, BNL, February 2005.

"Searches for Extra Dimensions: From Particles to Black Holes," ITEP Colloquium, Moscow, November 2004.

"Searches for Extra Dimensions at DØ," Fermilab Wine & Cheese Seminar, October 2004.

"Searches for Extra Dimensions at the Tevatron," SSI'04, SLAC, August 2004.

"Probing Quantum Gravity in the Lab," Durham Workshop on String Phenomenology, August 2003.

"Black Holes at the LHC and Beyond," Xth Marcel Grossmann Meeting on General Relativity, Rio de Janeiro, July 2003.

"Way Beyond the SM: Tevatron Results and Potential," Prague Workshop on Physics at the LHC, July 2003.

"News from Energy Frontier: Recent DØ Results in Run II," Caltech HEP Seminar, May 2003.

"Black Holes at Future Colliders and Beyond," Durham Workshop on Exotics at Hadron Colliders, March 2003.

"Extra Dimensions at the Tevatron: the Discovery Strategy," Durham Workshop on Exotics at Hadron Colliders, March 2003.

"Search for New Physics in Run 2," Cambridge Workshop on High p_T Physics, July 2002.

"Finding New Physics in Run 2," Advanced Analysis Techniques Workshop, Fermilab, June 2002.

"Black Holes at Future Colliders and Beyond," invited plenary talk at the XIth International Conference on Elastic and Diffractive Scattering, Blois, May 2005;

"Black Holes at Future Colliders and Beyond," invited plenary talk at the SUSY 2002 Conference, Hamburg, June 2002;

"Black Holes at Future Colliders and Beyond," invited plenary talk at the XXXVII Rencontres de Moriond, Les Arcs, March, 2002;

"Black Holes at Future Colliders and Beyond," invited talk at the UMD HEP Seminar, September 2001; Brown University HEP Seminar, October 2001; LBL Research Progress Meeting, November 2001; SLAC Experimental Seminar, November 2001; Fermilab Wine & Cheese Seminar, November 2001; University of Alabama HEP Seminar, December 2001; Argonne Laboratory HEP Seminar, February 2002; Université Paris VI HEP Seminar, March 2002;

LAL Orsay HEP Seminar, March 2002; SUNY at Stony Brook HEP Seminar, April 2002; University of Chicago HEP Seminar, April 2002; BNL HEP Seminar, May 2002; UCL HEP Seminar, June 2002; Imperial College HEP Seminar, June 2002; Cavendish Lab HEP Seminar, June 2002; University of Heidelberg Colloquium, July 2002; University of Virginia Colloquium, September 2002; University of Florida Colloquium, November 2002; University of Rochester Colloquium, September 2003; University of Crete Colloquium, May 2004; University of Zurich Colloquium, May 2004; Boston University Colloquium, February 2005; Princeton University Seminar, March 2005; University of São Paulo Colloquium, November 2005.

"Scales Beyond 1 TeV Snowmass Working Group Summary," plenary talk at the Snowmass 2001, July 2001; Fermilab Wine & Cheese Seminar, August 2001.

"Extra Dimensions and More," plenary talk at the XXXVIth Rencontres de Moriond "QCD and High Energy Hadronic Interactions" Conference, Les Arcs, March, 2001.

"Out-of-this-World Physics: Probing Quantum Gravity in the Lab," invited talk at the BNL HEP Seminar, September 2000; MSU HEP Seminar, September 2000; SLAC Experimental Seminar, October 2000; LBL Research Progress Meeting, October 2000; UC Riverside Colloquium, October 2000; Iowa State University Colloquium, October 2000; University of Massachussetts HEP Seminar, Amherst, November 2000; Brown University Colloquium, Providence, November 2000; Boston University HEP Seminar, January 2001; Carnegie Mellon University HEP Seminar, February 2001; Center de Physique de Particules de Marseille, March 2001; Stanford University Colloquium, April 2001; Syracuse University Colloquium, November 2003; Cornell University Colloquium, February 2004; UC Santa Cruz HEP Seminar, December 2005; Rockefeller University Colloquium, May 2006; University of Alberta Colloquium, April 2009.

"Mini-Review on Extra Dimensions," invited talk at the ICHEP 2000 Meeting, Osaka, August 2000.

"Probing Large Extra Dimensions in Collider Experiments," invited plenary talk at the APS 2000 Meeting, April 2000, Long Beach, CA; invited talk at the NLC Workshop, March 2000, Berkeley, CA.

"Search for Large Extra Dimensions at DØ," invited talk at the Fermilab Wine and Cheese Seminar, April 2000.

"Hunt for new Physics at DØ: from Run I to Run II," invited talk at the DESY HEP Seminar, September 1999; University of Mainz HEP Seminar, September 1999; University of Heidelberg HEP Seminar, September 1999; Sudbury Neutrino Observatory, November 1999.

"Hunting for SUSY in Run II at DØ," invited plenary talk at the international conference SUSY'99, Fermilab, June 1999.

6. Research Grants

Brown SEED Grant "Using Artificial Intelligence to Search for New Physics Underground, on the Ground, and in the Sky," PI
02/01/21–1/31/22, $90K;

DOE Grant "HL CMS Upgrade: Endcap Calorimeter," Co-PI
01/01/17–12/31/18, $80K;

NSF CAREER Award "Search for Extra Dimensions in Space," PI
08/01/03–07/31/09, $400K;

DOE Grant "TASK C: Experimental Particle Physics," PI
09/01/91–4/1/25, approximately $18M;

DOE Grant "Activities related to the US CMS Silicon Tracker Subsystem," PI
04/01/07–10/31/10, $110K;

A.P. Sloan Research Fellowship, PI 09/01/03-08/31/05, $40K;

Salomon Faculty Research Award, PI 03/01/00–02/28/01, $10K;

7. Service

Service to the University

Commencement Speaker Committee 2003–2008;

Creative Arts Council 2000–2002;

Physics Graduate Admissions Committee, Chair" 2007–2009;

Physics Graduate Admissions Committee" 2003–2006, 2010, 2014-2018;

Physics Curriculum Committee 2011, 2014–2015, 2022–2023;

Physics Computing Committee 2011, 2021–2022;

Physics Colloquium Committee, Chair 2004, 2016-2019; 2021–2023;

Physics Colloquium Committee 1998–2001;

Physics ScM Advisor 2020–2023;

Standing Committee on the Academic Code" 2018–2019.

Service to the Profession

CMS Publication Committee Chair since 2021

CMS Violation of Fundamental Symmetries B Physics Working Group Convener 2020–2021

Member of the Phys. Rev. Lett. Editorial Board since 2020

CMS B Physics Group Convener 2018–2020

SciPost Editorial Board Member since 2018

CMS HGCAL Institutional Board Deputy Chair 2016–2019

CMS MET+X Exotica Working Group Convener 2017–2018

CMS HCAL Detector Performance Group Convener 2014–2015

CMS Deputy Publication Committee Chair	2014-2015
Fermilab LPC Distinguished Researcher	2014–2015
CMS Physics Coordinator	2012–2013
LPC Management Board	2010–2013
CMS Exotica Group Convener	2009–2010
LHC Theory Initiative Grant Selection Committee	2009-2010
LPC Visiting Experimentalist of the Week	November 2009
US LHC Users Organization Executive Committee	2007-2010
LPC Coordinator Selection Committee	2009
US CMS Physics Coordinator	2007–2008
US CMS Institutional Advisory Board	2007–2009
LHC Physics Center Advisory Board	2004–2005 and 2007–2009
Convener of CMS Missing E_T Group	2007–2008
Member of the NSERC GSC19 Subatomic Grant Selection Panel, Canada	2006–2009, 2016
Fermilab Users Organization Executive Committee	2006-2008
Convener of the US CMS LHC Physics Center Trigger Group	2005–2007
Deputy Physics Coordinator of the DØ Experiment	2003–2005
Convener of the DØ New Phenomena Group	1997–2003
Convener of the DØ Physics Streaming Group	2001
Convener of the "Scales Beyond 1 TeV," group of the Snowmass 2001 Workshop on Future of Particle Physics	2001
Convener of the "Beyond the SM" group of the Les Houches 2001 Workshop on Physics at TeV Colliders	2001
Convener of the Run II Workshop on Strong Dynamics at Fermilab"	1998
Convener of the Run II SUSY/Higgs Workshop at Fermilab"	1998–1999

Service to the Community

A number of public lectures and interviews published in science and general press	1998–2022.
Served on CREST Foundation Scholarship Selection Committee	2009, 2010, 2011, 2013–2015
Served on J.K. Cooke Foundation Undergraduate Transfer Review Panel	2008

8. Academic Honors

Fellow of American Physical Society	since December 2009

Awards

National Science Foundation CAREER Research Award	August 2003 – July 2008

Arthur P. Sloan Research Fellowship	September 2001 – September 2005
Aditya Sambamurti Memorial Award	June 1997

9. Teaching

Physics 30, 50, 70 Lab and Course Management	Fall 2002, 2003, 2006–2009.
Physics 30 course management	Fall 2015–2017, Spring 2021, Fall 2022.
Physics 30, 50, 70 lab management	Fall 2018.
Physics 40, 60, 160 lab management	Spring 2016.
Physics 1170	Spring 2007, 2008, 2014, 2018.
Physics 70	Fall 2003, 2004.
Physics 2170	Spring 2003–2005, 2009, 2011, 2015–2017, 2019, 2023.
Physics 2610F	Fall 2011.
Physics 560	Spring 1999–2001.
Physics 1560	Spring 2022.
Physics 2010	Fall 1998-2000, 2020–2021.
Advised sixteen graduate students; nine of them received Ph.D. under my supervision	1999–present.
Advised seven M.Sc. students	2016–present.
Directed four senior student theses	2000–present.
Supervised summer research of 14 undergraduate students	1999–present.
Served as an academic advisor; total number of students advised – 36	2003–present.