Publications with major contribution

- [1] Shion Chen, Yūki Nakaguchi, and Sachio Komamiya. Testing bell's inequality using charmonium decays. *Progress of Theoretical and Experimental Physics*, 2013(6):063A01, 2013.
- [2] M. S. Amjad et al. Beam test performance of the SKIROC2 ASIC. Nucl. Instrum. Meth., A778:78–84, 2015.
- [3] ATLAS Collaboration. Search for gluinos in events with an isolated lepton, jets and missing transverse momentum at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:565, 2016.
- [4] ATLAS Collaboration. Search for squarks and gluinos in events with an isolated lepton, jets, and missing transverse momentum at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 96:112010, 2017.
- [5] ATLAS Collaboration. Searches for electroweak production of supersymmetric particles with compressed mass spectra in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Rev. D, 101:052005, 2020.
- [6] ATLAS Collaboration. Search for chargino–neutralino pair production in final states with three leptons and missing transverse momentum in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with the ATLAS detector. Eur. Phys. J. C, 81:1118, 2021.
- [7] ATLAS Collaboration. Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at $\sqrt{s} = 13 \,\text{TeV}$. Eur. Phys. J. C, 81:578, 2021.
- [8] ATLAS Collaboration. Search for charginos and neutralinos in final states with two boosted hadronically decaying bosons and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 104:112010, 2021.
- [9] Dawson, I. and others. Radiation effects in the LHC experiments: impact on detector performance and operation, CERN Yellow Reports: Monographs. 2021.
- [10] Shion Chen, Hajime Fukuda, Toshiaki Inada, Takeo Moroi, Tatsumi Nitta, and Thanaporn Sichanugrist. Detecting hidden photon dark matter using the direct excitation of transmon qubits. *Physical Review Letters*, 131(21):211001, 2023.

Other authored publications

- [1] ATLAS Collaboration. Study of the rare decays of B^0_s and B^0 into muon pairs from data collected during the LHC Run~1 with the ATLAS detector. Eur. Phys. J. C, 76:513, 2016.
- [2] ATLAS Collaboration. Measurement of jet $p_{\text{-}}$ T correlations in Pb+Pb and pp collisions at $\sqrt{s_{\text{-}}NN} = 2.76$ TeV with the ATLAS detector. *Phys. Lett. B*, 774:379, 2017.
- [3] ATLAS Collaboration. Transverse momentum, rapidity, and centrality dependence of inclusive charged-particle production in $\sqrt{s_-NN} = 5.02 \text{ TeV } p+\text{Pb}$ collisions measured by the ATLAS experiment. *Phys. Lett. B*, 763:313, 2016.
- [4] ATLAS Collaboration. Measurement of dijet azimuthal decorrelations in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector and determination of the strong coupling. Phys. Rev. D, 98:092004, 2018.
- [5] ATLAS Collaboration. Precision measurement and interpretation of inclusive W^+ , W^- and Z/γ^* production cross sections with the ATLAS detector. Eur. Phys. J. C, 77:367, 2017.
- [6] ATLAS Collaboration. Measurement of the production cross-section of a single top quark in association with a W boson at 8 TeV with the ATLAS experiment. *JHEP*, 01:064, 2016.
- [7] ATLAS Collaboration. The performance of the jet trigger for the ATLAS detector during 2011 data taking. Eur. Phys. J. C, 76:526, 2016.
- [8] ATLAS Collaboration. Angular analysis of $B^0_d \to K^*\mu^+\mu^-$ decays in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 10:047, 2018.
- [9] ATLAS Collaboration. Luminosity determination in pp collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector at the LHC. Eur. Phys. J. C, 76:653, 2016.
- [10] ATLAS Collaboration. Search for new phenomena in events with at least three photons collected in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:210, 2016.
- [11] ATLAS Collaboration. Search for a high-mass Higgs boson decaying to a W boson pair in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 01:032, 2016.
- [12] ATLAS Collaboration. Search for charged Higgs bosons in the $H^{\pm} \to tb$ decay channel in pp collisions at $\sqrt{s} = 8$ TeV using the ATLAS detector. *JHEP*, 03:127, 2016.
- [13] ATLAS Collaboration. Searches for Higgs boson pair production in the $hh \to bb\tau\tau, \gamma\gamma WW^*, \gamma\gamma bb, bbbb$ channels with the ATLAS detector. Phys. Rev. D, 92:092004, 2015.

- [14] ATLAS Collaboration. Measurement of the photon identification efficiencies with the ATLAS detector using LHC Run-1 data. Eur. Phys. J. C, 76:666, 2016.
- [15] ATLAS Collaboration. Measurement of the $b\bar{b}$ dijet cross section in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:670, 2016.
- [16] ATLAS Collaboration. Measurement of total and differential W^+W^- production cross sections in proton–proton collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector and limits on anomalous triple-gauge-boson couplings. *JHEP*, 09:029, 2016.
- [17] ATLAS Collaboration. Measurement of the $t\bar{t}W$ and $t\bar{t}Z$ production cross sections in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. $JHEP,\,11:172,\,2015.$
- [18] ATLAS Collaboration. Measurement of the correlation between the polar angles of leptons from top quark decays in the helicity basis at $\sqrt{s} = 7 \text{ TeV}$ using the ATLAS detector. *Phys. Rev. D*, 93:012002, 2016.
- [19] ATLAS Collaboration. Search for anomalous couplings in the *Wtb* vertex from the measurement of double differential angular decay rates of single top quarks produced in the *t*-channel with the ATLAS detector. *JHEP*, 04:023, 2016.
- [20] ATLAS Collaboration. Beam-induced and cosmic-ray backgrounds observed in the AT-LAS detector during the LHC 2012 proton-proton running period. JINST, 11:P05013, 2016.
- [21] ATLAS Collaboration. Searches for scalar leptoquarks in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:5, 2016.
- [22] ATLAS Collaboration. A search for prompt lepton-jets in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 02:062, 2016.
- [23] ATLAS Collaboration. Search for pair production of a new heavy quark that decays into a W boson and a light quark in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 92:112007, 2015.
- [24] ATLAS Collaboration. Search for single production of vector-like quarks decaying into Wb in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. Eur. Phys. J. C, 76:442, 2016.
- [25] ATLAS Collaboration. Search for the production of single vector-like and excited quarks in the Wt final state in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 02:110, 2016.
- [26] ATLAS Collaboration. Probing lepton flavour violation via neutrinoless $\tau \to 3\mu$ decays with the ATLAS detector. Eur. Phys. J. C, 76:232, 2016.
- [27] ATLAS Collaboration. Search for magnetic monopoles and stable particles with high electric charges in 8 TeV pp collisions with the ATLAS detector. Phys. Rev. D, 93:052009, 2016.

- [28] ATLAS Collaboration. Combination of searches for WW, WZ, and ZZ resonances in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 755:285, 2016.
- [29] ATLAS Collaboration. Search for single production of a vector-like quark via a heavy gluon in the 4b final state with the ATLAS detector in pp collisions at $\sqrt{s} = 8 \text{ TeV}$. Phys. Lett. B, 758:249, 2016.
- [30] ATLAS Collaboration. Search for dark matter produced in association with a Higgs boson decaying to two bottom quarks in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *Phys. Rev. D*, 93:072007, 2016.
- [31] ATLAS Collaboration. Search for the standard model Higgs boson produced in association with a vector boson and decaying into a tau pair in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 93:092005, 2016.
- [32] ATLAS Collaboration. Search for lepton-flavour-violating $H \to \mu \tau$ decays of the Higgs boson with the ATLAS detector. *JHEP*, 11:211, 2015.
- [33] ATLAS Collaboration. Search for the Standard Model Higgs boson produced by vector-boson fusion and decaying to bottom quarks in $\sqrt{s} = 8 \text{ TeV } pp$ collisions with the ATLAS detector. *JHEP*, 11:112, 2016.
- [34] ATLAS Collaboration. Measurement of quarkonium production in proton—lead and proton—proton collisions at 5.02 TeV with the ATLAS detector. Eur. Phys. J. C, 78:171, 2018.
- [35] ATLAS Collaboration. Determination of jet calibration and energy resolution in proton–proton collisions at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. Eur. Phys. J. C, 80:1104, 2020.
- [36] ATLAS Collaboration. Performance of algorithms that reconstruct missing transverse momentum in $\sqrt{s} = 8$ TeV proton–proton collisions in the ATLAS detector. Eur. Phys. J. C, 77:241, 2017.
- [37] ATLAS Collaboration. Reconstruction of hadronic decay products of tau leptons with the ATLAS experiment. Eur. Phys. J. C, 76:295, 2016.
- [38] ATLAS Collaboration. Topological cell clustering in the ATLAS calorimeters and its performance in LHC Run~1. Eur. Phys. J. C, 77:490, 2017.
- [39] ATLAS Collaboration. Measurements of $Z\gamma$ and $Z\gamma\gamma$ production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 93:112002, 2016.
- [40] ATLAS Collaboration. Measurements of $W^{\pm}Z$ production cross sections in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector and limits on anomalous gauge boson self-couplings. *Phys. Rev. D*, 93:092004, 2016.
- [41] ATLAS Collaboration. Dijet production in $\sqrt{s} = 7$ TeV pp collisions with large rapidity gaps at the ATLAS experiment. *Phys. Lett. B*, 754:214, 2016.

- [42] ATLAS Collaboration. Measurement of $W^{\pm}W^{\pm}$ vector-boson scattering and limits on anomalous quartic gauge couplings with the ATLAS detector. *Phys. Rev. D*, 96:012007, 2017.
- [43] ATLAS Collaboration. Measurement of the double-differential high-mass Drell-Yan cross section in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 08:009, 2016.
- [44] ATLAS Collaboration. Measurement of event-shape observables in $Z \to \ell^+\ell^-$ events in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector at the LHC. Eur. Phys. J. C, 76:375, 2016.
- [45] ATLAS Collaboration. Study of ordered hadron chains with the ATLAS detector. *Phys. Rev. D*, 96:092008, 2017.
- [46] ATLAS Collaboration. Measurement of the inclusive isolated prompt photon cross section in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 08:005, 2016.
- [47] ATLAS Collaboration. Measurement of the angular coefficients in Z-boson events using electron and muon pairs from data taken at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 08:159, 2016.
- [48] ATLAS Collaboration. Measurements of electroweak Wjj production and constraints on anomalous gauge couplings with the ATLAS detector. Eur. Phys. J. C, 77:474, 2017.
- [49] ATLAS Collaboration. Measurement of the transverse momentum and $\phi^* \eta$ distributions of Drell-Yan lepton pairs in proton–proton collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:291, 2016.
- [50] ATLAS Collaboration. Measurements of four-lepton production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 753:552, 2016.
- [51] ATLAS Collaboration. Measurement of the ZZ production cross section in proton-proton collisions at $\sqrt{s}=8$ TeV using the $ZZ\to\ell^-\ell^+\ell'^-\ell'^+$ and $ZZ\to\ell^-\ell^+\nu\bar{\nu}$ decay channels with the ATLAS detector. JHEP,~01:099,~2017.
- [52] ATLAS Collaboration. Measurement of jet charge in dijet events from $\sqrt{s} = 8 \text{ TeV } pp$ collisions with the ATLAS detector. *Phys. Rev. D*, 93:052003, 2016.
- [53] ATLAS Collaboration. Measurement of the W-boson mass in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector. Eur. Phys. J. C, 78:110, 2018.
- [54] ATLAS Collaboration. Charged-particle distributions in pp interactions at $\sqrt{s} = 8 \text{ TeV}$ measured with the ATLAS detector. Eur. Phys. J. C, 76:403, 2016.
- [55] ATLAS Collaboration. Search for the electroweak production of supersymmetric particles in $\sqrt{s} = 8 \text{ TeV } pp$ collisions with the ATLAS detector. *Phys. Rev. D*, 93:052002, 2016.

- [56] ATLAS Collaboration. Summary of the ATLAS experiment's sensitivity to supersymmetry after LHC Run 1 interpreted in the phenomenological MSSM. JHEP, 10:134, 2015.
- [57] ATLAS Collaboration. Measurements of fiducial cross-sections for $t\bar{t}$ production with one or two additional *b*-jets in pp collisions at $\sqrt{s}=8\,\mathrm{TeV}$ using the ATLAS detector. Eur. Phys. J. C, 76:11, 2016.
- [58] ATLAS Collaboration. Search for flavour-changing neutral current top quark decays $t \to Hq$ in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *JHEP*, 12:061, 2015.
- [59] ATLAS Collaboration. Measurement of the differential cross-section of highly boosted top quarks as a function of their transverse momentum in $\sqrt{s} = 8 \text{ TeV}$ proton-proton collisions using the ATLAS detector. *Phys. Rev. D*, 93:032009, 2016.
- [60] ATLAS Collaboration. Measurement of the charge asymmetry in top-quark pair production in the lepton-plus-jets final state in pp collision data at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:87, 2016.
- [61] ATLAS Collaboration. Probing the Wtb vertex structure in t-channel single-top-quark production and decay in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. JHEP, 04:124, 2017.
- [62] ATLAS Collaboration. Measurement of the relative width difference of the B^0 - \bar{B}^0 system with the ATLAS detector. *JHEP*, 06:081, 2016.
- [63] ATLAS Collaboration. Measurement of the prompt J/ψ pair production cross-section in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. Eur. Phys. J. C, 77:76, 2017.
- [64] ATLAS Collaboration. Measurements of $\psi(2S)$ and $X(3872) \rightarrow J/\psi \pi^+ \pi^-$ production in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. JHEP, 01:117, 2017.
- [65] ATLAS Collaboration. Measurement of b-hadron pair production with the ATLAS detector in proton-proton collisions at $\sqrt{s} = 8 \text{ TeV}$. JHEP, 11:062, 2017.
- [66] ATLAS Collaboration. Measurement of J/ψ production in association with a W^{\pm} boson with pp data at 8 TeV. JHEP, 01:095, 2020.
- [67] ATLAS Collaboration. A search for an excited muon decaying to a muon and two jets in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. New J. Phys., 18:073021, 2016.
- [68] ATLAS Collaboration. Search for new phenomena in dijet mass and angular distributions from pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 754:302, 2016.
- [69] ATLAS Collaboration. Search for new phenomena in final states with an energetic jet and large missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. Phys. Rev. D, 94:032005, 2016.

- [70] ATLAS Collaboration. Search for heavy particles decaying into top-quark pairs using lepton-plus-jets events in proton-proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:565, 2018.
- [71] ATLAS Collaboration. Search for new phenomena in events with a photon and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:059, 2016.
- [72] ATLAS Collaboration. Search for new resonances in events with one lepton and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Lett. B, 762:334, 2016.
- [73] ATLAS Collaboration. Search for high-mass new phenomena in the dilepton final state using proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett.* B, 761:372, 2016.
- [74] ATLAS Collaboration. Search for dark matter produced in association with a hadronically decaying vector boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Lett. B, 763:251, 2016.
- [75] ATLAS Collaboration. Search for strong gravity in multijet final states produced in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector at the LHC. JHEP, 03:026, 2016.
- [76] ATLAS Collaboration. Search for pair production of Higgs bosons in the $b\bar{b}b\bar{b}$ final state using proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 94:052002, 2016.
- [77] ATLAS Collaboration. Search for new phenomena with photon+jet events in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 03:041, 2016.
- [78] ATLAS Collaboration. Search for TeV-scale gravity signatures in high-mass final states with leptons and jets with the ATLAS detector at $\sqrt{s} = 13$ TeV. Phys. Lett. B, 760:520, 2016.
- [79] ATLAS Collaboration. Search for new resonances decaying to a W or Z boson and a Higgs boson in the $\ell^+\ell^-b\bar{b}$, $\ell\nu b\bar{b}$, and $\nu\bar{\nu}b\bar{b}$ channels with pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Lett. B, 765:32, 2016.
- [80] ATLAS Collaboration. Search for scalar leptoquarks in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS experiment. New J. Phys., 18:093016, 2016.
- [81] ATLAS Collaboration. Search for new phenomena in different-flavour high-mass dilepton final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:541, 2016.
- [82] ATLAS Collaboration. Search for resonances in the mass distribution of jet pairs with one or two jets identified as b-jets in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 759:229, 2016.

- [83] ATLAS Collaboration. Search for dark matter in association with a Higgs boson decaying to b-quarks in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Lett. B, 765:11, 2016.
- [84] ATLAS Collaboration. Constraints on non-Standard Model Higgs boson interactions in an effective Lagrangian using differential cross sections measured in the $H \to \gamma \gamma$ decay channel at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 753:69, 2015.
- [85] ATLAS Collaboration. Constraints on new phenomena via Higgs boson couplings and invisible decays with the ATLAS detector. *JHEP*, 11:206, 2015.
- [86] ATLAS Collaboration. Measurement of fiducial differential cross sections of gluon-fusion production of Higgs bosons decaying to $WW^* \to e\nu\mu\nu$ with the ATLAS detector at $\sqrt{s} = 8$ TeV. JHEP, 08:104, 2016.
- [87] ATLAS Collaboration. Search for the Standard Model Higgs boson decaying into $b\bar{b}$ produced in association with top quarks decaying hadronically in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. JHEP, 05:160, 2016.
- [88] ATLAS Collaboration. Test of *CP* Invariance in vector-boson fusion production of the Higgs boson using the *Optimal Observable* method in the ditau decay channel with the ATLAS detector. *Eur. Phys. J. C*, 76:658, 2016.
- [89] ATLAS and CMS Collaborations. Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC pp collision data at $\sqrt{s} = 7$ and 8 TeV. JHEP, 08:045, 2016.
- [90] ATLAS Collaboration. Search for Minimal Supersymmetric Standard Model Higgs bosons H/A and for a Z' boson in the $\tau\tau$ final state produced in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS Detector. Eur. Phys. J. C, 76:585, 2016.
- [91] ATLAS Collaboration. Search for lepton-flavour-violating decays of the Higgs and Z bosons with the ATLAS detector. Eur. Phys. J. C, 77:70, 2017.
- [92] ATLAS Collaboration. Search for charged Higgs bosons produced in association with a top quark and decaying via $H^{\pm} \to \tau \nu$ using pp collision data recorded at $\sqrt{s} = 13 \text{ TeV}$ by the ATLAS detector. *Phys. Lett. B*, 759:555, 2016.
- [93] ATLAS Collaboration. Measurement of jet fragmentation in 5.02 TeV proton—lead and proton—proton collisions with the ATLAS detector. *Nucl. Phys. A*, 978:65, 2018.
- [94] ATLAS Collaboration. Measurement of jet fragmentation in Pb+Pb and pp collisions at $\sqrt{s_{\text{NN}}} = 2.76 \text{ TeV}$ with the ATLAS detector at the LHC. Eur. Phys. J. C, 77:379, 2017.
- [95] ATLAS Collaboration. Measurement of the suppression and azimuthal anisotropy of muons from heavy-flavor decays in Pb+Pb collisions at $\sqrt{s_N}$ NN = 2.76 TeV with the ATLAS detector. *Phys. Rev. C*, 98:044905, 2018.

- [96] ATLAS Collaboration. Observation of Long-Range Elliptic Azimuthal Anisotropies in $\sqrt{s} = 13$ and 2.76 TeV pp Collisions with the ATLAS Detector. *Phys. Rev. Lett.*, 116:172301, 2016.
- [97] ATLAS Collaboration. Femtoscopy with identified charged pions in proton–lead collisions at $\sqrt{s_{-}NN} = 5.02 \text{ TeV}$ with ATLAS. *Phys. Rev. C*, 96:064908, 2017.
- [98] ATLAS Collaboration. Measurement of forward-backward multiplicity correlations in lead–lead, proton–lead and proton–proton collisions with the ATLAS detector. *Phys. Rev. C*, 95:064914, 2017.
- [99] ATLAS Collaboration. Measurement of multi-particle azimuthal correlations in pp, p+Pb and low-multiplicity Pb+Pb collisions with the ATLAS detector. Eur. Phys. J. C, 77:428, 2017.
- [100] ATLAS Collaboration. Performance of the ATLAS Transition Radiation Tracker in Run~1 of the LHC: tracker properties. *JINST*, 12:P05002, 2017.
- [101] ATLAS Collaboration. Reconstruction of primary vertices at the ATLAS experiment in Run~1 proton–proton collisions at the LHC. Eur. Phys. J. C, 77:332, 2017.
- [102] ATLAS Collaboration. Identification of boosted, hadronically decaying W bosons and comparisons with ATLAS data taken at $\sqrt{s} = 8$ TeV. Eur. Phys. J. C, 76:154, 2016.
- [103] ATLAS Collaboration. Identification of high transverse momentum top quarks in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 06:093, 2016.
- [104] ATLAS Collaboration. A measurement of the calorimeter response to single hadrons and determination of the jet energy scale uncertainty using LHC Run-1 pp-collision data with the ATLAS detector. Eur. Phys. J. C, 77:26, 2017.
- [105] ATLAS Collaboration. A measurement of material in the ATLAS tracker using secondary hadronic interactions in 7 TeV pp collisions. JINST, 11:P11020, 2016.
- [106] ATLAS Collaboration. Study of the material of the ATLAS inner detector for Run~2 of the LHC. *JINST*, 12:P12009, 2017.
- [107] ATLAS Collaboration. Performance of the ATLAS track reconstruction algorithms in dense environments in LHC Run². Eur. Phys. J. C, 77:673, 2017.
- [108] ATLAS Collaboration. Jet reconstruction and performance using particle flow with the ATLAS Detector. Eur. Phys. J. C, 77:466, 2017.
- [109] ATLAS Collaboration. Muon reconstruction performance of the ATLAS detector in proton–proton collision data at $\sqrt{s} = 13 \text{ TeV}$. Eur. Phys. J. C, 76:292, 2016.
- [110] ATLAS Collaboration. Measurement of the inclusive jet cross-sections in proton-proton collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 09:020, 2017.

- [111] ATLAS Collaboration. Charged-particle distributions in $\sqrt{s} = 13 \text{ TeV } pp$ interactions measured with the ATLAS detector at the LHC. *Phys. Lett. B*, 758:67, 2016.
- [112] ATLAS Collaboration. Measurement of W^{\pm} and Z-boson production cross sections in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Lett. B, 759:601, 2016.
- [113] ATLAS Collaboration. Measurement of the Inelastic Proton–Proton Cross Section at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS Detector at the LHC. *Phys. Rev. Lett.*, 117:182002, 2016.
- [114] ATLAS Collaboration. Search for triboson $W^{\pm}W^{\pm}W^{\mp}$ production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 77:141, 2017.
- [115] ATLAS Collaboration. Study of hard double-parton scattering in four-jet events in pp collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS experiment. *JHEP*, 11:110, 2016.
- [116] ATLAS Collaboration. Search for anomalous electroweak production of WW/WZ in association with a high-mass dijet system in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 95:032001, 2017.
- [117] ATLAS Collaboration. Measurement of exclusive $\gamma\gamma \to W^+W^-$ production and search for exclusive Higgs boson production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. Phys. Rev. D, 94:032011, 2016.
- [118] ATLAS Collaboration. High- E_{-} T isolated-photon plus jets production in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. Nucl. Phys. B, 918:257, 2017.
- [119] ATLAS Collaboration. Measurement of the charged-particle multiplicity inside jets from $\sqrt{s}=8\,\text{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 76:322, 2016.
- [120] ATLAS Collaboration. Measurement of the ZZ Production Cross Section in pp Collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS Detector. Phys. Rev. Lett., 116:101801, 2016.
- [121] ATLAS Collaboration. Measurement of the k_{-} t splitting scales in $Z \to \ell\ell$ events in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *JHEP*, 08:026, 2017.
- [122] ATLAS Collaboration. Measurements of integrated and differential cross sections for isolated photon pair production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 95:112005, 2017.
- [123] ATLAS Collaboration. Charged-particle distributions at low transverse momentum in $\sqrt{s} = 13 \,\text{TeV}\ pp$ interactions measured with the ATLAS detector at the LHC. Eur. Phys. J. C, 76:502, 2016.
- [124] ATLAS Collaboration. Measurement of τ polarisation in $Z/\gamma^* \to \tau\tau$ decays in proton-proton collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:163, 2018.

- [125] ATLAS Collaboration. Measurement of the $W^{\pm}Z$ boson pair-production cross section in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS Detector. Phys. Lett. B, 762:1, 2016.
- [126] ATLAS Collaboration. Measurement of the W^+W^- production cross section in pp collisions at a centre-of-mass energy of $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS experiment. Phys. Lett. B, 773:354, 2017.
- [127] ATLAS Collaboration. Studies of $Z\gamma$ production in association with a high-mass dijet system in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. *JHEP*, 07:107, 2017.
- [128] ATLAS Collaboration. Measurement of the total cross section from elastic scattering in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 761:158, 2016.
- [129] ATLAS Collaboration. Measurement of $WW/WZ \rightarrow \ell\nu qq'$ production with the hadronically decaying boson reconstructed as one or two jets in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with ATLAS, and constraints on anomalous gauge couplings. Eur. Phys. J. C, 77:563, 2017.
- [130] ATLAS Collaboration. Measurement of W^+W^- production in association with one jet in proton–proton collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 763:114, 2016.
- [131] ATLAS Collaboration. Search for bottom squark pair production in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:547, 2016.
- [132] ATLAS Collaboration. Search for top squarks in final states with one isolated lepton, jets, and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Rev. D, 94:052009, 2016.
- [133] ATLAS Collaboration. A search for top squarks with R-parity-violating decays to all-hadronic final states with the ATLAS detector in $\sqrt{s} = 8$ TeV proton–proton collisions. JHEP, 06:067, 2016.
- [134] ATLAS Collaboration. Search for squarks and gluinos in final states with jets and missing transverse momentum at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 76:392, 2016.
- [135] ATLAS Collaboration. Search for new phenomena in final states with large jet multiplicities and missing transverse momentum with ATLAS using $\sqrt{s} = 13 \,\text{TeV}$ protonproton collisions. *Phys. Lett. B*, 757:334, 2016.
- [136] ATLAS Collaboration. Search for supersymmetry at $\sqrt{s} = 13 \,\text{TeV}$ in final states with jets and two same-sign leptons or three leptons with the ATLAS detector. Eur. Phys. J. C, 76:259, 2016.
- [137] ATLAS Collaboration. Search for pair production of gluinos decaying via stop and sbottom in events with b-jets and large missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 94:032003, 2016.

- [138] ATLAS Collaboration. Dark matter interpretations of ATLAS searches for the electroweak production of supersymmetric particles in $\sqrt{s} = 8 \text{ TeV}$ proton–proton collisions. *JHEP*, 09:175, 2016.
- [139] ATLAS Collaboration. Evidence for single top-quark production in the s-channel in proton-proton collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector using the Matrix Element Method. Phys. Lett. B, 756:228, 2016.
- [140] ATLAS Collaboration. Measurement of lepton differential distributions and the top quark mass in $t\bar{t}$ production in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 77:804, 2017.
- [141] ATLAS Collaboration. Top-quark mass measurement in the all-hadronic $t\bar{t}$ decay channel at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 09:118, 2017.
- [142] ATLAS Collaboration. Measurement of jet activity in top quark events using the $e\mu$ final state with two b-tagged jets in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. JHEP, 09:074, 2016.
- [143] ATLAS Collaboration. Fiducial, total and differential cross-section measurements of t-channel single top-quark production in pp collisions at 8 TeV using data collected by the ATLAS detector. Eur. Phys. J. C, 77:531, 2017.
- [144] ATLAS Collaboration. Measurements of top-quark pair differential cross-sections in the lepton+jets channel in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. Eur. Phys. J. C, 76:538, 2016.
- [145] ATLAS Collaboration. Measurement of top quark pair differential cross sections in the dilepton channel in pp collisions at $\sqrt{s} = 7$ and 8 TeV with ATLAS. Phys. Rev. D, 94:092003, 2016.
- [146] ATLAS Collaboration. Measurements of the charge asymmetry in top-quark pair production in the dilepton final state at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 94:032006, 2016.
- [147] ATLAS Collaboration. Measurement of the $t\bar{t}$ production cross-section using $e\mu$ events with b-tagged jets in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 761:136, 2016.
- [148] ATLAS Collaboration. Measurement of the charge asymmetry in highly boosted topquark pair production in $\sqrt{s} = 8 \text{ TeV } pp$ collision data collected by the ATLAS experiment. *Phys. Lett. B*, 756:52, 2016.
- [149] ATLAS Collaboration. Analysis of the Wtb vertex from the measurement of triple-differential angular decay rates of single top quarks produced in the t-channel at $\sqrt{s} = 8$ TeV with the ATLAS detector. JHEP, 12:017, 2017.
- [150] ATLAS Collaboration. Measurements of top quark spin observables in $t\bar{t}$ events using dilepton final states in $\sqrt{s}=8\,\mathrm{TeV}$ pp collisions with the ATLAS detector. JHEP, 03:113, 2017.

- [151] ATLAS Collaboration. Measurement of the inclusive cross-sections of single top-quark and top-antiquark t-channel production in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 04:086, 2017.
- [152] ATLAS Collaboration. Measurement of the cross-section for producing a W boson in association with a single top quark in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with ATLAS. JHEP, 01:063, 2018.
- [153] ATLAS Collaboration. Measurement of jet activity produced in top-quark events with an electron, a muon and two b-tagged jets in the final state in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 77:220, 2017.
- [154] ATLAS Collaboration. Measurement of the $t\bar{t}$ production cross section in the τ + jets final state in pp collisions at $\sqrt{s}=8\,\text{TeV}$ using the ATLAS detector. Phys. Rev. D, 95:072003, 2017.
- [155] ATLAS Collaboration. Measurement of the $t\bar{t}\gamma$ production cross section in protonproton collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. *JHEP*, 11:086, 2017.
- [156] ATLAS Collaboration. Measurement of the $t\bar{t}Z$ and $t\bar{t}W$ production cross sections in multilepton final states using 3.2 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 77:40, 2017.
- [157] ATLAS Collaboration. Measurement of the relative $B^{\pm} c/B^{\pm}$ production cross section with the ATLAS detector at $\sqrt{s} = 8 \text{ TeV}$. Phys. Rev. D, 104:012010, 2021.
- [158] ATLAS Collaboration. Searches for heavy diboson resonances in pp collisions at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS detector. JHEP, 09:173, 2016.
- [159] ATLAS Collaboration. Search for heavy resonances decaying to a Z boson and a photon in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Lett. B, 764:11, 2016.
- [160] ATLAS Collaboration. Measurement of detector-corrected observables sensitive to the anomalous production of events with jets and large missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector. Eur. Phys. J. C, 77:765, 2017.
- [161] ATLAS Collaboration. Search for heavy Higgs bosons A/H decaying to a top quark pair in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. *Phys. Rev. Lett.*, 119:191803, 2017.
- [162] ATLAS Collaboration. Search for new high-mass phenomena in the dilepton final state using $36 \, \text{fb}^{-1}$ of proton–proton collision data at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS detector. *JHEP*, 10:182, 2017.
- [163] ATLAS Collaboration. Search for a new heavy gauge-boson resonance decaying into a lepton and missing transverse momentum in $36 \, \text{fb}^{-1}$ of pp collisions at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS experiment. Eur. Phys. J. C, 78:401, 2018.

- [164] ATLAS Collaboration. Search for doubly charged Higgs boson production in multi-lepton final states with the ATLAS detector using proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$. Eur. Phys. J. C, 78:199, 2018.
- [165] ATLAS Collaboration. Searches for scalar leptoquarks and differential cross-section measurements in dilepton-dijet events in proton-proton collisions at a centre-of-mass energy of $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS experiment. Eur. Phys. J. C, 79:733, 2019.
- [166] ATLAS Collaboration. Search for lepton-flavor violation in different-flavor, high-mass final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 98:092008, 2018.
- [167] ATLAS Collaboration. Search for heavy resonances decaying into a W or Z boson and a Higgs boson in final states with leptons and b-jets in $36 \, \text{fb}^{-1}$ of $\sqrt{s} = 13 \, \text{TeV} \, pp$ collisions with the ATLAS detector. JHEP, 03:174, 2018.
- [168] ATLAS Collaboration. Search for resonant WZ production in the fully leptonic final state in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 787:68, 2018.
- [169] ATLAS Collaboration. Search for heavy resonances decaying to a W or Z boson and a Higgs boson in the $q\bar{q}^{(\prime)}b\bar{b}$ final state in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 774:494, 2017.
- [170] ATLAS Collaboration. Search for pair production of up-type vector-like quarks and for four-top-quark events in final states with multiple b-jets with the ATLAS detector. *JHEP*, 07:089, 2018.
- [171] ATLAS Collaboration. Search for pair production of heavy vector-like quarks decaying to high- p_{-} T W bosons and b quarks in the lepton-plus-jets final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 10:141, 2017.
- [172] ATLAS Collaboration. Search for pair production of vector-like top quarks in events with one lepton, jets, and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. *JHEP*, 08:052, 2017.
- [173] ATLAS Collaboration. Search for new phenomena in events with same-charge leptons and b-jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 12:039, 2018.
- [174] ATLAS Collaboration. Search for single production of vector-like quarks decaying into Wb in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 05:164, 2019.
- [175] ATLAS Collaboration. Search for vector-boson resonances decaying to a top quark and bottom quark in the lepton plus jets final state in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 788:347, 2018.
- [176] ATLAS Collaboration. Search for diboson resonances with boson-tagged jets in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 777:91, 2017.

- [177] ATLAS Collaboration. Search for Low-Mass Dijet Resonances Using Trigger-Level Jets with the ATLAS Detector in pp Collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. Lett., 121:081801, 2018.
- [178] ATLAS Collaboration. Search for new phenomena in dijet events using 37 fb⁻¹ of pp collision data collected at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 96:052004, 2017.
- [179] ATLAS Collaboration. Search for Higgs boson decays to beyond-the-Standard-Model light bosons in four-lepton events with the ATLAS detector at $\sqrt{s} = 13$ TeV. *JHEP*, 06:166, 2018.
- [180] ATLAS Collaboration. Search for dark matter in events with a hadronically decaying vector boson and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 10:180, 2018.
- [181] ATLAS Collaboration. Search for heavy particles decaying into a top-quark pair in the fully hadronic final state in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Rev. D, 99:092004, 2019.
- [182] ATLAS Collaboration. Search for Dark Matter Produced in Association with a Higgs Boson Decaying to $b\bar{b}$ using 36 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS Detector. *Phys. Rev. Lett.*, 119:181804, 2017.
- [183] ATLAS Collaboration. Search for new phenomena in high-mass final states with a photon and a jet from pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:102, 2018.
- [184] ATLAS Collaboration. Search for dark matter and other new phenomena in events with an energetic jet and large missing transverse momentum using the ATLAS detector. *JHEP*, 01:126, 2018.
- [185] ATLAS Collaboration. Search for WW/WZ resonance production in $\ell\nu qq$ final states in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP,~03:042,~2018.
- [186] ATLAS Collaboration. Searches for heavy ZZ and ZW resonances in the $\ell\ell qq$ and $\nu\nu qq$ final states in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP, 03:009, 2018.
- [187] ATLAS Collaboration. Search for heavy resonances decaying to a photon and a hadronically decaying Z/W/H boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Rev. D, 98:032015, 2018.
- [188] ATLAS Collaboration. Search for pair production of Higgs bosons in the $b\bar{b}b\bar{b}$ final state using proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 01:030, 2019.
- [189] ATLAS Collaboration. Search for dark matter at $\sqrt{s} = 13$ TeV in final states containing an energetic photon and large missing transverse momentum with the ATLAS detector. Eur. Phys. J. C, 77:393, 2017.

- [190] ATLAS Collaboration. Search for resonances in the mass distribution of jet pairs with one or two jets identified as b-jets in proton–proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Rev. D, 98:032016, 2018.
- [191] ATLAS Collaboration. Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $\ell\ell bb$ final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Lett. B, 783:392, 2018.
- [192] ATLAS Collaboration. Search for pair- and single-production of vector-like quarks in final states with at least one Z boson decaying into a pair of electrons or muons in pp collision data collected with the ATLAS detector. Phys. Rev. D, 98:112010, 2018.
- [193] ATLAS Collaboration. Search for lepton-flavor-violating decays of the Z boson into a τ lepton and a light lepton with the ATLAS detector. Phys. Rev. D, 98:092010, 2018.
- [194] ATLAS Collaboration. Search for invisible Higgs boson decays in vector boson fusion at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 793:499, 2019.
- [195] ATLAS Collaboration. A strategy for a general search for new phenomena using dataderived signal regions and its application within the ATLAS experiment. Eur. Phys. J. C, 79:120, 2019.
- [196] ATLAS Collaboration. Search for the Higgs boson produced in association with a W boson and decaying to four b-quarks via two spin-zero particles in pp collisions at 13 TeV with the ATLAS detector. Eur. Phys. J. C, 76:605, 2016.
- [197] ATLAS Collaboration. Search for Higgs boson decays into a pair of light bosons in the $bb\mu\mu$ final state in pp collision at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 790:1, 2018.
- [198] ATLAS Collaboration. Search for Higgs and Z Boson Decays to $\phi \gamma$ with the ATLAS Detector. Phys. Rev. Lett., 117:111802, 2016.
- [199] ATLAS Collaboration. Measurements of gluon-gluon fusion and vector-boson fusion Higgs boson production cross-sections in the $H \to WW^* \to e\nu\mu\nu$ decay channel in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 789:508, 2019.
- [200] ATLAS Collaboration. Search for resonances in diphoton events at $\sqrt{s} = 13$ TeV with the ATLAS detector. *JHEP*, 09:001, 2016.
- [201] ATLAS Collaboration. Search for doubly charged scalar bosons decaying into same-sign W boson pairs with the ATLAS detector. Eur. Phys. J. C, 79:58, 2019.
- [202] ATLAS Collaboration. Search for the Dimuon Decay of the Higgs Boson in pp Collisions at $\sqrt{s} = 13$ TeV with the ATLAS Detector. Phys. Rev. Lett., 119:051802, 2017.
- [203] ATLAS Collaboration. Search for charged Higgs bosons decaying via $H^{\pm} \to \tau^{\pm}\nu_{-}\tau$ in the $\tau+$ jets and $\tau+$ lepton final states with 36 fb⁻¹ of pp collision data recorded at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS experiment. JHEP,~09:139,~2018.

- [204] ATLAS Collaboration. Search for additional heavy neutral Higgs and gauge bosons in the ditau final state produced in $36 \, \text{fb}^{-1}$ of pp collisions at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS detector. JHEP, 01:055, 2018.
- [205] ATLAS Collaboration. Search for exclusive Higgs and Z boson decays to $\phi\gamma$ and $\rho\gamma$ with the ATLAS detector. *JHEP*, 07:127, 2018.
- [206] ATLAS Collaboration. Searches for the $Z\gamma$ decay mode of the Higgs boson and for new high-mass resonances in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 10:112, 2017.
- [207] ATLAS Collaboration. Search for Higgs boson pair production in the $\gamma\gamma b\bar{b}$ final state with 13 TeV pp collision data collected by the ATLAS experiment. $JHEP,\ 11:040,\ 2018.$
- [208] ATLAS Collaboration. A search for resonant and non-resonant Higgs boson pair production in the $b\bar{b}\tau^+\tau^-$ decay channel in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Rev. Lett., 121:191801, 2018.
- [209] ATLAS Collaboration. Search for new phenomena in high-mass diphoton final states using $37 \, \text{fb}^{-1}$ of proton–proton collisions collected at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 775:105, 2017.
- [210] ATLAS Collaboration. Search for dark matter in association with a Higgs boson decaying to two photons at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 96:112004, 2017.
- [211] ATLAS Collaboration. Search for heavy ZZ resonances in the $\ell^+\ell^-\ell^+\ell^-$ and $\ell^+\ell^-\nu\bar{\nu}$ final states using proton–proton collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:293, 2018.
- [212] ATLAS Collaboration. Search for Higgs boson pair production in the $\gamma\gamma WW^*$ channel using pp collision data recorded at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:1007, 2018.
- [213] ATLAS Collaboration. Measurements of Higgs boson properties in the diphoton decay channel with 36 fb⁻¹ of pp collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Rev. D, 98:052005, 2018.
- [214] ATLAS Collaboration. Measurement of the Higgs boson coupling properties in the $H \to ZZ^* \to 4\ell$ decay channel at $\sqrt{s} = 13\,\text{TeV}$ with the ATLAS detector. *JHEP*, 03:095, 2018.
- [215] ATLAS Collaboration. Searches for exclusive Higgs and Z boson decays into $J/\psi\gamma$, $\psi(2S)\gamma$, and $\Upsilon(nS)\gamma$ at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 786:134, 2018.
- [216] ATLAS Collaboration. Search for Higgs boson pair production in the $WW^{(*)}WW^{(*)}$ decay channel using ATLAS data recorded at $\sqrt{s} = 13 \,\text{TeV}$. JHEP, 05:124, 2019.

- [217] ATLAS Collaboration. Measurement of inclusive and differential cross sections in the $H \to ZZ^* \to 4\ell$ decay channel in pp collisions at $\sqrt{s} = 13\,\text{TeV}$ with the ATLAS detector. JHEP, 10:132, 2017.
- [218] ATLAS Collaboration. Search for top quark decays $t \to qH$, with $H \to \gamma\gamma$, in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions using the ATLAS detector. JHEP, 10:129, 2017.
- [219] ATLAS Collaboration. Search for Higgs boson pair production in the $b\bar{b}WW^*$ decay mode at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 04:092, 2019.
- [220] ATLAS Collaboration. Search for an invisibly decaying Higgs boson or dark matter candidates produced in association with a Z boson in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 776:318, 2017.
- [221] ATLAS Collaboration. Evidence for the $H \to b\bar{b}$ decay with the ATLAS detector. JHEP, 12:024, 2017.
- [222] ATLAS Collaboration. Search for Higgs bosons produced via vector-boson fusion and decaying into bottom quark pairs in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Rev. D, 98:052003, 2018.
- [223] ATLAS Collaboration. Search for heavy resonances decaying into WW in the $e\nu\mu\nu$ final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 78:24, 2018.
- [224] ATLAS Collaboration. Search for heavy neutral Higgs bosons produced in association with b-quarks and decaying into b-quarks at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Rev. D, 102:032004, 2020.
- [225] ATLAS Collaboration. Measurement of the Higgs boson mass in the $H \to ZZ^* \to 4\ell$ and $H \to \gamma\gamma$ channels with $\sqrt{s} = 13 \,\text{TeV}$ pp collisions using the ATLAS detector. Phys. Lett. B, 784:345, 2018.
- [226] ATLAS Collaboration. Measurements of long-range azimuthal anisotropies and associated Fourier coefficients for pp collisions at $\sqrt{s} = 5.02$ and 13 TeV and p+Pb collisions at $\sqrt{s}.NN = 5.02$ TeV with the ATLAS detector. *Phys. Rev. C*, 96:024908, 2017.
- [227] ATLAS Collaboration. Exclusive dimuon production in ultraperipheral Pb+Pb collisions at $\sqrt{s_-NN} = 5.02 \,\text{TeV}$ with ATLAS. *Phys. Rev. C*, 104:024906, 2021.
- [228] ATLAS Collaboration. Measurement of longitudinal flow decorrelations in Pb+Pb collisions at $\sqrt{s_-\text{NN}} = 2.76$ and 5.02 TeV with the ATLAS detector. Eur. Phys. J. C, 78:142, 2018.
- [229] ATLAS Collaboration. Evidence for light-by-light scattering in heavy-ion collisions with the ATLAS detector at the LHC. *Nature Phys.*, 13:852, 2017.
- [230] ATLAS Collaboration. Measurement of the azimuthal anisotropy of charged particles produced in $\sqrt{s_-NN} = 5.02 \,\text{TeV}$ Pb+Pb collisions with the ATLAS detector. Eur. Phys. J. C, 78:997, 2018.

- [231] ATLAS Collaboration. Prompt and non-prompt J/ψ and $\psi(2S)$ suppression at high transverse momentum in 5.02 TeV Pb+Pb collisions with the ATLAS experiment. Eur. Phys. J. C, 78:762, 2018.
- [232] ATLAS Collaboration. Electron efficiency measurements with the ATLAS detector using 2012 LHC proton–proton collision data. Eur. Phys. J. C, 77:195, 2017.
- [233] ATLAS Collaboration. Jet energy scale measurements and their systematic uncertainties in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 96:072002, 2017.
- [234] ATLAS Collaboration. Measurements of b-jet tagging efficiency with the ATLAS detector using $t\bar{t}$ events at $\sqrt{s} = 13 \text{ TeV}$. JHEP, 08:089, 2018.
- [235] ATLAS Collaboration. Identification and rejection of pile-up jets at high pseudorapidity with the ATLAS detector. Eur. Phys. J. C, 77:580, 2017.
- [236] ATLAS Collaboration. Performance of missing transverse momentum reconstruction with the ATLAS detector using proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$. Eur. Phys. J. C, 78:903, 2018.
- [237] ATLAS Collaboration. Measurements of the production cross section of a Z boson in association with jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 77:361, 2017.
- [238] ATLAS Collaboration. Measurements of top-quark pair to Z-boson cross-section ratios at $\sqrt{s} = 13, 8, 7 \text{ TeV}$ with the ATLAS detector. *JHEP*, 02:117, 2017.
- [239] ATLAS Collaboration. Measurement of inclusive jet and dijet cross-sections in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 05:195, 2018.
- [240] ATLAS Collaboration. Measurement of the Drell-Yan triple-differential cross section in pp collisions at $\sqrt{s} = 8$ TeV. JHEP, 12:059, 2017.
- [241] ATLAS Collaboration. Study of $WW\gamma$ and $WZ\gamma$ production in pp collisions at $\sqrt{s} = 8$ TeV and search for anomalous quartic gauge couplings with the ATLAS experiment. Eur. Phys. J. C, 77:646, 2017.
- [242] ATLAS Collaboration. Measurement of the production cross section of three isolated photons in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. *Phys. Lett. B*, 781:55, 2018.
- [243] ATLAS Collaboration. Measurement of charged-particle distributions sensitive to the underlying event in $\sqrt{s} = 13 \text{ TeV}$ proton-proton collisions with the ATLAS detector at the LHC. *JHEP*, 03:157, 2017.
- [244] ATLAS Collaboration. Measurement of the cross section for inclusive isolated-photon production in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. *Phys. Lett. B*, 770:473, 2017.

- [245] ATLAS Collaboration. Measurement of the cross-section for electroweak production of dijets in association with a Z boson in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 775:206, 2017.
- [246] ATLAS Collaboration. Determination of the strong coupling constant α_s from transverse energy-energy correlations in multijet events at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. Eur. Phys. J. C, 77:872, 2017.
- [247] ATLAS Collaboration. Measurement of the inclusive cross-section for the production of jets in association with a Z boson in proton–proton collisions at 8 TeV using the ATLAS detector. Eur. Phys. J. C, 79:847, 2019.
- [248] ATLAS Collaboration. Measurement of the exclusive $\gamma\gamma \to \mu^+\mu^-$ process in proton-proton collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 777:303, 2018.
- [249] ATLAS Collaboration. Measurement of differential cross sections and W^+/W^- cross-section ratios for W boson production in association with jets at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. *JHEP*, 05:077, 2018.
- [250] ATLAS Collaboration. $ZZ \to \ell^+\ell^-\ell'^+\ell'^-$ cross-section measurements and search for anomalous triple gauge couplings in 13 TeV pp collisions with the ATLAS detector. Phys. Rev. D, 97:032005, 2018.
- [251] ATLAS Collaboration. Search for squarks and gluinos in events with hadronically decaying tau leptons, jets and missing transverse momentum in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ recorded with the ATLAS detector. Eur. Phys. J. C, 76:683, 2016.
- [252] ATLAS Collaboration. Search for heavy long-lived charged R-hadrons with the ATLAS detector in $3.2\,\mathrm{fb^{-1}}$ of proton–proton collision data at $\sqrt{s}=13\,\mathrm{TeV}$. Phys. Lett. B, 760:647, 2016.
- [253] ATLAS Collaboration. Search for metastable heavy charged particles with large ionization energy loss in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS experiment. Phys. Rev. D, 93:112015, 2016.
- [254] ATLAS Collaboration. Search for supersymmetry in a final state containing two photons and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions at the LHC using the ATLAS detector. Eur. Phys. J. C, 76:517, 2016.
- [255] ATLAS Collaboration. Search for new phenomena in events containing a same-flavour opposite-sign dilepton pair, jets, and large missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 77:144, 2017.
- [256] ATLAS Collaboration. Search for long-lived charginos based on a disappearing-track signature in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 06:022, 2018.

- [257] ATLAS Collaboration. Search for squarks and gluinos in final states with jets and missing transverse momentum using $36 \, \text{fb}^{-1}$ of $\sqrt{s} = 13 \, \text{TeV} \, pp$ collision data with the ATLAS detector. *Phys. Rev. D*, 97:112001, 2018.
- [258] ATLAS Collaboration. Search for long-lived, massive particles in events with displaced vertices and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Rev. D, 97:052012, 2018.
- [259] ATLAS Collaboration. A search for pair-produced resonances in four-jet final states at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:250, 2018.
- [260] ATLAS Collaboration. Search for supersymmetry in final states with missing transverse momentum and multiple b-jets in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:107, 2018.
- [261] ATLAS Collaboration. Search for new phenomena in a lepton plus high jet multiplicity final state with the ATLAS experiment using $\sqrt{s} = 13 \,\text{TeV}$ proton–proton collision data. *JHEP*, 09:088, 2017.
- [262] ATLAS Collaboration. Search for new phenomena with large jet multiplicities and missing transverse momentum using large-radius jets and flavour-tagging at ATLAS in 13 TeV pp collisions. JHEP, 12:034, 2017.
- [263] ATLAS Collaboration. Search for supersymmetry in final states with two same-sign or three leptons and jets using $36 \, \text{fb}^{-1}$ of $\sqrt{s} = 13 \, \text{TeV} \, pp$ collision data with the ATLAS detector. *JHEP*, 09:084, 2017.
- [264] ATLAS Collaboration. Search for a scalar partner of the top quark in the jets plus missing transverse momentum final state at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 12:085, 2017.
- [265] ATLAS Collaboration. Search for top-squark pair production in final states with one lepton, jets, and missing transverse momentum using $36 \, \text{fb}^{-1}$ of $\sqrt{s} = 13 \, \text{TeV} \, pp$ collision data with the ATLAS detector. *JHEP*, 06:108, 2018.
- [266] ATLAS Collaboration. Search for direct top squark pair production in final states with two leptons in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with the ATLAS detector. Eur. Phys. J. C, 77:898, 2017.
- [267] ATLAS Collaboration. Search for dark matter produced in association with bottom or top quarks in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with the ATLAS detector. Eur. Phys. J. C, 78:18, 2018.
- [268] ATLAS Collaboration. Search for top squarks decaying to tau sleptons in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 98:032008, 2018.
- [269] ATLAS Collaboration. Search for direct top squark pair production in events with a Higgs or Z boson, and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. JHEP, 08:006, 2017.

- [270] ATLAS Collaboration. Search for supersymmetry in events with four or more leptons in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with ATLAS. *Phys. Rev. D*, 98:032009, 2018.
- [271] ATLAS Collaboration. Search for R-parity-violating supersymmetric particles in multijet final states produced in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector at the LHC. *Phys. Lett. B*, 785:136, 2018.
- [272] ATLAS Collaboration. Search for the direct production of charginos and neutralinos in final states with tau leptons in $\sqrt{s}=13\,\mathrm{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 78:154, 2018.
- [273] ATLAS Collaboration. Search for electroweak production of supersymmetric particles in final states with two or three leptons at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:995, 2018.
- [274] ATLAS Collaboration. Search for electroweak production of supersymmetric states in scenarios with compressed mass spectra at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 97:052010, 2018.
- [275] ATLAS Collaboration. Search for supersymmetry in final states with charm jets and missing transverse momentum in 13 TeV pp collisions with the ATLAS detector. JHEP, 09:050, 2018.
- [276] ATLAS Collaboration. Search for photonic signatures of gauge-mediated supersymmetry in 13 TeV pp collisions with the ATLAS detector. Phys. Rev. D, 97:092006, 2018.
- [277] ATLAS Collaboration. Search for supersymmetry in events with b-tagged jets and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 11:195, 2017.
- [278] ATLAS Collaboration. Search for B-L R-parity-violating top squarks in $\sqrt{s}=13\,\mathrm{TeV}$ pp collisions with the ATLAS experiment. Phys. Rev. D, 97:032003, 2018.
- [279] ATLAS Collaboration. Search for squarks and gluinos in final states with hadronically decaying τ -leptons, jets, and missing transverse momentum using pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 99:012009, 2019.
- [280] ATLAS Collaboration. Search for heavy charged long-lived particles in proton—proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ using an ionisation measurement with the ATLAS detector. Phys. Lett. B, 788:96, 2018.
- [281] ATLAS Collaboration. Search for heavy charged long-lived particles in the ATLAS detector in 36.1 fb⁻¹ of proton–proton collision data at $\sqrt{s} = 13$ TeV. Phys. Rev. D, 99:092007, 2019.
- [282] ATLAS Collaboration. Search for new phenomena using the invariant mass distribution of same-flavour opposite-sign dilepton pairs in events with missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}\ pp$ collisions with the ATLAS detector. Eur. Phys. J. C, 78:625, 2018.

- [283] ATLAS Collaboration. Measurements of top-quark pair differential cross-sections in the lepton+jets channel in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ using the ATLAS detector. JHEP, 11:191, 2017.
- [284] ATLAS Collaboration. Measurement of the W boson polarisation in $t\bar{t}$ events from pp collisions at $\sqrt{s}=8\,\text{TeV}$ in the lepton+jets channel with ATLAS. Eur. Phys. J. C, 77:264, 2017.
- [285] ATLAS Collaboration. Measurement of the top quark mass in the $t\bar{t} \to \text{dilepton}$ channel from $\sqrt{s} = 8 \text{ TeV}$ ATLAS data. *Phys. Lett. B*, 761:350, 2016.
- [286] ATLAS Collaboration. Measurements of top-quark pair differential cross-sections in the $e\mu$ channel in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector. Eur. Phys. J. C, 77:292, 2017.
- [287] ATLAS Collaboration. Measurement of K_S^0 and Λ^0 production in $t\bar{t}$ dileptonic events in pp collisions at $\sqrt{s}=7\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:1017, 2019.
- [288] ATLAS Collaboration. Measurement of single top-quark production in association with a W boson in the single-lepton channel at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:720, 2021.
- [289] ATLAS Collaboration. Measurements of charge and CP asymmetries in b-hadron decays using top-quark events collected by the ATLAS detector in pp collisions at $\sqrt{s} = 8 \text{ TeV}$. JHEP, 02:071, 2017.
- [290] ATLAS Collaboration. Measurement of the inclusive and fiducial $t\bar{t}$ production cross-sections in the lepton+jets channel in pp collisions at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:487, 2018.
- [291] ATLAS Collaboration. Measurements of $t\bar{t}$ differential cross-sections of highly boosted top quarks decaying to all-hadronic final states in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ using the ATLAS detector. *Phys. Rev. D*, 98:012003, 2018.
- [292] ATLAS Collaboration. Measurements of top-quark pair spin correlations in the $e\mu$ channel at $\sqrt{s} = 13 \,\text{TeV}$ using pp collisions in the ATLAS detector. Eur. Phys. J. C, 80:754, 2020.
- [293] ATLAS Collaboration. Measurement of the $t\bar{t}Z$ and $t\bar{t}W$ cross sections in proton-proton collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 99:072009, 2019.
- [294] ATLAS Collaboration. Measurement of differential cross-sections of a single top quark produced in association with a W boson at $\sqrt{s} = 13 \,\text{TeV}$ with ATLAS. Eur. Phys. J. C, 78:186, 2018.
- [295] ATLAS Collaboration. Measurement of the production cross-section of a single top quark in association with a Z boson in proton–proton collisions at 13 TeV with the ATLAS detector. *Phys. Lett. B*, 780:557, 2018.

- [296] ATLAS and CMS Collaborations. Combination of inclusive and differential $t\bar{t}$ charge asymmetry measurements using ATLAS and CMS data at $\sqrt{s}=7$ and 8 TeV. *JHEP*, 04:033, 2018.
- [297] ATLAS Collaboration. Performance of the ATLAS trigger system in 2015. Eur. Phys. J. C, 77:317, 2017.
- [298] ATLAS Collaboration. Search for a Structure in the $B^0_s\pi^{\pm}$ Invariant Mass Spectrum with the ATLAS Experiment. *Phys. Rev. Lett.*, 120:202007, 2018.
- [299] ATLAS Collaboration. Comparison between simulated and observed LHC beam backgrounds in the ATLAS experiment at E_{-} beam = 4 TeV. JINST, 13:P12006, 2018.
- [300] ATLAS Collaboration. Search for light resonances decaying to boosted quark pairs and produced in association with a photon or a jet in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 788:316, 2018.
- [301] ATLAS Collaboration. Search for $W' \to tb$ decays in the hadronic final state using pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 781:327, 2018.
- [302] ATLAS Collaboration. Search for long-lived particles in final states with displaced dimuon vertices in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Phys. Rev. D, 99:012001, 2019.
- [303] ATLAS Collaboration. A search for resonances decaying into a Higgs boson and a new particle X in the $XH \rightarrow qqbb$ final state with the ATLAS detector. *Phys. Lett. B*, 779:24, 2018.
- [304] ATLAS Collaboration. Search for long-lived particles produced in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ that decay into displaced hadronic jets in the ATLAS muon spectrometer. Phys. Rev. D, 99:052005, 2019.
- [305] ATLAS Collaboration. Search for High-Mass Resonances Decaying to $\tau\nu$ in pp Collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. Lett., 120:161802, 2018.
- [306] ATLAS Collaboration. Search for pairs of highly collimated photon-jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 99:012008, 2019.
- [307] ATLAS Collaboration. Search for four-top-quark production in the single-lepton and opposite-sign dilepton final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 99:052009, 2019.
- [308] ATLAS Collaboration. Search for heavy long-lived multicharged particles in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. *Phys. Rev. D*, 99:052003, 2019.
- [309] ATLAS Collaboration. Search for pair production of heavy vector-like quarks decaying into hadronic final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 98:092005, 2018.

- [310] ATLAS Collaboration. Search for large missing transverse momentum in association with one top-quark in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 05:041, 2019.
- [311] ATLAS Collaboration. Combination of the searches for pair-produced vector-like partners of the third-generation quarks at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. Lett.*, 121:211801, 2018.
- [312] ATLAS Collaboration. Search for heavy Majorana or Dirac neutrinos and right-handed W gauge bosons in final states with two charged leptons and two jets at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 01:016, 2019.
- [313] ATLAS Collaboration. Search for magnetic monopoles and stable high-electric-charge objects in 13 TeV proton–proton collisions with the ATLAS detector. *Phys. Rev. Lett.*, 124:031802, 2020.
- [314] ATLAS Collaboration. Search for excited electrons singly produced in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS experiment at the LHC. Eur. Phys. J. C, 79:803, 2019.
- [315] ATLAS Collaboration. Search for the Production of a Long-Lived Neutral Particle Decaying within the ATLAS Hadronic Calorimeter in Association with a Z Boson from pp Collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. Lett., 122:151801, 2019.
- [316] ATLAS Collaboration. Search for long-lived neutral particles in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ that decay into displaced hadronic jets in the ATLAS calorimeter. Eur. Phys. J. C, 79:481, 2019.
- [317] ATLAS Collaboration. Search for heavy neutral leptons in decays of W bosons produced in 13 TeV pp collisions using prompt and displaced signatures with the ATLAS detector. JHEP, 10:265, 2019.
- [318] ATLAS Collaboration. Search for light long-lived neutral particles produced in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ and decaying into collimated leptons or light hadrons with the ATLAS detector. Eur. Phys. J. C, 80:450, 2020.
- [319] ATLAS Collaboration. Searches for third-generation scalar leptoquarks in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with the ATLAS detector. *JHEP*, 06:144, 2019.
- [320] ATLAS Collaboration. Combination of searches for heavy resonances decaying into bosonic and leptonic final states using 36 fb⁻¹ of proton–proton collision data at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 98:052008, 2018.
- [321] ATLAS Collaboration. Constraints on mediator-based dark matter and scalar dark energy models using $\sqrt{s} = 13 \,\text{TeV}$ pp collision data collected by the ATLAS detector. *JHEP*, 05:142, 2019.
- [322] ATLAS Collaboration. Search for pair production of heavy vector-like quarks decaying into high-p-T W bosons and top quarks in the lepton-plus-jets final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 08:048, 2018.

- [323] ATLAS Collaboration. Search for the Decay of the Higgs Boson to Charm Quarks with the ATLAS Experiment. *Phys. Rev. Lett.*, 120:211802, 2018.
- [324] ATLAS Collaboration. Evidence for the associated production of the Higgs boson and a top quark pair with the ATLAS detector. *Phys. Rev. D*, 97:072003, 2018.
- [325] ATLAS Collaboration. Search for the standard model Higgs boson produced in association with top quarks and decaying into a $b\bar{b}$ pair in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Rev. D, 97:072016, 2018.
- [326] ATLAS Collaboration. Search for charged Higgs bosons decaying into top and bottom quarks at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 11:085, 2018.
- [327] ATLAS Collaboration. Search for the Higgs boson produced in association with a vector boson and decaying into two spin-zero particles in the $H \to aa \to 4b$ channel in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 10:031, 2018.
- [328] ATLAS Collaboration. Constraints on off-shell Higgs boson production and the Higgs boson total width in $ZZ \to 4\ell$ and $ZZ \to 2\ell 2\nu$ final states with the ATLAS detector. *Phys. Lett. B*, 786:223, 2018.
- [329] ATLAS Collaboration. Cross-section measurements of the Higgs boson decaying into a pair of τ -leptons in proton–proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Phys. Rev. D*, 99:072001, 2019.
- [330] ATLAS Collaboration. Searches for lepton-flavour-violating decays of the Higgs boson in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Lett. B, 800:135069, 2019.
- [331] ATLAS Collaboration. Search for Higgs boson decays into pairs of light (pseudo)scalar particles in the $\gamma\gamma jj$ final state in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 782:750, 2018.
- [332] ATLAS Collaboration. Search for scalar resonances decaying into $\mu^+\mu^-$ in events with and without b-tagged jets produced in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:117, 2019.
- [333] ATLAS Collaboration. Combined measurement of differential and total cross sections in the $H \to \gamma \gamma$ and the $H \to ZZ^* \to 4\ell$ decay channels at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 786:114, 2018.
- [334] ATLAS Collaboration. Constraints on Higgs boson properties using $WW^*(\to e\nu\mu\nu)jj$ production in 36.1 fb⁻¹ of $\sqrt{s}=13\,\text{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 82:622, 2022.
- [335] ATLAS Collaboration. Measurement of the production cross section for a Higgs boson in association with a vector boson in the $H \to WW^* \to \ell\nu\ell\nu$ channel in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 798:134949, 2019.

- [336] ATLAS Collaboration. Measurement of long-range multiparticle azimuthal correlations with the subevent cumulant method in pp and p+Pb collisions with the ATLAS detector at the CERN Large Hadron Collider. Phys. Rev. C, 97:024904, 2018.
- [337] ATLAS Collaboration. Measurement of jet fragmentation in Pb+Pb and pp collisions at $\sqrt{s_-\text{NN}} = 5.02 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. C*, 98:024908, 2018.
- [338] ATLAS Collaboration. Prompt and non-prompt J/ψ elliptic flow in Pb+Pb collisions at $\sqrt{s_NN} = 5.02 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 78:784, 2018.
- [339] ATLAS Collaboration. Dijet azimuthal correlations and conditional yields in pp and p + Pb collisions at $\sqrt{s_-NN} = 5.02 \,\text{TeV}$ with the ATLAS detector. Phys. Rev. C, 100:034903, 2019.
- [340] ATLAS Collaboration. Correlated long-range mixed-harmonic fluctuations measured in pp, p+Pb and low-multiplicity Pb+Pb collisions with the ATLAS detector. Phys. Lett. B, 789:444, 2019.
- [341] ATLAS Collaboration. Comparison of Fragmentation Functions for Jets Dominated by Light Quarks and Gluons from pp and Pb+Pb Collisions in ATLAS. Phys. Rev. Lett., 123:042001, 2019.
- [342] ATLAS Collaboration. Fluctuations of anisotropic flow in Pb+Pb collisions at $\sqrt{s_{-}NN} = 5.02 \text{ TeV}$ with the ATLAS detector. *JHEP*, 01:051, 2020.
- [343] ATLAS Collaboration. Measurement of the nuclear modification factor for inclusive jets in Pb+Pb collisions at $\sqrt{s_-NN} = 5.02 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett.* B, 790:108, 2019.
- [344] ATLAS Collaboration. Measurement of long-range two-particle azimuthal correlations in Z-boson tagged pp collisions at $\sqrt{s} = 8$ and 13 TeV. Eur. Phys. J. C, 80:64, 2020.
- [345] ATLAS Collaboration. Modelling radiation damage to pixel sensors in the ATLAS detector. *JINST*, 14:P06012, 2019.
- [346] ATLAS Collaboration. Electron reconstruction and identification in the ATLAS experiment using the 2015 and 2016 LHC proton–proton collision data at $\sqrt{s} = 13 \text{ TeV}$. Eur. Phys. J. C, 79:639, 2019.
- [347] ATLAS Collaboration. Measurement of the photon identification efficiencies with the ATLAS detector using LHC Run~2 data collected in 2015 and 2016. Eur. Phys. J. C, 79:205, 2019.
- [348] ATLAS Collaboration. Electron and photon energy calibration with the ATLAS detector using 2015–2016 LHC proton–proton collision data. *JINST*, 14:P03017, 2019.
- [349] ATLAS Collaboration. Identification of boosted Higgs bosons decaying into b-quark pairs with the ATLAS detector at 13 TeV. Eur. Phys. J. C, 79:836, 2019.

- [350] ATLAS Collaboration. Measurement of the cross section for isolated-photon plus jet production in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. *Phys. Lett. B*, 780:578, 2018.
- [351] ATLAS Collaboration. Measurement of differential cross sections of isolated-photon plus heavy-flavour jet production in pp collisions at $\sqrt{s} = 8 \text{ TeV}$ using the ATLAS detector. *Phys. Lett. B*, 776:295, 2017.
- [352] ATLAS Collaboration. Measurement of ZZ production in the $\ell\ell\nu\nu$ final state with the ATLAS detector in pp collisions at $\sqrt{s} = 13$ TeV. JHEP, 10:127, 2019.
- [353] ATLAS Collaboration. Measurement of the Soft-Drop Jet Mass in pp Collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. Lett., 121:092001, 2018.
- [354] ATLAS Collaboration. Observation of Electroweak Production of a Same-Sign W Boson Pair in Association with Two Jets in pp Collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS Detector. Phys. Rev. Lett., 123:161801, 2019.
- [355] ATLAS Collaboration. Measurement of exclusive pion pair production in proton-proton collisions at $\sqrt{s} = 7 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 83:627, 2023.
- [356] ATLAS Collaboration. Two-particle Bose-Einstein correlations in pp collisions at $\sqrt{s} = 13$ TeV measured with the ATLAS detector at the LHC. Eur. Phys. J. C, 82:608, 2022.
- [357] ATLAS Collaboration. Measurement of the four-lepton invariant mass spectrum in 13 TeV proton–proton collisions with the ATLAS detector. *JHEP*, 04:048, 2019.
- [358] ATLAS Collaboration. Measurement of the ratio of cross sections for inclusive isolated-photon production in pp collisions at $\sqrt{s} = 13$ and 8 TeV with the ATLAS detector. JHEP, 04:093, 2019.
- [359] ATLAS Collaboration. Measurement of the cross-section and charge asymmetry of W bosons produced in proton–proton collisions at $\sqrt{s} = 8 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:760, 2019.
- [360] ATLAS Collaboration. Measurement of the jet mass in high transverse momentum $Z(\to b\bar{b})\gamma$ production at $\sqrt{s}=13\,\text{TeV}$ using the ATLAS detector. *Phys. Lett. B*, 812:135991, 2020.
- [361] ATLAS Collaboration. Study of the hard double-parton scattering contribution to inclusive four-lepton production in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector. Phys. Lett. B, 790:595, 2019.
- [362] ATLAS Collaboration. Properties of jet fragmentation using charged particles measured with the ATLAS detector in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. D, 100:052011, 2019.
- [363] ATLAS Collaboration. Properties of $g \to b\bar{b}$ at small opening angles in pp collisions with the ATLAS detector at $\sqrt{s} = 13 \,\text{TeV}$. Phys. Rev. D, 99:052004, 2019.

- [364] ATLAS Collaboration. Measurement of the $Z\gamma \to \nu\bar{\nu}\gamma$ production cross section in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector and limits on anomalous triple gauge-boson couplings. *JHEP*, 12:010, 2019.
- [365] ATLAS Collaboration. Observation of electroweak production of two jets and a Z-boson pair. Nature Phys., 19:237–253, 2023.
- [366] ATLAS Collaboration. Search for the electroweak diboson production in association with a high-mass dijet system in semileptonic final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 100:032007, 2019.
- [367] ATLAS Collaboration. Observation of photon-induced W^+W^- production in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector. Phys. Lett. B, 816:136190, 2021.
- [368] ATLAS Collaboration. Evidence for the production of three massive vector bosons with the ATLAS detector. *Phys. Lett. B*, 798:134913, 2019.
- [369] ATLAS Collaboration. Observation of electroweak $W^{\pm}Z$ boson pair production in association with two jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 793:469, 2019.
- [370] ATLAS Collaboration. Measurement of fiducial and differential W^+W^- production cross-sections at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:884, 2019.
- [371] ATLAS Collaboration. Evidence for electroweak production of two jets in association with a $Z\gamma$ pair in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Lett. $B,\,803:135341,\,2020.$
- [372] ATLAS Collaboration. Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton–proton collisions at ATLAS. Eur. Phys. J. C, 81:163, 2021.
- [373] ATLAS Collaboration. Measurement of distributions sensitive to the underlying event in inclusive Z boson production in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:666, 2019.
- [374] ATLAS Collaboration. Measurement of the inclusive isolated-photon cross section in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using 36 fb⁻¹ of ATLAS data. *JHEP*, 10:203, 2019.
- [375] ATLAS Collaboration. Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector. JHEP, 11:169, 2021.
- [376] ATLAS Collaboration. Measurement of isolated-photon plus two-jet production in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 03:179, 2020.
- [377] ATLAS Collaboration. Measurement of soft-drop jet observables in pp collisions with the ATLAS detector at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. D, 101:052007, 2020.

- [378] ATLAS Collaboration. Measurement of jet-substructure observables in top quark, W boson and light jet production in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 08:033, 2019.
- [379] ATLAS Collaboration. Measurement of cross-sections for production of a Z boson in association with a flavor-inclusive or doubly b-tagged large-radius jet in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS experiment. Phys. Rev. D, 108:012022, 2023.
- [380] ATLAS Collaboration. Measurements of the production cross-section for a Z boson in association with b-jets in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 07:044, 2020.
- [381] ATLAS Collaboration. Search for chargino and neutralino production in final states with a Higgs boson and missing transverse momentum at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 100:012006, 2019.
- [382] ATLAS Collaboration. Search for pair production of higgsinos in final states with at least three b-tagged jets in $\sqrt{s} = 13 \,\text{TeV}\ pp$ collisions using the ATLAS detector. Phys. Rev. D, 98:092002, 2018.
- [383] ATLAS Collaboration. Search for chargino–neutralino production using recursive jigsaw reconstruction in final states with two or three charged leptons in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 98:092012, 2018.
- [384] ATLAS Collaboration. Search for displaced vertices of oppositely charged leptons from decays of long-lived particles in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 801:135114, 2019.
- [385] ATLAS Collaboration. Operation and performance of the ATLAS Tile Calorimeter in Run 1. Eur. Phys. J. C, 78:987, 2018.
- [386] ATLAS Collaboration. Measurements of differential cross sections of top quark pair production in association with jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. JHEP, 10:159, 2018.
- [387] ATLAS Collaboration. Direct top-quark decay width measurement in the $t\bar{t}$ lepton+jets channel at $\sqrt{s}=8\,\text{TeV}$ with the ATLAS experiment. Eur. Phys. J. C, 78:129, 2018.
- [388] ATLAS Collaboration. Measurement of the top quark mass in the $t\bar{t} \to \text{lepton+jets}$ channel from $\sqrt{s} = 8 \text{ TeV}$ ATLAS data and combination with previous results. Eur. Phys. J. C, 79:290, 2019.
- [389] ATLAS Collaboration. Probing the Quantum Interference between Singly and Doubly Resonant Top-Quark Production in pp Collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS Detector. Phys. Rev. Lett., 121:152002, 2018.

- [390] ATLAS Collaboration. Search for flavour-changing neutral current top-quark decays $t \to qZ$ in proton–proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *JHEP*, 07:176, 2018.
- [391] ATLAS Collaboration. Search for top-quark decays $t \to Hq$ with 36 fb⁻¹ of pp collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector. *JHEP*, 05:123, 2019.
- [392] ATLAS Collaboration. Measurement of the inclusive $t\bar{t}$ production cross section in the lepton + jets channel in pp collisions at $\sqrt{s} = 7 \,\text{TeV}$ with the ATLAS detector using support vector machines. *Phys. Rev. D*, 108:032014, 2023.
- [393] ATLAS Collaboration. Measurement of the top-quark mass in $t\bar{t}+1$ -jet events collected with the ATLAS detector in pp collisions at $\sqrt{s}=8$ TeV. JHEP, 11:150, 2019.
- [394] ATLAS Collaboration. Measurements of inclusive and differential fiducial cross-sections of $t\bar{t}$ production with additional heavy-flavour jets in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 04:046, 2019.
- [395] ATLAS Collaboration. Measurement of colour flow using jet-pull observables in $t\bar{t}$ events with the ATLAS experiment at $\sqrt{s} = 13 \, \text{TeV}$. Eur. Phys. J. C, 78:847, 2018.
- [396] ATLAS Collaboration. Measurements of inclusive and differential fiducial cross-sections of $t\bar{t}\gamma$ production in leptonic final states at $\sqrt{s}=13\,\mathrm{TeV}$ in ATLAS. Eur. Phys. J. C, 79:382, 2019.
- [397] ATLAS Collaboration. Search for flavor-changing neutral currents in top quark decays $t \to Hc$ and $t \to Hu$ in multilepton final states in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. D*, 98:032002, 2018.
- [398] ATLAS and CMS Collaborations. Combinations of single-top-quark production cross-section measurements and $|f_LVV_tb|$ determinations at $\sqrt{s} = 7$ and 8 TeV with the ATLAS and CMS experiments. *JHEP*, 05:088, 2019.
- [399] ATLAS Collaboration. Measurement of the top-quark mass using a leptonic invariant mass in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:019, 2023.
- [400] ATLAS Collaboration. Measurements of jet observables sensitive to b-quark fragmentation in $t\bar{t}$ events at the LHC with the ATLAS detector. Phys. Rev. D, 106:032008, 2022.
- [401] ATLAS Collaboration. Measurement of the CP-violating phase ϕ_-s in $B^0_-s \to J/\psi\phi$ decays in ATLAS at 13 TeV. Eur. Phys. J. C, 81:342, 2021.
- [402] ATLAS Collaboration. Study of $B_c^+ \to J/\psi D_s^+$ and $B_c^+ \to J/\psi D_s^{*+}$ decays in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP, 08:087, 2022.
- [403] ATLAS Collaboration. Study of the rare decays of B^0_s and B^0 mesons into muon pairs using data collected during 2015 and 2016 with the ATLAS detector. *JHEP*, 04:098, 2019.

- [404] ATLAS Collaboration. ATLAS data quality operations and performance for 2015–2018 data-taking. *JINST*, 15:P04003, 2020.
- [405] ATLAS Collaboration. Electron and photon performance measurements with the ATLAS detector using the 2015–2017 LHC proton–proton collision data. *JINST*, 14:P12006, 2019.
- [406] ATLAS Collaboration. Search for low-mass resonances decaying into two jets and produced in association with a photon using pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 795:56, 2019.
- [407] ATLAS Collaboration. Search for new phenomena in events with an energetic jet and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 103:112006, 2021.
- [408] ATLAS Collaboration. Search for high-mass dilepton resonances using 139 fb⁻¹ of pp collision data collected at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 796:68, 2019.
- [409] ATLAS Collaboration. Search for heavy particles in the b-tagged dijet mass distribution with additional b-tagged jets in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS experiment. Phys. Rev. D, 105:012001, 2022.
- [410] ATLAS Collaboration. Search for a right-handed gauge boson decaying into a high-momentum heavy neutrino and a charged lepton in pp collisions with the ATLAS detector at $\sqrt{s} = 13 \text{ TeV}$. Phys. Lett. B, 798:134942, 2019.
- [411] ATLAS Collaboration. Search for new phenomena in final states with two leptons and one or no b-tagged jets at $\sqrt{s} = 13 \,\text{TeV}$ using the ATLAS detector. Phys. Rev. Lett., 127:141801, 2021.
- [412] ATLAS Collaboration. A search for an unexpected asymmetry in the production of $e^+\mu^-$ and $e^-\mu^+$ pairs in proton–proton collisions recorded by the ATLAS detector at $\sqrt{s} = 13 \,\text{TeV}$. Phys. Lett. B, 830:137106, 2022.
- [413] ATLAS Collaboration. Search for a heavy charged boson in events with a charged lepton and missing transverse momentum from pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 100:052013, 2019.
- [414] ATLAS Collaboration. Search for dijet resonances in events with an isolated charged lepton using $\sqrt{s} = 13 \,\text{TeV}$ proton–proton collision data collected by the ATLAS detector. *JHEP*, 06:151, 2020.
- [415] ATLAS Collaboration. Search for type-III seesaw heavy leptons in dilepton final states in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:218, 2021.
- [416] ATLAS Collaboration. Search for doubly charged Higgs boson production in multilepton final states using 139 fb⁻¹ of proton–proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 83:605, 2023.

- [417] ATLAS Collaboration. Search for the charged-lepton-flavor-violating decay $Z \to e\mu$ in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Phys. Rev. D*, 108:032015, 2023.
- [418] ATLAS Collaboration. Search for charged-lepton-flavour violation in Z-boson decays with the ATLAS detector. Nature Phys., 17:819, 2021.
- [419] ATLAS Collaboration. Search for dark matter produced in association with a dark Higgs boson decaying into $W^{\pm}W^{\mp}$ or ZZ in fully hadronic final states from $\sqrt{s}=13\,\text{TeV}\ pp$ collisions recorded with the ATLAS detector. Phys. Rev. Lett., 126:121802, 2021.
- [420] ATLAS Collaboration. Search for dark matter produced in association with a single top quark in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 81:860, 2021.
- [421] ATLAS Collaboration. Search for dark matter produced in association with a Standard Model Higgs boson decaying into b-quarks using the full Run² dataset from the ATLAS detector. JHEP, 11:209, 2021.
- [422] ATLAS Collaboration. Search for $t\bar{t}$ resonances in fully hadronic final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 10:061, 2020.
- [423] ATLAS Collaboration. Search for single production of vector-like T quarks decaying into Ht or Zt in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 08:153, 2023.
- [424] ATLAS Collaboration. Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ using displaced vertices in the ATLAS inner detector. JHEP, 11:229, 2021.
- [425] ATLAS Collaboration. Search for pair-production of vector-like quarks in pp collision events at $\sqrt{s} = 13 \,\text{TeV}$ with at least one leptonically decaying Z boson and a third-generation quark with the ATLAS detector. *Phys. Lett. B*, 843:138019, 2023.
- [426] ATLAS Collaboration. Search for long-lived neutral particles produced in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ decaying into displaced hadronic jets in the ATLAS inner detector and muon spectrometer. *Phys. Rev. D*, 101:052013, 2020.
- [427] ATLAS Collaboration. Search for dark matter in association with an energetic photon in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 02:226, 2021.
- [428] ATLAS Collaboration. ATLAS b-jet identification performance and efficiency measurement with $t\bar{t}$ events in pp collisions at $\sqrt{s}=13\,\text{TeV}$. Eur. Phys. J. C, 79:970, 2019.
- [429] ATLAS Collaboration. Search for exotic decays of the Higgs boson to $b\bar{b}$ and missing transverse momentum in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP, 01:063, 2022.

- [430] ATLAS Collaboration. Search for heavy diboson resonances in semileptonic final states in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:1165, 2020.
- [431] ATLAS Collaboration. Search for resonances decaying into a weak vector boson and a Higgs boson in the fully hadronic final state produced in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 102:112008, 2020.
- [432] ATLAS Collaboration. Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $\ell\ell bb$ and $\ell\ell WW$ final states in pp collisions at $\sqrt{s} = 13\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:396, 2021.
- [433] ATLAS Collaboration. Search for Heavy Resonances Decaying into a Photon and a Hadronically Decaying Higgs Boson in pp Collisions at $\sqrt{s} = 13$ TeV with the ATLAS Detector. Phys. Rev. Lett., 125:251802, 2020.
- [434] ATLAS Collaboration. Search for the $HH \to b\bar{b}b\bar{b}$ process via vector-boson fusion production using proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:108, 2020.
- [435] ATLAS Collaboration. Search for resonant $WZ \to \ell\nu\ell'\ell'$ production in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 83:633, 2023.
- [436] ATLAS Collaboration. Search for diboson resonances in hadronic final states in $139\,\mathrm{fb}^{-1}$ of pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. *JHEP*, 09:091, 2019.
- [437] ATLAS Collaboration. Search for non-resonant Higgs boson pair production in the $bb\ell\nu\ell\nu$ final state with the ATLAS detector in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$. Phys. Lett. B, 801:135145, 2019.
- [438] ATLAS Collaboration. Search for Higgs boson pair production in the two bottom quarks plus two photons final state in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 106:052001, 2022.
- [439] ATLAS Collaboration. Search for Higgs Boson Decays into a Z Boson and a Light Hadronically Decaying Resonance Using 13 TeV pp Collision Data from the ATLAS Detector. Phys. Rev. Lett., 125:221802, 2020.
- [440] ATLAS Collaboration. Search for resonant and non-resonant Higgs boson pair production in the $b\bar{b}\tau^+\tau^-$ decay channel using 13 TeV pp collision data from the ATLAS detector. JHEP, 07:040, 2023.
- [441] ATLAS Collaboration. Search for resonant pair production of Higgs bosons in the $b\bar{b}b\bar{b}$ final state using pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. Phys. Rev. D, 105:092002, 2022.
- [442] ATLAS Collaboration. Search for Heavy Higgs Bosons Decaying into Two Tau Leptons with the ATLAS Detector Using pp Collisions at $\sqrt{s} = 13 \,\text{TeV}$. Phys. Rev. Lett., 125:051801, 2020.

- [443] ATLAS Collaboration. Search for Higgs boson decays into two new low-mass spin-0 particles in the 4b channel with the ATLAS detector using pp collisions at $\sqrt{s} = 13$ TeV. Phys. Rev. D, 102:112006, 2020.
- [444] ATLAS Collaboration. Search for dark matter produced in association with a Higgs boson decaying to tau leptons at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 09:189, 2023.
- [445] ATLAS Collaboration. Search for charged Higgs bosons decaying into a top quark and a bottom quark at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 06:145, 2021.
- [446] ATLAS Collaboration. Searches for exclusive Higgs and Z boson decays into a vector quarkonium state and a photon using 139 fb⁻¹ of ATLAS $\sqrt{s} = 13$ TeV proton-proton collision data. Eur. Phys. J. C, 83:781, 2023.
- [447] ATLAS Collaboration. Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with $139 \, \text{fb}^{-1}$ of pp collision data at $\sqrt{s} = 13 \, \text{TeV}$. JHEP, 03:041, 2022.
- [448] ATLAS Collaboration. Search for a new Z' gauge boson in 4μ events with the ATLAS experiment. *JHEP*, 07:090, 2023.
- [449] ATLAS Collaboration. Combination of searches for Higgs boson pairs in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett. B*, 800:135103, 2019.
- [450] ATLAS Collaboration. Dijet Resonance Search with Weak Supervision Using $\sqrt{s} = 13 \,\text{TeV}$ pp collisions in the ATLAS detector. Phys. Rev. Lett., 125:131801, 2020.
- [451] ATLAS Collaboration. Observation of $H \to b\bar{b}$ decays and VH production with the ATLAS detector. *Phys. Lett. B*, 786:59, 2018.
- [452] ATLAS Collaboration. Search for heavy resonances decaying into a pair of Z bosons in the $\ell^+\ell^-\ell'^+\ell'^-$ and $\ell^+\ell^-\nu\bar{\nu}$ final states using 139 fb⁻¹ of proton–proton collisions at $\sqrt{s}=13$, TeV with the ATLAS detector. Eur. Phys. J. C, 81:332, 2021.
- [453] ATLAS Collaboration. Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector. *Phys. Lett. B*, 784:173, 2018.
- [454] ATLAS Collaboration. Test of CP invariance in vector-boson fusion production of the Higgs boson in the $H \to \tau\tau$ channel in proton-proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 805:135426, 2020.
- [455] ATLAS Collaboration. Search for associated production of a Z boson with an invisibly decaying Higgs boson or dark matter candidates at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 829:137066, 2022.
- [456] ATLAS Collaboration. Search for resonances decaying into photon pairs in 139 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *Phys. Lett. B*, 822:136651, 2021.

- [457] ATLAS Collaboration. Higgs boson production cross-section measurements and their EFT interpretation in the 4ℓ decay channel at $\sqrt{s} = 13\,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:957, 2020.
- [458] ATLAS Collaboration. Measurements of the Higgs boson inclusive and differential fiducial cross sections in the 4ℓ decay channel at $\sqrt{s}=13\,\text{TeV}$. Eur. Phys. J. C, 80:942, 2020.
- [459] ATLAS Collaboration. Evidence of off-shell Higgs boson production from ZZ leptonic decay channels and constraints on its total width with the ATLAS detector. *Phys. Lett. B*, 846:138223, 2023.
- [460] ATLAS Collaboration. A search for the $Z\gamma$ decay mode of the Higgs boson in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 809:135754, 2020.
- [461] ATLAS Collaboration. Evidence for Higgs boson decays to a low-mass dilepton system and a photon in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Lett.* B, 819:136412, 2021.
- [462] ATLAS Collaboration. Measurements of differential cross sections of Higgs boson production through gluon fusion in the $H \to WW^* \to e\nu\mu\nu$ final state at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 83:774, 2023.
- [463] ATLAS Collaboration. Measurement of VH, $H \to b\bar{b}$ production as a function of the vector-boson transverse momentum in 13 TeV pp collisions with the ATLAS detector. JHEP, 05:141, 2019.
- [464] ATLAS Collaboration. Measurements of WH and ZH production in the $H \to bb$ decay channel in pp collisions at 13 TeV with the ATLAS detector. Eur. Phys. J. C, 81:178, 2021.
- [465] ATLAS Collaboration. Measurement of the associated production of a Higgs boson decaying into b-quarks with a vector boson at high transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 816:136204, 2021.
- [466] ATLAS Collaboration. Combination of Searches for Invisible Higgs Boson Decays with the ATLAS Experiment. *Phys. Rev. Lett.*, 122:231801, 2019.
- [467] ATLAS Collaboration. Combined measurements of Higgs boson production and decay using up to $80 \, \text{fb}^{-1}$ of proton–proton collision data at $\sqrt{s} = 13 \, \text{TeV}$ collected with the ATLAS experiment. *Phys. Rev. D*, 101:012002, 2020.
- [468] ATLAS Collaboration. Search for the Higgs boson decays $H \to ee$ and $H \to e\mu$ in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Lett. B, 801:135148, 2019.
- [469] ATLAS Collaboration. Measurements of W and Z boson production in pp collisions at $\sqrt{s} = 5.02 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:128, 2019.

- [470] ATLAS Collaboration. Measurement of angular and momentum distributions of charged particles within and around jets in Pb+Pb and pp collisions at $\sqrt{s_NN} = 5.02 \text{ TeV}$ with the ATLAS detector. Phys. Rev. C, 100:064901, 2019.
- [471] ATLAS Collaboration. Measurement of flow harmonics correlations with mean transverse momentum in lead–lead and proton–lead collisions at $\sqrt{s_{-}NN} = 5.02 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:985, 2019.
- [472] ATLAS Collaboration. Measurement of prompt photon production in $\sqrt{s_-NN} = 8.16 \text{ TeV } p+\text{Pb}$ collisions with ATLAS. *Phys. Lett. B*, 796:230, 2019.
- [473] ATLAS Collaboration. Measurement of photon-jet transverse momentum correlations in 5.02 TeV Pb+Pb and pp collisions with ATLAS. Phys. Lett. B, 789:167, 2018.
- [474] ATLAS Collaboration. Z boson production in Pb+Pb collisions at $\sqrt{s_NN} = 5.02 \text{ TeV}$ measured by the ATLAS experiment. Phys. Lett. B, 802:135262, 2020.
- [475] ATLAS Collaboration. Observation of Centrality-Dependent Acoplanarity for Muon Pairs Produced via Two-Photon Scattering in Pb+Pb Collisions at $\sqrt{s_-NN} = 5.02 \text{ TeV}$ with the ATLAS Detector. *Phys. Rev. Lett.*, 121:212301, 2018.
- [476] ATLAS Collaboration. Charged-hadron production in pp, p+Pb, Pb+Pb, and Xe+Xe collisions at $\sqrt{s_NN} = 5$ TeV with the ATLAS detector at the LHC. JHEP, 07:074, 2023.
- [477] ATLAS Collaboration. Observation of Light-by-Light Scattering in Ultraperipheral Pb+Pb Collisions with the ATLAS Detector. *Phys. Rev. Lett.*, 123:052001, 2019.
- [478] ATLAS Collaboration. Transverse momentum and process dependent azimuthal anisotropies in $\sqrt{s_-NN} = 8.16 \,\text{TeV}\ p+\text{Pb}$ collisions with the ATLAS detector. Eur. Phys. J. C, 80:73, 2020.
- [479] ATLAS Collaboration. Measurement of Azimuthal Anisotropy of Muons from Charm and Bottom Hadrons in pp Collisions at $\sqrt{s} = 13$ TeV with the ATLAS Detector. *Phys. Rev. Lett.*, 124:082301, 2020.
- [480] ATLAS Collaboration. Measurement of the nuclear modification factor of b-jets in 5.02 TeV Pb+Pb collisions with the ATLAS detector. Eur. Phys. J. C, 83:438, 2023.
- [481] ATLAS Collaboration. Measurement of W^{\pm} boson production in Pb+Pb collisions at $\sqrt{s_{-}NN} = 5.02 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:935, 2019.
- [482] ATLAS Collaboration. Two-particle azimuthal correlations in photonuclear ultraperipheral Pb+Pb collisions at 5.02 TeV with ATLAS. *Phys. Rev. C*, 104:014903, 2021.
- [483] ATLAS Collaboration. Measurements of the suppression and correlations of dijets in Xe+Xe collisions at $\sqrt{s_-NN} = 5.44 \,\text{TeV}$. Phys. Rev. C, 108:024906, 2023.
- [484] ATLAS Collaboration. In situ calibration of large-radius jet energy and mass in 13 TeV proton–proton collisions with the ATLAS detector. Eur. Phys. J. C, 79:135, 2019.

- [485] ATLAS Collaboration. Performance of top-quark and W-boson tagging with ATLAS in Run~2 of the LHC. Eur. Phys. J. C, 79:375, 2019.
- [486] ATLAS Collaboration. Jet energy scale and resolution measured in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:689, 2021.
- [487] ATLAS Collaboration. Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton–proton collisions. *Eur. Phys. J. C*, 81:334, 2021.
- [488] ATLAS Collaboration. Measurement of the energy response of the ATLAS calorimeter to charged pions from $W^{\pm} \to \tau^{\pm}(\to \pi^{\pm}\nu_{-}\tau)\nu_{-}\tau$ events in Run~2 data. Eur. Phys. J. C, 82:223, 2022.
- [489] ATLAS Collaboration. Resolution of the ATLAS muon spectrometer monitored drift tubes in LHC Run². JINST, 14:P09011, 2019.
- [490] ATLAS Collaboration. AtlFast3: The Next Generation Of Fast Simulation in ATLAS. Comput. Softw. Big Sci., 6:7, 2022.
- [491] ATLAS Collaboration. Measurement of differential cross sections for single diffractive dissociation in $\sqrt{s} = 8 \text{ TeV } pp$ collisions using the ATLAS ALFA spectrometer. *JHEP*, 02:042, 2020.
- [492] ATLAS Collaboration. Measurement of $W^{\pm}Z$ production cross sections and gauge boson polarisation in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 79:535, 2019.
- [493] ATLAS Collaboration. Measurement of the $Z(\to \ell^+\ell^-)\gamma$ production cross-section in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP,~03:054,~2020.
- [494] ATLAS Collaboration. Measurement of W^{\pm} -boson and Z-boson production cross-sections in pp collisions at $\sqrt{s} = 2.76$ TeV with the ATLAS detector. Eur. Phys. J. C, 79:901, 2019.
- [495] ATLAS Collaboration. Measurement of the total cross section and ρ -parameter from elastic scattering in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 83:441, 2023.
- [496] ATLAS Collaboration. Measurement of the transverse momentum distribution of Drell-Yan lepton pairs in proton-proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:616, 2020.
- [497] ATLAS Collaboration. Observation and Measurement of Forward Proton Scattering in Association with Lepton Pairs Produced via the Photon Fusion Mechanism at ATLAS. *Phys. Rev. Lett.*, 125:261801, 2020.
- [498] ATLAS Collaboration. Measurements of differential cross-sections in four-lepton events in 13 TeV proton—proton collisions with the ATLAS detector. *JHEP*, 07:005, 2021.

- [499] ATLAS Collaboration. Measurements of $W^+W^-+ \ge 1$ jet production cross-sections in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. *JHEP*, 06:003, 2021.
- [500] ATLAS Collaboration. Inclusive-photon production and its dependence on photon isolation in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ using $139 \,\text{fb}^{-1}$ of ATLAS data. JHEP, 07:086, 2023.
- [501] ATLAS Collaboration. Cross-section measurements for the production of a Z boson in association with high-transverse-momentum jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:080, 2023.
- [502] ATLAS Collaboration. Determination of the strong coupling constant from transverse energy–energy correlations in multijet events at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 07:085, 2023.
- [503] ATLAS Collaboration. Measurement of b-quark fragmentation properties in jets using the decay $B^{\pm} \to J/\psi K^{\pm}$ in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 12:131, 2022.
- [504] ATLAS Collaboration. Measurement of the Lund Jet Plane Using Charged Particles in 13 TeV Proton-Proton Collisions with the ATLAS Detector. *Phys. Rev. Lett.*, 124:222002, 2020.
- [505] ATLAS Collaboration. Measurement of electroweak $Z(\nu\bar{\nu})\gamma jj$ production and limits on anomalous quartic gauge couplings in pp collisions at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS detector. JHEP, 06:082, 2023.
- [506] ATLAS Collaboration. Search for supersymmetry in events with four or more charged leptons in 139 fb⁻¹ of $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. JHEP, 07:167, 2021.
- [507] ATLAS Collaboration. Search for direct stau production in events with two hadronic τ -leptons in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. *Phys. Rev. D*, 101:032009, 2020.
- [508] ATLAS Collaboration. Searches for new phenomena in events with two leptons, jets, and missing transverse momentum in 139 fb⁻¹ of $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector. Eur. Phys. J. C, 83:515, 2023.
- [509] ATLAS Collaboration. Search for chargino–neutralino production with mass splittings near the electroweak scale in three-lepton final states in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Phys. Rev. D, 101:072001, 2020.
- [510] ATLAS Collaboration. Search for new phenomena with top quark pairs in final states with one lepton, jets, and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 04:174, 2021.
- [511] ATLAS Collaboration. Search for new phenomena in events with two opposite-charge leptons, jets and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 04:165, 2021.

- [512] ATLAS Collaboration. Search for squarks and gluinos in final states with same-sign leptons and jets using 139 fb⁻¹ of data collected with the ATLAS detector. *JHEP*, 06:046, 2020.
- [513] ATLAS Collaboration. Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:600, 2021.
- [514] ATLAS Collaboration. Search for new phenomena in final states with photons, jets and missing transverse momentum in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:021, 2023.
- [515] ATLAS Collaboration. Search for a scalar partner of the top quark in the all-hadronic $t\bar{t}$ plus missing transverse momentum final state at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:737, 2020.
- [516] ATLAS Collaboration. Search for long-lived, massive particles in events with displaced vertices and multiple jets in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 06:200, 2023.
- [517] ATLAS Collaboration. Search for displaced leptons in $\sqrt{s} = 13 \,\text{TeV}\ pp$ collisions with the ATLAS detector. *Phys. Rev. Lett.*, 127:051802, 2021.
- [518] ATLAS Collaboration. A search for the decays of stopped long-lived particles at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 07:173, 2021.
- [519] ATLAS Collaboration. Search for new phenomena in final states with large jet multiplicities and missing transverse momentum using $\sqrt{s} = 13 \,\text{TeV}$ proton–proton collisions recorded by ATLAS in Run 2 of the LHC. *JHEP*, 10:062, 2020.
- [520] ATLAS Collaboration. Search for long-lived charginos based on a disappearing-track signature using $136 \, \text{fb}^{-1}$ of pp collisions at $\sqrt{s} = 13 \, \text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 82:606, 2022.
- [521] ATLAS Collaboration. Search for top squarks in events with a Higgs or Z boson using $139\,\mathrm{fb^{-1}}$ of pp collision data at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Eur. Phys. J. $C,\,80:1080,\,2020.$
- [522] ATLAS Collaboration. Search for squarks and gluinos in final states with jets and missing transverse momentum using $139\,\mathrm{fb}^{-1}$ of $\sqrt{s}=13\,\mathrm{TeV}~pp$ collision data with the ATLAS detector. *JHEP*, 02:143, 2021.
- [523] ATLAS Collaboration. Search for direct production of electroweakinos in final states with missing transverse momentum and a Higgs boson decaying into photons in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 10:005, 2020.
- [524] ATLAS Collaboration. Search for supersymmetry in final states with missing transverse momentum and three or more b-jets in 139 fb⁻¹ of proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 83:561, 2023.

- [525] ATLAS Collaboration. Search for bottom-squark pair production with the ATLAS detector in final states containing Higgs bosons, b-jets and missing transverse momentum. *JHEP*, 12:060, 2019.
- [526] ATLAS Collaboration. Search for electroweak production of charginos and sleptons decaying into final states with two leptons and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions using the ATLAS detector. Eur. Phys. J. C, 80:123, 2020.
- [527] ATLAS Collaboration. Search for long-lived, massive particles in events with a displaced vertex and a muon with large impact parameter in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. D*, 102:032006, 2020.
- [528] ATLAS Collaboration. Search for new phenomena in final states with b-jets and missing transverse momentum in $\sqrt{s} = 13 \,\text{TeV}\ pp$ collisions with the ATLAS detector. JHEP, 05:093, 2021.
- [529] ATLAS Collaboration. Search for trilepton resonances from chargino and neutralino pair production in $\sqrt{s} = 13 \text{ TeV } pp$ collisions with the ATLAS detector. *Phys. Rev. D*, 103:112003, 2021.
- [530] ATLAS Collaboration. Search for phenomena beyond the Standard Model in events with large b-jet multiplicity using the ATLAS detector at the LHC. Eur. Phys. J. C, 81:11, 2021.
- [531] ATLAS Collaboration. Search for bottom-squark pair production in pp collision events at $\sqrt{s} = 13 \,\text{TeV}$ with hadronically decaying τ -leptons, b-jets and missing transverse momentum using the ATLAS detector. *Phys. Rev. D*, 104:032014, 2021.
- [532] ATLAS Collaboration. Search for heavy, long-lived, charged particles with large ionisation energy loss in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS experiment and the full Run² dataset. *JHEP*, 06:158, 2023.
- [533] ATLAS Collaboration. Observation of the associated production of a top quark and a Z boson in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:124, 2020.
- [534] ATLAS and CMS Collaborations. Combination of the W boson polarization measurements in top quark decays using ATLAS and CMS data at $\sqrt{s} = 8 \text{ TeV}$. JHEP, 08:051, 2020.
- [535] ATLAS Collaboration. Measurement of single top-quark production in the s-channel in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 06:191, 2023.
- [536] ATLAS Collaboration. Evidence for $t\bar{t}t\bar{t}$ production in the multilepton final state in proton–proton collisions at $\sqrt{s}=13\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:1085, 2020.

- [537] ATLAS Collaboration. Search for flavour-changing neutral-current interactions of a top quark and a gluon in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 82:334, 2022.
- [538] ATLAS Collaboration. Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:737, 2021.
- [539] ATLAS Collaboration. Measurement of the polarisation of single top quarks and antiquarks produced in the t-channel at $\sqrt{s} = 13 \text{ TeV}$ and bounds on the tWb dipole operator from the ATLAS experiment. JHEP, 11:040, 2022.
- [540] ATLAS Collaboration. Differential $t\bar{t}$ cross-section measurements using boosted top quarks in the all-hadronic final state with 139 fb⁻¹ of ATLAS data. *JHEP*, 04:080, 2023.
- [541] ATLAS Collaboration. Measurements of top-quark pair differential and double-differential cross-sections in the ℓ +jets channel with pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. Eur. Phys. J. C, 79:1028, 2019.
- [542] ATLAS Collaboration. Measurement of the $t\bar{t}$ production cross-section and lepton differential distributions in $e\mu$ dilepton events from pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:528, 2020.
- [543] ATLAS Collaboration. Measurements of top-quark pair single- and double-differential cross-sections in the all-hadronic channel in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector. JHEP, 01:033, 2021.
- [544] ATLAS Collaboration. Search for flavour-changing neutral currents in processes with one top quark and a photon using 81 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS experiment. *Phys. Lett. B*, 800:135082, 2019.
- [545] ATLAS Collaboration. Inclusive and differential cross-sections for dilepton $t\bar{t}$ production measured in $\sqrt{s}=13\,\mathrm{TeV}\ pp$ collisions with the ATLAS detector. *JHEP*, 07:141, 2023.
- [546] ATLAS Collaboration. Measurement of the polarisation of W bosons produced in top-quark decays using dilepton events at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS experiment. Phys. Lett. B, 843:137829, 2023.
- [547] ATLAS Collaboration. Test of the universality of τ and μ lepton couplings in W-boson decays with the ATLAS detector. Nature Phys., 17:813–818, 2021.
- [548] ATLAS and CMS Collaborations. Combination of inclusive top-quark pair production cross-section measurements using ATLAS and CMS data at $\sqrt{s} = 7$ and 8 TeV. *JHEP*, 07:213, 2023.
- [549] ATLAS Collaboration. Measurement of the $t\bar{t}$ production cross-section in pp collisions at $\sqrt{s} = 5.02 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 06:138, 2023.

- [550] ATLAS Collaboration. Observation of Single-Top-Quark Production in Association with a Photon Using the ATLAS detector. *Phys. Rev. Lett.*, 131:181901, 2023.
- [551] ATLAS Collaboration. Performance of the ATLAS muon triggers in Run². JINST, 15:P09015, 2020.
- [552] ATLAS Collaboration. Performance of electron and photon triggers in ATLAS during LHC Run~2. Eur. Phys. J. C, 80:47, 2020.
- [553] ATLAS Collaboration. Configuration and performance of the ATLAS b-jet triggers in Run~2. Eur. Phys. J. C, 81:1087, 2021.
- [554] ATLAS Collaboration. Search for new resonances in mass distributions of jet pairs using $139\,\mathrm{fb^{-1}}$ of pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. *JHEP*, 03:145, 2020.
- [555] ATLAS Collaboration. Search for light long-lived neutral particles that decay to collimated pairs of leptons or light hadrons in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 06:153, 2023.
- [556] ATLAS Collaboration. Search for single production of a vector-like T quark decaying into a Higgs boson and top quark with fully hadronic final states using the ATLAS detector. Phys. Rev. D, 105:092012, 2022.
- [557] ATLAS Collaboration. Search for pair-produced vector-like top and bottom partners in events with large missing transverse momentum in pp collisions with the ATLAS detector. Eur. Phys. J. C, 83:719, 2023.
- [558] ATLAS Collaboration. Search for pair-produced scalar and vector leptoquarks decaying into third-generation quarks and first- or second-generation leptons in pp collisions with the ATLAS detector. JHEP, 06:188, 2023.
- [559] ATLAS Collaboration. Search for pairs of scalar leptoquarks decaying into quarks and electrons or muons in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. JHEP, 10:112, 2020.
- [560] ATLAS Collaboration. Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a τ -lepton in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:179, 2021.
- [561] ATLAS Collaboration. Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector. *JHEP*, 11:005, 2020.
- [562] ATLAS Collaboration. Search for pair production of scalar leptoquarks decaying into first- or second-generation leptons and top quarks in proton–proton collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 81:313, 2021.
- [563] ATLAS Collaboration. Search for lepton-flavour violation in high-mass dilepton final states using 139 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 23:082, 2023.

- [564] ATLAS Collaboration. Search for neutral long-lived particles in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ that decay into displaced hadronic jets in the ATLAS calorimeter. JHEP, 06:005, 2022.
- [565] ATLAS Collaboration. Search for events with a pair of displaced vertices from long-lived neutral particles decaying into hadronic jets in the ATLAS muon spectrometer in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. D, 106:032005, 2022.
- [566] ATLAS Collaboration. Search for $t\bar{t}H/A \to t\bar{t}t\bar{t}$ production in the multilepton final state in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 07:203, 2023.
- [567] ATLAS Collaboration. Search for an axion-like particle with forward proton scattering in association with photon pairs at ATLAS. *JHEP*, 07:234, 2023.
- [568] ATLAS Collaboration. Search for Heavy Neutral Leptons in Decays of W Bosons Using a Dilepton Displaced Vertex in $\sqrt{s} = 13 \,\text{TeV}$ pp Collisions with the ATLAS Detector. Phys. Rev. Lett., 131:061803, 2023.
- [569] ATLAS Collaboration. Search for new phenomena in three- or four-lepton events in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 824:136832, 2021.
- [570] ATLAS Collaboration. Search for periodic signals in the dielectron and diphoton invariant mass spectra using 139 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 10:079, 2023.
- [571] ATLAS Collaboration. Calibration of the light-flavour jet mistagging efficiency of the *b*-tagging algorithms with Z+jets events using 139 fb⁻¹ of ATLAS proton–proton collision data at $\sqrt{s} = 13$ TeV. Eur. Phys. J. C, 83:728, 2023.
- [572] ATLAS Collaboration. ATLAS flavour-tagging algorithms for the LHC Run² pp collision dataset. Eur. Phys. J. C, 83:681, 2023.
- [573] ATLAS Collaboration. Search for doubly and singly charged Higgs bosons decaying into vector bosons in multi-lepton final states with the ATLAS detector using proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$. JHEP, 06:146, 2021.
- [574] ATLAS Collaboration. Search for high-mass $W\gamma$ and $Z\gamma$ resonances using hadronic W/Z boson decays from 139 fb⁻¹ of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 07:125, 2023.
- [575] ATLAS Collaboration. A search for new resonances in multiple final states with a high transverse momentum Z boson in 13 TeV pp collisions with the ATLAS detector. JHEP, 06:036, 2023.
- [576] ATLAS Collaboration. Search for dark photons from Higgs boson decays via ZH production with a photon plus missing transverse momentum signature from pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. JHEP, 07:133, 2023.

- [577] ATLAS Collaboration. A search for heavy Higgs bosons decaying into vector bosons in same-sign two-lepton final states in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:200, 2023.
- [578] ATLAS Collaboration. Reconstruction and identification of boosted di- τ systems in a search for Higgs boson pairs using 13 TeV proton–proton collision data in ATLAS. *JHEP*, 11:163, 2020.
- [579] ATLAS Collaboration. Search for a light charged Higgs boson in $t \to H^{\pm}b$ decays, with $H^{\pm} \to cb$, in the lepton+jets final state in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 09:004, 2023.
- [580] ATLAS Collaboration. Search for nonresonant pair production of Higgs bosons in the $b\bar{b}b\bar{b}$ final state in pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. Phys. Rev. D, 108:052003, 2023.
- [581] ATLAS Collaboration. Search for Higgs boson pair production in association with a vector boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 83:519, 2023.
- [582] ATLAS Collaboration. Search for exclusive Higgs and Z boson decays to $\omega \gamma$ and Higgs boson decays to $K^* \gamma$ with the ATLAS detector. Phys. Lett. B, 847:138292, 2023.
- [583] ATLAS Collaboration. CP Properties of Higgs Boson Interactions with Top Quarks in the $t\bar{t}H$ and tH Processes Using $H\to\gamma\gamma$ with the ATLAS Detector. Phys. Rev. Lett., 125:061802, 2020.
- [584] ATLAS Collaboration. Search for dark matter in events with missing transverse momentum and a Higgs boson decaying into two photons in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 10:013, 2021.
- [585] ATLAS Collaboration. Measurements of Higgs Bosons Decaying to Bottom Quarks from Vector Boson Fusion Production with the ATLAS Experiment at $\sqrt{s} = 13 \,\text{TeV}$. Eur. Phys. J. C, 81:537, 2021.
- [586] ATLAS Collaboration. Measurements of Higgs boson production cross-sections in the $H \to \tau^+ \tau^-$ decay channel in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 08:175, 2022.
- [587] ATLAS Collaboration. Measurement of the CP properties of Higgs boson interactions with τ -leptons with the ATLAS detector. Eur. Phys. J. C, 83:563, 2023.
- [588] ATLAS Collaboration. Searches for lepton-flavour-violating decays of the Higgs boson into $e\tau$ and $\mu\tau$ in $\sqrt{s}=13\,\text{TeV}\ pp$ collisions with the ATLAS detector. *JHEP*, 07:166, 2023.
- [589] ATLAS Collaboration. Measurements of the Higgs boson inclusive and differential fiducial cross-sections in the diphoton decay channel with pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 08:027, 2022.

- [590] ATLAS Collaboration. A search for the dimuon decay of the Standard Model Higgs boson with the ATLAS detector. *Phys. Lett. B*, 812:135980, 2020.
- [591] ATLAS Collaboration. Search for boosted diphoton resonances in the 10 to $70 \,\text{GeV}$ mass range using $138 \,\text{fb}^{-1}$ of $13 \,\text{TeV}$ pp collisions with the ATLAS detector. JHEP, 07:155, 2023.
- [592] ATLAS Collaboration. Measurements of the suppression and correlations of dijets in Pb+Pb collisions at $\sqrt{s_-NN} = 5.02 \,\text{TeV}$. Phys. Rev. C, 107:054908, 2023.
- [593] ATLAS Collaboration. Measurement of the azimuthal anisotropy of charged-particle production in Xe+Xe collisions at $\sqrt{s_-NN} = 5.44 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. C*, 101:024906, 2020.
- [594] ATLAS Collaboration. Medium-Induced Modification of Z-Tagged Charged Particle Yields in Pb+Pb Collisions at 5.02 TeV with the ATLAS Detector. *Phys. Rev. Lett.*, 126:072301, 2021.
- [595] ATLAS Collaboration. Longitudinal flow decorrelations in Xe+Xe collisions at $\sqrt{s_-NN} = 5.44 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. Lett.*, 126:122301, 2021.
- [596] ATLAS Collaboration. Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb⁻¹ of Pb+Pb data with the ATLAS detector. *JHEP*, 03:243, 2021.
- [597] ATLAS Collaboration. Measurement of Suppression of Large-Radius Jets and Its Dependence on Substructure in Pb+Pb Collisions at $\sqrt{s_NN} = 5.02 \,\text{TeV}$ with the ATLAS detector. *Phys. Rev. Lett.*, 131:172301, 2023.
- [598] ATLAS Collaboration. Measurement of azimuthal anisotropy of muons from charm and bottom hadrons in Pb+Pb collisions at $\sqrt{s_-NN} = 5.02 \,\text{TeV}$ with the ATLAS detector. *Phys. Lett. B*, 807:135595, 2020.
- [599] ATLAS Collaboration. Measurement of the nuclear modification factor for muons from charm and bottom hadrons in Pb+Pb collisions at 5.02 TeV with the ATLAS detector. *Phys. Lett. B*, 829:137077, 2022.
- [600] ATLAS Collaboration. Alignment of the ATLAS Inner Detector in Run 2. Eur. Phys. J. C, 80:1194, 2020.
- [601] ATLAS Collaboration. Performance of the ATLAS RPC detector and Level-1 muon barrel trigger at $\sqrt{s} = 13 \text{ TeV}$. JINST, 16:P07029, 2021.
- [602] ATLAS Collaboration. Operation and performance of the ATLAS semiconductor tracker in LHC Run². JINST, 17:P01013, 2022.
- [603] ATLAS Collaboration. Measurement of hadronic event shapes in high- p_{-} T multijet final states at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 01:188, 2021.

- [604] ATLAS Collaboration. Observation of WWW Production in pp Collisions at \sqrt{s} = 13 TeV with the ATLAS Detector. Phys. Rev. Lett., 129:061803, 2022.
- [605] ATLAS Collaboration. Determination of the parton distribution functions of the proton from ATLAS measurements of differential W^{\pm} and Z boson production in association with jets. *JHEP*, 07:223, 2021.
- [606] ATLAS Collaboration. Observation of the $\gamma\gamma \to \tau\tau$ Process in Pb+Pb Collisions and Constraints on the τ -Lepton Anomalous Magnetic Moment with the ATLAS Detector. *Phys. Rev. Lett.*, 131:151802, 2023.
- [607] ATLAS Collaboration. Measurement of the production of a W boson in association with a charmed hadron in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Phys. Rev. D, 108:032012, 2023.
- [608] ATLAS Collaboration. Search for direct pair production of sleptons and charginos decaying to two leptons and neutralinos with mass splittings near the W-boson mass in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. JHEP, 06:031, 2023.
- [609] ATLAS Collaboration. Search for R-parity-violating supersymmetry in a final state containing leptons and many jets with the ATLAS experiment using $\sqrt{s} = 13 \text{ TeV}$ proton-proton collision data. Eur. Phys. J. C, 81:1023, 2021.
- [610] ATLAS Collaboration. Search for direct production of electroweakinos in final states with one lepton, missing transverse momentum and a Higgs boson decaying into two b-jets in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. Eur. Phys. J. C, 80:691, 2020.
- [611] ATLAS Collaboration. Constraints on spin-0 dark matter mediators and invisible Higgs decays using ATLAS 13 TeV pp collision data with two top quarks and missing transverse momentum in the final state. Eur. Phys. J. C, 83:503, 2023.
- [612] ATLAS Collaboration. Search for displaced photons produced in exotic decays of the Higgs boson using 13 TeV pp collisions with the ATLAS detector. Phys. Rev. D, 108:032016, 2023.
- [613] ATLAS Collaboration. Search for new phenomena in *pp* collisions in final states with tau leptons, *b*-jets, and missing transverse momentum with the ATLAS detector. *Phys. Rev. D*, 104:112005, 2021.
- [614] ATLAS Collaboration. Performance of the upgraded PreProcessor of the ATLAS Level-1 Calorimeter Trigger. *JINST*, 15:P11016, 2020.
- [615] ATLAS Collaboration. The ATLAS Fast TracKer system. JINST, 16:P07006, 2021.
- [616] ATLAS Collaboration. Measurements of observables sensitive to colour reconnection in $t\bar{t}$ events with the ATLAS detector at $\sqrt{s} = 13$ TeV. Eur. Phys. J. C, 83:518, 2023.

- [617] ATLAS Collaboration. Search for flavor-changing neutral-current couplings between the top quark and the Z boson with proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 108:032019, 2023.
- [618] ATLAS Collaboration. Search for flavour-changing neutral current interactions of the top quark and the Higgs boson in events with a pair of τ -leptons in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:155, 2023.
- [619] ATLAS Collaboration. Search for flavour-changing neutral-current couplings between the top quark and the photon with the ATLAS detector at $\sqrt{s} = 13 \text{ TeV}$. Phys. Lett. B, 842:137379, 2023.
- [620] ATLAS Collaboration. Measurements of differential cross-sections in top-quark pair events with a high transverse momentum top quark and limits on beyond the Standard Model contributions to top-quark pair production with the ATLAS detector at $\sqrt{s} = 13 \,\text{TeV}$. JHEP, 06:063, 2022.
- [621] ATLAS Collaboration. Measurement of the energy asymmetry in $t\bar{t}j$ production at 13 TeV with the ATLAS experiment and interpretation in the SMEFT framework. Eur. Phys. J. C, 82:374, 2022.
- [622] ATLAS Collaboration. Performance of the missing transverse momentum triggers for the ATLAS detector during Run-2 data taking. *JHEP*, 08:080, 2020.
- [623] ATLAS Collaboration. Performance of the ATLAS Level-1 topological trigger in Run~2. Eur. Phys. J. C, 82:7, 2022.
- [624] ATLAS Collaboration. The ATLAS Inner Detector Trigger performance in pp collisions at 13 TeV during LHC Run~2. Eur. Phys. J. C, 82:206, 2022.
- [625] ATLAS Collaboration. Operation of the ATLAS trigger system in Run~2. JINST, 15:P10004, 2020.
- [626] ATLAS Collaboration. Measurement of the $B_-s^0 \to \mu\mu$ Effective Lifetime with the ATLAS Detector. *JHEP*, 09:199, 2023.
- [627] ATLAS Collaboration. Search for type-III seesaw heavy leptons in leptonic final states in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector. Eur. Phys. J. C, 82:988, 2022.
- [628] ATLAS Collaboration. Search for dark matter produced in association with a dark Higgs boson decaying into W^+W^- in the one-lepton final state at $\sqrt{s} = 13 \text{ TeV}$ using 139 fb^{-1} of pp collisions recorded with the ATLAS detector. JHEP, 07:116, 2023.
- [629] ATLAS Collaboration. Search for Majorana neutrinos in same-sign WW scattering events from pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Eur. Phys. J. C, 83:824, 2023.
- [630] ATLAS Collaboration. Search for third-generation vector-like leptons in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 07:118, 2023.

- [631] ATLAS Collaboration. Search for invisible Higgs-boson decays in events with vector-boson fusion signatures using 139 fb⁻¹ of proton–proton data recorded by the ATLAS experiment. *JHEP*, 08:104, 2022.
- [632] ATLAS Collaboration. Search for new phenomena in multi-body invariant masses in events with at least one isolated lepton and two jets using $\sqrt{s} = 13 \,\text{TeV}$ proton–proton collision data collected by the ATLAS detector. *JHEP*, 07:202, 2023.
- [633] ATLAS Collaboration. Search for excited τ -leptons and leptoquarks in the final state with τ -leptons and jets in pp collisions at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. JHEP, 06:199, 2023.
- [634] ATLAS Collaboration. Search for Lepton-Flavor-Violation in Z-Boson Decays with τ -Leptons with the ATLAS detector. *Phys. Rev. Lett.*, 127:271801, 2021.
- [635] ATLAS Collaboration. Measurement of the c-jet mistagging efficiency in $t\bar{t}$ events using pp collision data at $\sqrt{s}=13\,\mathrm{TeV}$ collected with the ATLAS detector. Eur. Phys. J. C, 82:95, 2022.
- [636] ATLAS Collaboration. Search for a new scalar resonance in flavour-changing neutral-current top-quark decays $t \to qX$ (q = u, c), with $X \to b\bar{b}$, in proton–proton collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 07:199, 2023.
- [637] ATLAS Collaboration. Search for heavy resonances decaying into a Z or W boson and a Higgs boson in final states with leptons and b-jets in 139 fb⁻¹ of pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:016, 2023.
- [638] ATLAS Collaboration. Measurement of the Higgs boson mass in the $H \to ZZ^* \to 4\ell$ decay channel using 139 fb⁻¹ of $\sqrt{s} = 13$ TeV pp collisions recorded by the ATLAS detector at the LHC. Phys. Lett. B, 843:137880, 2023.
- [639] ATLAS Collaboration. Test of CP Invariance in Higgs Boson Vector-Boson-Fusion Using the $H \to \gamma \gamma$ Channel with the ATLAS Detector. Phys. Rev. Lett., 131:061802, 2023.
- [640] ATLAS Collaboration. Search for Higgs boson production in association with a highenergy photon via vector-boson fusion with decay into bottom quark pairs at \sqrt{s} = 13 TeV with the ATLAS detector. *JHEP*, 03:268, 2021.
- [641] ATLAS Collaboration. Measurement of the properties of Higgs boson production at $\sqrt{s} = 13 \text{ TeV}$ in the $H \to \gamma \gamma$ channel using 139 fb^{-1} of pp collision data with the ATLAS experiment. *JHEP*, 07:088, 2023.
- [642] ATLAS Collaboration. Model-independent search for the presence of new physics in events including $H \to \gamma \gamma$ with $\sqrt{s} = 13 \,\text{TeV}$ pp data recorded by the ATLAS detector at the LHC. JHEP, 07:176, 2023.
- [643] ATLAS Collaboration. Measurement of Higgs boson decay into b-quarks in associated production with a top-quark pair in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 06:097, 2022.

- [644] ATLAS Collaboration. Integrated and differential fiducial cross-section measurements for the vector boson fusion production of the Higgs boson in the $H \to WW^* \to e\nu\mu\nu$ decay channel at 13 TeV with the ATLAS detector. *Phys. Rev. D*, 108:072003, 2023.
- [645] ATLAS Collaboration. Measurements of azimuthal anisotropies of jet production in Pb+Pb collisions at $\sqrt{s_{-}NN} = 5.02 \text{ TeV}$ with the ATLAS detector. *Phys. Rev. C*, 105:064903, 2022.
- [646] ATLAS Collaboration. Measurement of muon pairs produced via $\gamma\gamma$ scattering in non-ultraperipheral Pb+Pb collisions at $\sqrt{s_-NN} = 5.02$ TeV with the ATLAS detector. *Phys. Rev. C*, 107:054907, 2023.
- [647] ATLAS Collaboration. Measurements of sensor radiation damage in the ATLAS inner detector using leakage currents. *JINST*, 16:P08025, 2021.
- [648] ATLAS Collaboration. Emulating the impact of additional proton—proton interactions in the ATLAS simulation by pre-sampling sets of inelastic Monte Carlo events. *Comput. Softw. Big Sci.*, 6:3, 2022.
- [649] ATLAS Collaboration. Measurements of $Z\gamma$ +jets differential cross sections in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. JHEP, 07:072, 2023.
- [650] ATLAS Collaboration. Measurements of multijet event isotropies using optimal transport with the ATLAS detector. *JHEP*, 10:060, 2023.
- [651] ATLAS Collaboration. Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at $\sqrt{s} = 7,8$ and 13 TeV. Eur. Phys. J. C, 82:438, 2022.
- [652] ATLAS Collaboration. Search for pairs of muons with small displacements in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Lett. B, 846:138172, 2023.
- [653] ATLAS Collaboration. Search in diphoton and dielectron final states for displaced production of Higgs or Z bosons with the ATLAS detector in $\sqrt{s} = 13$ TeV pp collisions. Phys. Rev. D, 108:012012, 2023.
- [654] ATLAS Collaboration. Measurement of the $t\bar{t}$ production cross-section in the lepton+jets channel at $\sqrt{s}=13\,\text{TeV}$ with the ATLAS experiment. *Phys. Lett. B*, 810:135797, 2020.
- [655] ATLAS Collaboration. Measurements of inclusive and differential cross-sections of combined $t\bar{t}\gamma$ and $tW\gamma$ production in the $e\mu$ channel at 13 TeV with the ATLAS detector. *JHEP*, 09:049, 2020.
- [656] ATLAS Collaboration. Evidence for the charge asymmetry in $pp \to t\bar{t}$ production at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector. *JHEP*, 08:077, 2023.
- [657] ATLAS Collaboration. Measurement of the $t\bar{t}t\bar{t}$ production cross section in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 11:118, 2021.

- [658] ATLAS Collaboration. Search for leptonic charge asymmetry in $t\bar{t}W$ production in final states with three leptons at $\sqrt{s} = 13 \text{ TeV}$. JHEP, 07:033, 2023.
- [659] ATLAS Collaboration. Luminosity determination in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ using the ATLAS detector at the LHC. Eur. Phys. J. C, 83:982, 2023.
- [660] ATLAS Collaboration. Search for dark matter produced in association with a single top quark and an energetic W boson in $\sqrt{s} = 13 \,\text{TeV}$ pp collisions with the ATLAS detector. Eur. Phys. J. C, 83:603, 2023.
- [661] ATLAS Collaboration. Observation of electroweak production of two jets in association with an isolated photon and missing transverse momentum, and search for a Higgs boson decaying into invisible particles at 13 TeV with the ATLAS detector. Eur. Phys. J. C, 82:105, 2022.
- [662] ATLAS Collaboration. Search for Higgs boson decays into a pair of pseudoscalar particles in the $bb\mu\mu$ final state with the ATLAS detector in pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Rev. D, 105:012006, 2022.
- [663] ATLAS Collaboration. Combination of searches for invisible decays of the Higgs boson using $139 \, \text{fb}^{-1}$ of proton–proton collision data at $\sqrt{s} = 13 \, \text{TeV}$ collected with the ATLAS experiment. *Phys. Lett. B*, 842:137963, 2023.
- [664] ATLAS Collaboration. Constraints on Higgs boson production with large transverse momentum using $H \to b\bar{b}$ decays in the ATLAS detector. *Phys. Rev. D*, 105:092003, 2022.
- [665] ATLAS Collaboration. Direct constraint on the Higgs-charm coupling from a search for Higgs boson decays into charm quarks with the ATLAS detector. *Eur. Phys. J. C*, 82:717, 2022.
- [666] ATLAS Collaboration. Measurements of Higgs boson production by gluon–gluon fusion and vector-boson fusion using $H \to WW^* \to e\nu\mu\nu$ decays in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Phys. Rev. D, 108:032005, 2023.
- [667] ATLAS Collaboration. A detailed map of Higgs boson interactions by the ATLAS experiment ten years after the discovery. *Nature*, 607:52–59, 2022.
- [668] ATLAS Collaboration. Correlations between flow and transverse momentum in Xe+Xe and Pb+Pb collisions at the LHC with the ATLAS detector: A probe of the heavy-ion initial state and nuclear deformation. *Phys. Rev. C*, 107:054910, 2023.
- [669] ATLAS Collaboration. Measurement of the Sensitivity of Two-Particle Correlations in pp Collisions to the Presence of Hard Scatterings. Phys. Rev. Lett., 131:162301, 2023.
- [670] ATLAS Collaboration. Measurement of substructure-dependent jet suppression in Pb+Pb collisions at 5.02 TeV with the ATLAS detector. *Phys. Rev. C*, 107:054909, 2023.

- [671] ATLAS Collaboration. Production of $\Upsilon(nS)$ mesons in Pb+Pb and pp collisions at 5.02 TeV. Phys. Rev. C, 107:054912, 2023.
- [672] ATLAS Collaboration. Exclusive dielectron production in ultraperipheral Pb+Pb collisions at $\sqrt{s_-NN} = 5.02 \text{ TeV}$ with ATLAS. *JHEP*, 06:182, 2023.
- [673] ATLAS Collaboration. Strong Constraints on Jet Quenching in Centrality-Dependent p + Pb Collisions at 5.02 TeV from ATLAS. *Phys. Rev. Lett.*, 131:072301, 2023.
- [674] ATLAS Collaboration. Modelling and computational improvements to the simulation of single vector-boson plus jet processes for the ATLAS experiment. *JHEP*, 08:089, 2022.
- [675] ATLAS Collaboration. Measurement of $Z\gamma\gamma$ production in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. Eur. Phys. J. C, 83:539, 2023.
- [676] ATLAS Collaboration. Measurements of W^+W^- production in decay topologies inspired by searches for electroweak supersymmetry. Eur. Phys. J. C, 83:718, 2023.
- [677] ATLAS Collaboration. Observation of four-top-quark production in the multilepton final state with the ATLAS detector. Eur. Phys. J. C, 83:496, 2023.
- [678] ATLAS Collaboration. Measurement of the charge asymmetry in top-quark pair production in association with a photon with the ATLAS experiment. *Phys. Lett. B*, 843:137848, 2023.
- [679] ATLAS Collaboration. Observation of an Excess of Dicharmonium Events in the Four-Muon Final State with the ATLAS Detector. *Phys. Rev. Lett.*, 131:151902, 2023.
- [680] ATLAS Collaboration. Search for leptoquarks decaying into the $b\tau$ final state in pp collisions at $\sqrt{s} = 13 \text{ TeV}$ with the ATLAS detector. *JHEP*, 10:001, 2023.
- [681] ATLAS Collaboration. Constraining the Higgs boson self-coupling from single- and double-Higgs production with the ATLAS detector using pp collisions at $\sqrt{s} = 13 \text{ TeV}$. Phys. Lett. B, 843:137745, 2023.
- [682] ATLAS Collaboration. Search for a new heavy scalar particle decaying into a Higgs boson and a new scalar singlet in final states with one or two light leptons and a pair of τ -leptons with the ATLAS detector. *JHEP*, 10:009, 2023.
- [683] ATLAS Collaboration. Measurement of the total and differential Higgs boson production cross-sections at $\sqrt{s} = 13 \,\text{TeV}$ with the ATLAS detector by combining the $H \to ZZ^* \to 4\ell$ and $H \to \gamma\gamma$ decay channels. *JHEP*, 05:028, 2023.
- [684] ATLAS Collaboration. Comparison of inclusive and photon-tagged jet suppression in 5.02 TeV Pb+Pb collisions with ATLAS. *Phys. Lett. B*, 846:138154, 2023.
- [685] ATLAS Collaboration. New techniques for jet calibration with the ATLAS detector. Eur. Phys. J. C, 83:761, 2023.

- [686] ATLAS Collaboration. Studies of the muon momentum calibration and performance of the ATLAS detector with pp collisions at $\sqrt{s}=13\,\text{TeV}$. Eur. Phys. J. C, 83:686, 2023.
- [687] ATLAS Collaboration. Observation of gauge boson joint-polarisation states in $W^{\pm}Z$ production from pp collisions at $\sqrt{s}=13\,\mathrm{TeV}$ with the ATLAS detector. *Phys. Lett.* $B,\,843:137895,\,2023.$