

## FACULTY CURRICULUM VITAE

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### AREA OF EXPERTISE

Experimental high energy particle physicist with experience in teaching introductory mechanics, introductory electricity magnetism and modern physics.

### EDUCATION

Year	Degree	Major	Institution
2008	Ph.D		Southern Methodist University

### PROFESSIONAL EXPERIENCE

Begin/End Year	Place of Employment	Rank / Job Title
2008-present	Southern Methodist University, Department of Physics	Post Doctoral Fellow
2004-2008	Southern Methodist University, Department of Physics	Teaching assistant

### SCHOLARSHIP

#### Refereed Journal Articles

“Search for massive colored scalars in four-jet final states in  $\sqrt{s}=7$  TeV proton-proton collisions with the ATLAS detector” G.Aad et al, EPJC 71 (2011) 182

“Search for new phenomena in final states with large jet multiplicities and missing transverse momentum using  $\sqrt{s}=7$  TeV  $pp$  collisions with the ATLAS detector” G. Aad et al, JHEP 11 (2011) 99

“Performance of the ATLAS Trigger System in 2010”, G. Aad et al, EPJC 72 (2012) 1849

“Measurement of the inclusive and dijet cross-sections of b-jets in  $pp$  collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, EPJC 71 (2011) 1846

“Search for the Standard Model Higgs boson in the decay channel  $H \rightarrow ZZ(*) \rightarrow 4l$  with the ATLAS

detector”, G. et al, Phys. Lett. B 705 (2011) 435-451

“Measurement of the jet fragmentation function and transverse profile in proton-proton collisions at a center-of-mass energy of 7 TeV with the ATLAS detector”, G. Aad et al, EPJC 71 (2011) 1795

“Search for New Phenomena in  $t\bar{t}$  Events With Large Missing Transverse Momentum in Proton-Proton Collisions at  $\sqrt{s} = 7$  TeV with the ATLAS Detector”, G. et al, Phys. Rev. Lett. 108, 041805 (2012)

“Search for the Higgs boson in the  $H \rightarrow WW \rightarrow l\nu jj$  decay channel in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G Aad et al, Phys. Rev. Lett. 107, 231801 (2011)

“Search for a Standard Model Higgs boson in the  $H \rightarrow ZZ \rightarrow l\nu\nu$  decay channel with the ATLAS detector”, G. Aad et al, Phys. Rev. Lett. 107, 221802 (2011)

“Search for a heavy neutral particle decaying into an electron and a muon using  $1 \text{ fb}^{-1}$  of ATLAS data”, G. Aad et al, EPJC 71 (2011) 1809

“Search for displaced vertices arising from decays of new heavy particles in 7 TeV pp collisions at ATLAS”, G. Aad et al, Phys. Lett. B 707 (2012) 478-496

“Measurement of the cross section for the production of a W boson in association with b-jets in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 707 (2012) 418-437

“Measurement of the cross-section for b-jets produced in association with a Z boson at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 706 (2011) 295-313

“Measurements of the electron and muon inclusive cross-sections in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G Aad et al, Phys. Lett. B 707 (2012) 438-458

“Measurement of the pseudorapidity and transverse momentum dependence of the elliptic flow of charged particles in lead-lead collisions at  $\sqrt{s_{NN}} = 2.76$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 707 (2012) 330–348

“Search for the Standard Model Higgs boson in the two photon decay channel with the ATLAS detector at the LHC”, G. Aad et al, Phys. Lett. B 705 (2011) 452-470

“Search for a heavy Standard Model Higgs boson in the channel  $H \rightarrow ZZ \rightarrow llqq$  using the ATLAS detector”, G. Aad et al, Phys. Lett. B 707 (2012) 27-45

“Measurement of the W to tau nu Cross Section in pp Collisions at  $\sqrt{s} = 7$  TeV with the ATLAS experiment”, G. Aad et al, Phys. Lett. B 706 (2011) 276-294

“Measurement of the top quark pair production cross section in pp collisions at  $\sqrt{s} = 7$  TeV in dilepton final states with ATLAS”, G. Aad et al, Phys. Lett. B 707 (2012) 459-477

“Measurement of the Z to tau tau Cross Section with the ATLAS Detector”, G. Aad et al, Phys. Rev. D 84, 112006 (2011)

“Search for dilepton resonances in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Rev. Lett. 107, 272002 (2011)

“Search for a heavy gauge boson decaying to a charged lepton and a neutrino in  $1 \text{ fb}^{-1}$  of pp collisions at  $\sqrt{s} = 7$  TeV using the ATLAS detector”, G. Aad et al, Phys. Lett. B 705 (2011) 28–46

“Inclusive search for same-sign dilepton signatures in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, JHEP 10 (2011) 107

“Measurement of the inclusive isolated prompt photon cross-section in pp collisions at  $\sqrt{s} = 7$  TeV using  $35 \text{ pb}^{-1}$  of ATLAS data”, G. Aad et al, Phys. Lett. B 706 (2011), 150-167

“Search for neutral MSSM Higgs bosons decaying to  $\tau^+ \tau^-$  pairs in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 705 (2011), 174-192

“Properties of jets measured from tracks in proton-proton collisions at center-of-mass energy  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Rev. D 84, 054001 (2011)

“Measurement of the transverse momentum distribution of  $Z/\gamma^*$  bosons in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 705 (2011) 415-434

“Measurement of multi-jet cross sections in proton-proton collisions at a 7 TeV center-of-mass energy”, G. Aad et al, EPJC 71 (2011)

“Measurement of dijet production with a veto on additional central jet activity in pp collisions at  $\sqrt{s} = 7$  TeV using the ATLAS detector”, G. Aad et al, JHEP 09 (2011) 053

“Measurement of the isolated di-photon cross-section in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Rev. D 85, 012003 (2012)

“Search for Diphoton Events with Large Missing Transverse Energy with  $36 \text{ pb}^{-1}$  of 7 TeV Proton-

Proton Collision Data with the ATLAS Detector”, G. Aad et al, EPJC 71 (2011) 1744

“Search for new phenomena with the monojet and missing transverse momentum signature using the ATLAS detector in  $\sqrt{s} = 7$  TeV proton-proton collisions”, G. Aad et al, Phys. Lett B705 (2011) 294-312

“Measurement of the Upsilon(1S) Production Cross-Section in pp Collisions at  $\sqrt{s} = 7$  TeV in ATLAS”, G. Aad et al, Phys. Lett. B 705 (2011) 9–27

“Search for Heavy Long-Lived Charged Particles with the ATLAS detector in pp collisions at  $\sqrt{s} = 7$  TeV”, Phys. Lett. B 703 (2011)

“Limits on the production of the Standard Model Higgs Boson in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, EPJC 71 (2011) 1728

“Measurement of  $W\gamma$  and  $Z\gamma$  production in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS Detector”, G. Aad et al, JHEP 09 (2011) 072

“Measurement of the WW cross section in  $\sqrt{s} = 7$  TeV pp collisions with ATLAS”, G. Aad et al, Phys. Rev. Lett. 107, 041802 (2011)

“Search for pair production of first or second generation leptoquarks in proton-proton collisions at  $\sqrt{s} = 7$  TeV using the ATLAS detector at the LHC”, G. Aad et al, Phys. Rev. D 83, 112006 (2011)

“Search for Contact Interactions in Dimuon Events from pp Collisions at  $\sqrt{s} = 7$  TeV with the ATLAS Detector”, G. Aad et al, Phys. Rev. D 84, 011101(R) (2011)

“Measurement of the differential cross-sections of inclusive, prompt and non-prompt J/psi production in proton-proton collisions at  $\sqrt{s} = 7$  TeV”, G. Aad et al, Nuclear Physics B 850 (2011), 387

“Measurement of the Inelastic Proton-Proton Cross-Section at  $\sqrt{s} = 7$  TeV with the ATLAS Detector”, G. Aad et al, Nature Comm. 2 (2011) 463

“Search for high mass dilepton resonances in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS experiment”, G. Aad et al, Phys Lett B700 (2011) 163-180

“Search for an excess of events with an identical flavour lepton pair and significant missing transverse momentum in  $\sqrt{s} = 7$  TeV proton-proton collisions with the ATLAS detector”, G. Aad et al, EPJC 71 (2011) 1647

“Search for supersymmetric particles in events with lepton pairs and large missing transverse momentum in  $\sqrt{s} = 7$  TeV proton-proton collisions”, G. Aad et al, EPJC 71 (2011) 1682

“Search for a heavy particle decaying into an electron and a muon with the ATLAS detector in  $\sqrt{s} = 7$  TeV pp collisions at the LHC”, G. Aad et al, Phys. Rev. Lett. 106, 251801(2011)

“Search for supersymmetry in pp collisions at  $\sqrt{s} = 7$  TeV in final states with missing transverse momentum and b-jets”, G. Aad et al, Phys. Lett. B701 (2011), 398-416

“Search for New Physics in Dijet Mass and Angular Distributions in pp Collisions at  $\sqrt{s} = 7$  TeV Measured with the ATLAS Detector”, New J. Phys. 13 (2011) 053044

“Measurement of the Muon Charge Asymmetry from W Bosons Produced in pp Collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 701 (2011) 31

“Search for Stable Hadronising Squarks and Gluinos at the ATLAS Experiment at the LHC”, G. Aad et al, Phys. Lett. B 701 (2011) 1

“Measurements of underlying event properties using neutral and charged particles in p-p collisions at 900 GeV and 7 TeV with the ATLAS detector at the LHC”, G. Aad et al, EPJC 71 (2011) 1636

“Search for high-mass states with one lepton plus missing transverse momentum in proton-proton collisions at  $\sqrt{s}=7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B 701 (2011) 50

“Search for squarks and gluinos using final states with jets and missing transverse momentum with the ATLAS detector in  $\sqrt{s} = 7$  TeV proton-proton collisions”, G. Aad et al, Phys. Lett. B 701 (2011) 186

“Measurement of Dijet Azimuthal Decorrelations in pp Collisions at  $\sqrt{s}=7$  TeV”, G. Aad et al, Phys. Rev. Lett. 106, 172002 (2011)

“Search for supersymmetry using final states with one lepton, jets, and missing transverse momentum with the ATLAS detector in  $\sqrt{s}=7$  TeV pp collisions”, G. Aad et al, Phys. Rev. Lett. 106, 131802 (2011)

“Search for Massive Long-lived Highly Ionising Particles with the ATLAS Detector at the LHC”, G. Aad et al, Phys. Lett. B698 (2011) 353-370

“Luminosity Determination in pp Collisions at  $\sqrt{s}=7$  TeV Using the ATLAS Detector at the LHC”, G. Aad et al, EPJC 71 (2011) , 1630

“Study of Jet Shapes in Inclusive Jet Production in pp Collisions at  $\sqrt{s} = 7$  TeV using the ATLAS Detector”, G. Aad et al, Phys. Rev. D 83, 052003 (2011)

“Measurement of the centrality dependence of J/Psi yields and observation of Z production in lead-lead collisions with the ATLAS detector at the LHC”, G. Aad et al, Phys Lett. B697 (2011) 294-312

“Measurement of the production cross section for W-bosons in association with jets in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Lett. B698 (2011) 325-345

“Charged-particle multiplicities in pp interactions measured with the ATLAS detector at the LHC”, G. Aad et al, New J Phys 13 (2011) 053033

“Measurement of the inclusive isolated prompt photon cross section in pp collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, Phys. Rev. D 83, 052005 (2011)

“Search for Diphoton Events with Large Missing Transverse Energy in 7 TeV Proton-Proton Collisions with the ATLAS Detector”, G. Aad et al, Phys. Rev. Lett. 106, 121803 (2010)

“Measurement of the top quark-pair production cross section with ATLAS in pp collisions at  $\sqrt{s}=7$  TeV”, G. Aad et al, EPJC 71 (2011) 1577

“Measurement of underlying event characteristics using charged particles in pp collisions at  $\sqrt{s} = 900$  GeV and 7 TeV with the ATLAS detector”, G. Aad et al, Phys. Rev. D 83, 112001 (2011)

“Studies of the performance of the ATLAS detector using cosmic-ray muons”, G. Aad et al, EPJC 71 (2011) 1593

“Observation of a centrality-dependent dijet asymmetry in lead-lead collisions at  $\sqrt{s_{NN}} = 2.76$  TeV with the ATLAS detector at the LHC”, G. Aad et al, Phys. Rev. Lett. 105, 252303 (2010)

“Measurement of the  $W \rightarrow l\nu$  and  $Z/\gamma^* \rightarrow ll$  production cross sections in proton-proton collisions at  $\sqrt{s} = 7$  TeV with the ATLAS detector”, G. Aad et al, JHEP 12 (2010) 060

“Measurement of inclusive jet and dijet cross sections in proton-proton collisions at 7 TeV centre-of-mass energy with the ATLAS detector”, G. Aad et al, EPJC 71 (2011) 1512

“Search for Quark Contact Interactions in Dijet Angular Distributions in 7 TeV Proton-Proton Collisions with the ATLAS Detector at the LHC”, G. Aad et al, Phys. Lett. B694 (2011) 327-345

“Search for New Particles in Two-Jet Final States in 7 TeV Proton-Proton Collisions with the ATLAS Detector at the LHC”, G. Aad et al, Phys. Rev. Lett. 105, 161801

“Internal conversions in Higgs decays to two photons,” A.Firan, R.Stroynowski, Phys.Rev D 76,057301, (2007).

“A novel recombinant vaccine which protects mice against ricin intoxication”, J.Smallshaw, A.Firan, J.Fulmer, S.Ruback, V.Ghetie, E.Vitetta, Vaccine,Vol 20,27-28:3422-3427, (2002).