Alaettin Serhan Mete

Personal Data

Place and Date of Birth:	Ankara, Turkey | 30 April 1984
Address:	355, Rue Simone Veil, Saint-Genis-Pouilly, 01630, France
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Research Interests

Exotic and SUSY searches for physics beyond the Standard Model with main focus on direct production of heavy gauge bosons, top squarks, charginos/neutralinos and sleptons. Currently working on the ATLAS experiment at the Large Hadron Collider and based at the European Organization for Nuclear Research, Geneva, Switzerland.

Education

2006–2012	Ph.D. in Physics - **Iowa State University**, Ames, IA Adviser : Prof. James H. Cochran Thesis Title : *"Search for a heavy charged gauge boson decaying to a muon and a neutrino in* 1 fb^{-1} *of proton-proton collisions at* $\sqrt{s}$ = 7 *TeV using the ATLAS Detector"*, CERN-THESIS-2012-063
2002–2006	B.Sc. in Physics, **Middle East Technical University**, Ankara Graduation Project Supervisor : Prof. Namık Kemal PAK Graduation Project Title : *"Time Dependent Wave Packet Collisions"* High Honor Student

Positions Held

2017–	Assistant Project Scientist, Department of Physics and Astronomy, **University of California, Irvine**, CA, USA
2012–2017	Post-Doctoral Research Scholar, Department of Physics and Astronomy, **University of California, Irvine**, CA, USA
2008–2012	Research Assistant, Department of Physics and Astronomy, **Iowa State University**, Ames, IA, USA and **Brookhaven National Laboratory**, Upton, NY, USA (since 2009)
2006–2008	Teaching Assistant, Department of Physics and Astronomy, **Iowa State University**, Ames, IA, USA

Teaching Experience

Teaching Assistant	Phys. 111 - General Physics	(1 semester)
	Phys. 221 - Introduction to Classical Physics I	(2 semesters)
	Phys. 321 - Introduction to Modern Physics I	(1 semester)
	Phys. 564 - Advanced Classical Mechanics	(1 semester)
	Phys. 571 - Electricity and Magnetism I	(2 semesters)

Research Experience

Convener	HEP Software Foundation (HSF) Software Tools Working Group	(2018–)
Software Developer/ Convener	ATLAS Software Performance Optimization Team (SPOT)	(2017–)
Editorial Board Member	ATLAS compressed SUSY EWK scenarios search	(2016–)
Analysis Contact	ATLAS Stop2L SUSY search (Moriond/LHCP 2017)	(2016–2017)
Editorial Board Member	ATLAS 2τ SUSY EWK search	(2016–2018)
Conference Note Editor	ATLAS Stop2L SUSY search (ICHEP 2016)	(2016)
Paper Editor	ATLAS legacy of Run-I SUSY EWK searches	(2015)
Subgroup Convener	ATLAS SUSY EWK searches	(2014–2015)
Analysis Contact/ Paper Editor	ATLAS 2L SUSY EWK search	(2013–2014)
Paper Editor	ATLAS $W' \to \ell\nu$ $\sqrt{s} = 8$ TeV search	(2014)
Analysis Contact/ Paper Editor	ATLAS $W' \to \ell\nu$ $\sqrt{s} = 7$ TeV search	(2011)
Software Developer	NSW sTGC trigger simulation	(2015–2017)
Software Developer	$E_{\mathrm{T}}^{\mathrm{miss}}$ Run-II EDM and reconstruction	(2014–2017)
Trigger Monitoring Expert	Author of *OnlineRatesChecker* package	(2011–2012)
DAQ/HLT Shifter	Online DAQ/HLT shifts	(2010–2011)

Publications

- ATLAS Collaboration, "Search for electroweak production of supersymmetric particles in final states with two or three leptons at $\sqrt{s} = 13$ TeV with the ATLAS detector", Eur. Phys. J. **C78** (2018) 995, arxiv:1803.02762 [hep-ex]
- ATLAS Collaboration, "Search for direct top squark pair production in final states with two leptons in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector", Eur. Phys. J. **C77** (2017) 898, arxiv:1708.03247 [hep-ex]
- ATLAS Collaboration, "Search for supersymmetry in final states with two same-sign or three leptons and jets using 36 fb^{-1} of $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector", J. High Energy Phys. **09** (2017) 084, arxiv:1706.03731 [hep-ex]
- ATLAS Collaboration, "Dark matter interpretations of ATLAS searches for the electroweak production of supersymmetric particles in $\sqrt{s} = 8$ TeV proton-proton collisions", J. High Energy Phys. **09** (2016) 175, arxiv:1608.00872 [hep-ex]
- ATLAS Collaboration, "Search for the electroweak production of supersymmetric particles in $\sqrt{s} = 8$ TeV pp collisions with the ATLAS detector", Phys. Rev. **D93** (2016) 052002, arxiv:1509.07152 [hep-ex]
- J. Abdallah *et al.*, "Simplified Models for Dark Matter Searches at the LHC", Phys. Dark Univ. **9-10** (2015) 8-23, arxiv:1506.03116 [hep-ph]
- ATLAS Collaboration, "Search for direct pair production of a chargino and a neutralino decaying to the 125 GeV Higgs boson in $\sqrt{s} = 8$ TeV pp collisions with the ATLAS detector", Eur. Phys. J. **C75** (2015) 208, arxiv:1501.07110 [hep-ex]
- ATLAS Collaboration, "Search for new particles in events with one lepton and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector", J. High Energy Phys. **09** (2014) 037, arxiv:1407.7494 [hep-ex]
- ATLAS Collaboration, "Search for the direct production of charginos, neutralinos and staus in final states with at least two hadronically decaying taus and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector", J. High Energy Phys. **10** (2014) 096, arxiv:1407.0350 [hep-ex]
- ATLAS Collaboration, "Search for direct production of charginos, neutralinos and sleptons in final states with two leptons and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector", J. High Energy Phys. **05** (2014) 071, arxiv:1403.5294 [hep-ex]
- ATLAS Collaboration, "Search for direct production of charginos and neutralinos in events with three leptons and missing transverse momentum in $\sqrt{s} = 8$ TeV pp collisions with the ATLAS detector", J. High Energy Phys. **04** (2014) 169, arxiv:1402.7029 [hep-ex]
- ATLAS Collaboration, "ATLAS search for a heavy gauge boson decaying to a charged lepton and a neutrino in pp collisions at $\sqrt{s} = 7$ TeV", Eur. Phys. J. **C72** (2012) 2241, arxiv:1209.4446 [hep-ex]

- ATLAS Collaboration, "Search for direct production of charginos and neutralinos in events with three leptons and missing transverse momentum in $\sqrt{s} = 7$ TeV pp collisions with the ATLAS detector", Phys. Lett. **B718** (2013) 841, arxiv:1208.3144 [hep-ex]
- ATLAS Collaboration, "Search for direct slepton and gaugino production in final states with two leptons and missing transverse momentum with the ATLAS detector in pp collisions at $\sqrt{s} = 7$ TeV", Phys. Lett. **B718** (2013) 879, arxiv:1208.2884 [hep-ex]
- ATLAS Collaboration, "Search for a heavy gauge boson decaying to a charged lepton and a neutrino in 1 fb^{-1} of pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector", Phys. Lett. **B705** (2011) 28, arxiv:1108.1316 [hep-ex]
- ATLAS Collaboration, "Search for high-mass states with lepton plus missing transverse momentum in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector", Phys. Lett. **B701** (2011) 50, arxiv:1103.1391 [hep-ex]
- S.K. Gupta, A.S. Mete and G. Valencia, "CP violating anomalous top quark couplings at the LHC", Phys. Rev. **D80** (2009) 034013, arxiv:0905.1074 [hep-ph]

Conference Notes and Proceedings

- A. S. Mete, "Searches for Higgsinos and related challenges in ATLAS", 53$^{\text{rd}}$ Rencontres de Moriond on Electroweak Interactions and Unified Theories, ATL-PHYS-PROC-2018-027 (2018)
- ATLAS Collaboration, "Search for electroweak production of supersymmetric particles in the two and three lepton final state at $\sqrt{s} = 13$ TeV with the ATLAS detector", ATLAS-CONF-2017-039 (2017)
- ATLAS Collaboration, "Search for electroweak production of charginos and neutralinos in multilepton final states at $\sqrt{s} = 13$ TeV with the ATLAS detector", ATLAS-CONF-2016-096 (2016)
- ATLAS Collaboration, "Search for direct top squark pair production and Dark Matter production in final states with two leptons in $\sqrt{s} = 13$ TeV pp collisions using 13 fb^{-1} of ATLAS data", ATLAS-CONF-2016-076 (2016)
- ATLAS Collaboration, "Search for supersymmetry with two same-sign leptons or three leptons using 13.2 fb^{-1} of $\sqrt{s} = 13$ TeV pp collision data collected by the ATLAS detector", ATLAS-CONF-2016-037 (2016)
- ATLAS Collaboration, "Search for direct top squark pair production in final states with two leptons in $\sqrt{s} =$ 13 TeV pp collisions using 3.2 fb^{-1} of ATLAS data", ATLAS-CONF-2016-009 (2016)
- ATLAS Collaboration, "Search for high-mass states with one lepton plus missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector", ATLAS-CONF-2014-017 (2014)
- ATLAS Collaboration, "Search for direct-slepton and direct-chargino production in final states with two opposite-sign leptons, missing transverse momentum and no jets in 20 fb^{-1} of pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector", ATLAS-CONF-2013-049 (2013)
- A. S. Mete, "New Physics searches with ATLAS", EPJ Web Conf. **70** (2014) 00050, ATL-PHYS-PROC-2012-201 (2012)
- ATLAS Collaboration, "Search for high-mass states with one muon plus missing transverse momentum in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector", ATLAS-CONF-2011-082 (2011)

Talks

- "Higgsino searches and related challenges in ATLAS", 53rd Rencontres de Moriond EW (3/2018), **(On behalf of the ATLAS Collaboration)**
- "Searches for supersymmetry with electroweak and third generation squark production at ATLAS", CERN-LHC Seminar (5/2017), **(On behalf of the ATLAS Collaboration)**
- "SUSY at ATLAS", (Re)interpreting the results of new physics searches at the LHC (12/2016), **(On behalf of the ATLAS Collaboration)**
- "SUSY 3$^{\text{rd}}$ Generation Review", ATLAS SUSY Workshop at Sussex (4/2016)
- "EWK SUSY Searches", ATLAS Physics Workshop - Ready for Run-2 (11/2014)
- "Searches for electroweakinos with Higgs in the final state", ATLAS BSM Higgs Workshop (10/2014)

- "Search for dark matter in the mono-lepton channel at the LHC", Dark Matter @ LHC (9/2014), **(On behalf of the ATLAS and CMS Collaborations)**
- "ATLAS Direct Electroweak SUSY Search in 2 OS Leptons + Missing Transverse Momentum Final State", UC Irvine Particle Physics Seminar (3/2014)
- "ATLAS Direct Electroweak Searches", Oregon Terascale Workshop (3/2014)
- "ATLAS Direct Electroweak Searches", CERN Collider Cross Talk (8/2013)
- "2 Leptons ($e/\mu/\tau$) + MET", ATLAS SUSY Workshop at Nikhef (4/2013)
- "New Physics searches with ATLAS", International Conference on New Frontiers in Physics (6/2012), **(On behalf of the ATLAS Collaboration)**
- "Background studies and spin correlation expectations in $t\bar{t}$ events in the e/μ decay channel at the LHC", American Physical Society April Meeting (5/2009), **(On behalf of the ATLAS Collaboration)**

Programming

Operating Systems:	Mac OS X - Linux SLC5/SLC6/CC7/Ubuntu - Windows XP/Vista/7/8/10
Languages:	C, C++, Java, Python, Bash scripting, SQL, R, LaTeX
Softwares:	Pythia, MC@NLO, MadGraph, Jimmy, Herwig, Herwig++, ROOT, Matlab, Mathematica, ATLAS Athena

Languages

Turkish:	Native
English:	Full Professional Proficiency
French:	Elementary Proficiency