

Gabriella Sciolla

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Education

1996 Ph.D., Torino University
1992 Laurea, Torino University

Professional Positions

2015–present Professor of Physics, Brandeis University
2011–2015 Associate Professor, Brandeis University
2003–2011 Assistant and Associate Professor, MIT
2002–2003 Pappalardo Fellow, MIT
2000–2002 Research Scientist, Laboratory for Nuclear Science, MIT
1996–2000 Research Associate, Stanford Linear Accelerator Center

Awards and Honors

2018 Nahum Glatzer Teaching Scholar Award, Brandeis University
2010 Buechner Undergraduate Advising Award, MIT
2007 Cecil and Ida Green Career Development Professorship, MIT
2006 Outstanding Faculty Mentor Award for Undergraduate Research, MIT
2005 Charles E. Reed Faculty Initiatives Fund, MIT

Selected Professional Activities

2019–2020 DOE HEP Basic Research Needs Study Group on Detector R&D, Co-convenor
2017–2019 SNOLAB Science and Technical Review Committee (STRC)
2016–2019 SNOLAB Board of Directors
2015 Committee of Visitors (COV) for the NSF Division of Physics
2014–2017 High Energy Physics Advisory Panel (HEPAP)
2014–present Coordinating Panel on Advanced Detectors (CPAD)
2011 DPF Task Force on Instrumentation in High Energy Physics
2010–2014 Fermilab Physics Advisory Committee (PAC)
2003–2005 Executive Committee of the SLAC Users Organization (Chair 2003–04)
2003–2005 BABAR Speakers Bureau (Chair 2005–06)

Experimental Collaborations/Synergistic Activities

2011–present ATLAS at CERN
2007–2011 DMTPC - Dark Matter Time Projection Chamber
1996–2008 BABAR at SLAC
1992–1996 DELPHI at CERN

Selected ATLAS Activities

2020–present	US ATLAS Level 2 Manager for ITk Strips Project (budget: \$42M)
2017–2020	US ATLAS Deputy Level 2 Manager for ITk Strips Project (budget: \$42M)
2019–2020	US ATLAS Level 3 Manager for ITk Strips Module Assembly (budget: \$15M)
2016–2019	US ATLAS Level 3 Manager for ITk Strips Stave Assembly (budget: \$6M)
2014–2016	ATLAS Muon Combined Performance Convener (MCP)
2013–present	US ATLAS Physics Advisor

Postdoctoral Scholars Advised

2016–present	Max Goblirsch
2015–2018	Gaetano Barone, now Research Associate at Brookhaven National Laboratory
2013–2015	Giacomo Artoni, now Postdoctoral Fellow at the University of Oxford.
2011–2014	Rozmin Daya, then Postdoctoral Fellow at U. Mass Amherst.
2008–2010	James Battat (Pappalardo Fellow), now Associate Professor at Wellesley College
2007–2008	Denis Dujmic, now Research Scientist at L3 Security and Detection Systems
2004–2007	Stephen Sekula, now Associate Professor at the Southern Methodist University

Ph.D. Students Advised

2019–present	Francesca Capocasa
2018–present	Douglas (Todd) Zenger
2018–present	Sagar Addipalli
2017–present	Prajita Bhattarai
2017–present	Jenny Chen, Ph.D, expected in 2022
2016–present	Zachary Schillaci, Ph.D. expected in 2021
2015–2020	Laura Bergsten, now Data Scientist at EQRx in Cambridge, MA
2014–2020	Hannah Herde, now Postdoctoral Fellow at SLAC
2012–2016	Alessio Venturini, now Senior Data Scientist at The Adecco Group, Zurich
2011–2015	Stafano Zambito, then postdoc at Harvard University and now CERN Fellow
2011–2013	Eric Fitzgerald, (previously Ph.D student at MIT), now Data Scientist at Nike
2014–2008	Minliang Zhao, now at Oracle, California
2014–2007	Karsten Koenke, now Assistant Professor in Freiburg, Germany

Masters Students Advised

2014–2016	Kevin Loew, now Ph.D. Student in Physics at Colorado State University
2013–2015	Wei Zhong Goh, now Ph.D. Student in Neuroscience at Boston University

Current Grant Support

Approx. \$500k/year in total received from

Department of Energy base grant
US-ATLAS HL-LHC Project funding
US-ATLAS ATC (ATLAS center) grant
U.S-Israel Binational Science Foundation grant

Selected Recent ATLAS Publications

- *The ABC130 barrel module prototyping programme for the ATLAS strip tracker*, JINST 15 (2020) 09, P09004, arXiv:2009.03197 [physics.ins-det]
- *Observation of vector-boson-fusion production of Higgs bosons in the $H \rightarrow WW^* \rightarrow e\nu\mu\nu$ decay channel in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector*, ATLAS-CONF-2020-045 (2020).
- *Measurement of the four-lepton invariant mass spectrum in 13 TeV proton-proton collisions with the ATLAS detector*, JHEP 04 (2019) 048, arXiv:1902.05892 [hep-ex].
- *Measurement of the Higgs boson mass in the $H \rightarrow ZZ^* \rightarrow 4\ell$ $H \rightarrow \gamma\gamma$ channels with $\sqrt{s}=13$ TeV pp collisions using the ATLAS detector*, Phys. Lett. B 784 (2018) 345, arXiv:1806.00242 [hep-ex].
- *Technical Design Report for the ATLAS Inner Tracker Strip Detector*, CERN-LHCC-2017-005, ATLAS-TDR-025.
- *Muon reconstruction performance of the ATLAS detector in proton–proton collision data at $\sqrt{s}=13$ TeV*, Eur. Phys. J. C 76 (2016) 292, arXiv:1603.05598 [hep-ex].
- *Search for high-mass new phenomena in the dilepton final state using proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector*, Phys. Lett. B 761 (2016) 372, arXiv:1607.03669 [hep-ex].
- *Search for dark matter in events with heavy quarks and missing transverse momentum in pp collisions with the ATLAS detector*, Eur. Phys. J. C 75 (2015) 92, arXiv:1410.4031 [hep-ex].
- *Measurements of Higgs boson production and couplings in the four-lepton channel in pp collisions at center-of-mass energies of 7 and 8 TeV with the ATLAS detector*, Phys. Rev. D 91 (2015) 012006, arXiv:1408.5191 [hep-ex].
- *Measurement of the muon reconstruction performance of the ATLAS detector using 2011 and 2012 LHC proton-proton collision data*, Eur. Phys. J. C 74 (2014) 3130, arXiv:1407.3935 [hep-ex].
- *Search for high-mass dilepton resonances in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector*, Phys. Rev. D 90 (2014) 052005, arXiv:1405.4123 [hep-ex].
- *Measurement of the Higgs boson mass from the $H \rightarrow \gamma\gamma$ and $H \rightarrow ZZ^{(*)} \rightarrow 4\ell$ channels with the ATLAS detector using 25 fb^{-1} of pp collision data*, Phys. Rev. D 90 (2014) 052004, arXiv:1406.3827 [hep-ex].

Selected Recent Talks

- *From Elementary Particles to the Cosmos: Searching for Dark Matter at the LHC*, Dark Matter Summer School (DMSS 2018), University at Albany, SUNY, July 2018.
- *Recent Highlights from the ATLAS Experiment*, Miami 2017, Fort Lauderdale, December 2017.
- *From Elementary Particles to the Cosmos: Searching for Dark Matter at the LHC*, Physics Colloquium, Florida State University, February 2017.
- *Searches for Dark Matter Particles at the Large Hadron Collider*, The VIII International Symposium on Large TPCs for Low-Energy Rare Event Detection, Paris, December 2016.

- *Searches for Dark Matter Particles at the Large Hadron Collider*, Identification of Dark Matter Conference (IDM2016), Sheffield, UK, July 2016.
- *Double the Energy, Double the Fun*, Physics Division Colloquium, Argonne National Laboratory, March 2016.
- *Measurement of the Higgs couplings at the LHC and constraints on New Physics*, PACIFIC 2014, Sep. 2014, Moorea, French Polynesia.
- *Measurement of cross sections and couplings of the Higgs boson in the ZZ decay channel using the ATLAS detector*, ICHEP2014, Valencia (Spain), July 2014.
- *Review of the ATLAS Higgs results from Run-1*, APS Invited Talk, Savannah, Apr. 2014.
- *Dark Matter and Heavy Quarks in scalar interactions at hadron colliders*, Dark Matter at the LHC Workshop, Chicago, Sep. 2013.

University Service (recent)

2020–2021	Physics Department Faculty Search Committee, High Energy (Chair)
2019	South Street Seminar Guest Speaker, alumni event hosted by the Brandeis President
2018–present	Committee on Undergraduate Admissions and Financial Aid (Chair 2019-2020)
2018–2019	Committee on Diversity, Equity and Inclusion Studies in the US and Difference and Justice in the World, School of Arts and Sciences
2016–2017	Physics Department Faculty Search Committee, Astronomy
2015–present	First Year Advisor (now Faculty Ambassador)
2011–present	Physics Department Graduate Admissions Committee (Chair 2020 and 2014)
2011–present	Physics Department Undergraduate Curriculum Committee