

Salvatore AIOLA

CONTACTS

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EDUCATION AND EMPLOYMENT HISTORY

- Nov 2018-current Postdoctoral Research Fellow **INFN, Sezione di Milano (Italy)**
(*Assegno di Ricerca*)
Research topic: *Feasibility study for a search of electric dipole moment of heavy baryons in LHCb*
PI: Prof. Nicola Neri
- Jun 2013-Oct 2018 Ph.D. in Physics **Yale University (USA)**
Thesis: *Measurement of the production of D^0 -meson tagged jets in pp collisions at $\sqrt{s} = 7$ TeV with ALICE*
Thesis Advisor: Prof. John W. Harris
- Apr 2012-May 2013 Student Assistant **LBNL (USA)**
Research topic: *Jets in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ALICE detector*
PI: Dr. Constantinos Loizides
- Jun-Sep 2011 Summer Student **CERN (Switzerland)**
Research topic: *Evaluation of the ALICE EMCAL trigger system performance*
PI: Dr. Constantinos Loizides
- Oct 2010-Nov 2012 Master's in Physics **University of Catania (Italy)**
(*Laurea Magistrale*)
Thesis: *Jet reconstruction in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ALICE experiment*
Thesis Advisor: Prof. Francesco Riggi
Co-advisor: Dr. Constantinos Loizides (LBNL)
Final Grade: 110/110 cum laude
- Oct 2007-Nov 2010 Bachelor's in Physics **University of Catania (Italy)**
(*Laurea Triennale*)
Thesis: *Identification of extensive cosmic showers via time correlation measurements in the context of the EEE Project*
Thesis Advisor: Prof. Francesco Riggi
Final Grade: 110/110 cum laude

PUBLICATIONS

ALICE Collaboration, S. Acharya et al, *Measurement of the production of charm jets tagged with D^0 mesons in pp collisions at $\sqrt{s} = 7$ TeV*, *JHEP* 1908 (2019) 133

ALICE TPC Collaboration, Z. Ahammed et al, *Particle identification studies with a full-size 4-GEM prototype for the ALICE TPC upgrade*, *Nucl. Instr. and Meth. A* 903 (2018) 215

S. Aiola, R.J. Ehlers, S. Gu, et al, *Combination of two Gas Electron Multipliers and a Micromegas as gain elements for a time projection chamber*, *Nucl. Instr. and Meth. A* 834 (2016) 149

ALICE Collaboration, J. Adam et al, *Measurement of jet suppression in Pb–Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV*, *Phys. Lett. B* 746 (2015) 1

ALICE Collaboration, J. Adam et al, *Addendum to the Technical Design Report for the Upgrade of the ALICE Time Projection Chamber*, *CERN Tech. Rep. ALICE-TDR-016-ADD-1* (2015)

EEE Collaboration, M. Abbrescia et al, *Time correlation measurements from extensive air showers detected by the EEE telescopes*, *Eur. Phys. Journal Plus* 128 (2013) 12

S. Aiola, *Educational measurements of cosmic rays using small scintillation detectors*, *Il Nuovo Cimento C* 35 (2012) 223

S. Aiola, P. La Rocca, F. Riggi and S. Riggi, *Detection of extensive cosmic air showers by small scintillation detectors with wavelength-shifting fibres*, *Eur. Journal of Phys.* 33 (2012) 1207

TALKS AND PRESENTATIONS

EDM and MDM measurements of heavy baryons and leptons

S. Aiola

Physics Beyond Colliders Working Group meeting, CERN, Geneva, Switzerland, 5-6 November 2019

Oral presentation: <https://indico.cern.ch/event/827066/contributions/3590887/>

Perspectives for measurements of electromagnetic dipole moments of charm and strange baryons at the LHC

S. Aiola

105th Congress of the Italian Physical Society (SIF), L'Aquila, Italy, 23-27 September 2019

Oral presentation: <https://congresso.sif.it/talk/303>

EDM and MDM measurements in LHCb: the SELDOM project

S. Aiola

Second LHCb Heavy Ion Workshop: Exploring Matter with Precision Charm and Beauty Production Measurements in Heavy Nuclei Collisions, Chia (Cagliari), Italy, 4-6 September 2019

Oral presentation: <https://agenda.infn.it/event/18734/contributions/98726>

Measurements of heavy-flavour correlations and jets with ALICE at the LHC

S. Aiola for the ALICE Collaboration

Hard Probes 2018, Aix-Les-Bains, France, 30 September - 5 October 2018

Oral presentation: <https://indico.cern.ch/event/634426/contributions/3090489/>

Measurement of the p_T -differential cross section and fragmentation function of D^0 -tagged jets in pp collisions with ALICE

S. Aiola for the ALICE Collaboration

Quark Matter 2018, Venezia, Italy, 14-19 May 2018

Poster presentation: <https://indico.cern.ch/event/656452/contributions/2859692/>

New results on jets and heavy flavor in heavy-ion collisions with ALICE

S. Aiola for the ALICE Collaboration

LHCP 2017, Shanghai, China, 15-20 May 2017

Proceedings: [arXiv:1709.09654](https://arxiv.org/abs/1709.09654)

Exploring the charm content of jets in pp collisions with ALICE

S. Aiola for the ALICE Collaboration

Quark Matter 2017, Chicago, IL, USA, 5-11 February 2017

Poster presentation: <https://indico.cern.ch/event/433345/contributions/2358064/>

Performance studies of D-meson tagged jets in pp collisions at 7 TeV with ALICE

S. Aiola for the ALICE Collaboration

Hot Quarks 2016, South Padre Island, TX, USA, 12-17 September 2016

Proceedings: [J.Phys.Conf.Ser. 832 \(2017\) 012030](https://arxiv.org/abs/1701.01203)

Characterization of an amplification read-out gas chamber with stacked GEM and Micromegas detectors

S. Aiola

APS Meeting, Baltimore, MD, USA, 11-14 April 2015

Abstract: <http://adsabs.harvard.edu/abs/2015APS..APR.E4001A>

Measurement of jet p_T spectra and R_{AA} in pp and Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ALICE detector

S. Aiola for the ALICE Collaboration

Quark Matter 2014, Darmstadt, Germany, 19-24 May 2014

Proceedings: [Nuclear Physics A 931 \(2014\) 382](https://arxiv.org/abs/1405.382)

Measurement of jet spectra in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV with the ALICE detector at the LHC

S. Aiola for the ALICE Collaboration

Hot Quarks 2012, Copamarina, Puerto Rico, 14-20 October 2012

Proceedings: [J.Phys.Conf.Ser. 446 \(2013\) 012005](https://arxiv.org/abs/1301.0120)

Misure didattiche di correlazione tra cosmici mediante scintillatori di piccole dimensioni: un'attività nella laurea triennale in fisica

S. Aiola, P. La Rocca, F. Riggi

XCVII National Congress of the Italian Physical Society, L'Aquila, Italy, 26-30 September 2011

Awarded as best talk in the section "General physics, didactics and history of physics"

RESEARCH EXPERIENCE

- 2018-current **Member of the LHCb Collaboration**
Main activities: tracking algorithms, SELDOM project (electromagnetic dipole moments of heavy baryons)
- 2011-2019 **Member of the ALICE Collaboration**
Main activities: EMCal/DCal, TPC upgrade, operations, jets, heavy-flavour
- 2010-2012 **Member of the EEE Collaboration**
Main activities: time-correlation measurements of cosmic showers

TEACHING EXPERIENCE

- Spring 2017 **Quantum Physics and Beyond** (Yale University)
Teaching Fellow
Prof. John W. Harris
- Spring 2014, **Modern Physical Measurement** (Yale University)
Fall 2014, Teaching Fellow
Spring 2015 Prof. Keith Baker, Prof. Witold Skiba, Prof. Karsten Heeger
- Fall 2013 **The Physics of Dance** (Yale University)
Grader
Prof. Sarah Demers

LANGUAGES

- Italian** Native speaker
English Full professional proficiency (C2)
French Elementary proficiency (A2)

REFERENCES

Available on request.