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## RESEARCH EXPERIENCE

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### Lawrence Berkeley National Laboratory

Berkeley, CA, United States

*Owen Chamberlain Postdoctoral Fellow*

*Sept. 2019 – present*

- Assembly and testing of pixelated LArTPC prototypes for the DUNE near detector.
- Leading developer of the DUNE near detector simulation framework with GPU algorithms.
- Monte Carlo samples production manager of the Mu2e collaboration.
- Deep learning methods for particle identification in the Mu2e experiment.

### Harvard University

Cambridge, MA, United States

*Postdoctoral Fellow*

*Apr. 2019 – Aug. 2019*

*Graduate Fellow*

*Sept. 2017 – Mar. 2019*

- First measurement of cosmic-ray reconstruction efficiency in a LArTPC.
- Data-driven measurement of the space-charge effect with tagged cosmic muons in MicroBooNE.
- Leading analyzer of the low-energy excess search for the MicroBooNE collaboration, main physics goal of the experiment.

### INFN Frascati National Laboratories

Frascati, Rome, Italy

*Graduate Fellow*

*Feb. – Sept. 2015*

- Full characterization of the first electromagnetic calorimeter prototype for the Mu2e experiment. Three test beams and radiation-hardness tests.

### Fermi National Accelerator Laboratory

Batavia, IL, United States

*Summer intern*

*Jul. – Sept. 2013*

- Electronics simulation for the Mu2e electromagnetic calorimeter.

## EDUCATION

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### University of Oxford

Oxford, United Kingdom

*Ph.D. in Particle Physics*

*Mar. 2019*

- Thesis: “[Search for a low-energy excess of electron neutrinos in MicroBooNE](#)”
- Advisors: Roxanne Guenette, Alfons Weber

### Sapienza University of Rome

Rome, Italy

*Master (Laurea magistrale) in Physics*

*Jan. 2015*

- Thesis: “[Study of requirements and performances of the electromagnetic calorimeter for the Mu2e experiment at Fermilab](#)”
- Advisors: Stefano Miscetti, Cesare Bini

### Sapienza University of Rome

Rome, Italy

*Bachelor (Laurea) in Physics*

*Oct. 2012*

## TEACHING & TUTORING EXPERIENCE

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- Supervisor of two students at the **University of California - Berkeley** for their undergraduate academic research project 2021
- Tutor of one student for the **Harvard University summer student program** 2018
- Demonstrator in the **Optics laboratory of the University of Oxford** 2017
- Tutor of one student for the **University of Oxford summer student program** 2017

## SCHOLARSHIPS, FELLOWSHIPS & AWARDS

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- Owen Chamberlain Postdoctoral Fellowship at the Lawrence Berkeley National Laboratory 2019 – 2022
- Ermenegildo Zegna Founder's Scholarship 2015 – 2017
- University of Oxford St Catherine's College Graduate Scholarship 2016 – 2017
- INFN Postgraduate Scholarship 2015
- INFN - Fermilab Summer Student Scholarship 2013
- University College "Lamaro Pozzani" Scholarship 2009 – 2014

## PROFESSIONAL ACTIVITIES

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- **GPU Hackathon**, Simon Fraser University 2021
- **Computational and Data Science Training for High Energy Physics**, Princeton University 2019
- **International Neutrino Summer School**, ICISE, Vietnam 2016

## OUTREACH & COMMUNITY

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- **Early Career Member-at-Large**, American Physical Society, Topical Group on Data Science 2022
- **Nuclear Science Day for Scouts** at the Lawrence Berkeley National Laboratory 2021
- Developer and maintainer of a **neutrino preprints Twitter bot** @nuarxiv 2020
- Re-design of the **MicroBooNE collaboration website** <https://microboone.fnal.gov> 2017
- Marking of **British Physics Olympiads** papers at the University of Oxford 2015 – 2016
- Orientation and welcoming events at the University of Oxford 2015 – 2016

## CONFERENCE PRESENTATIONS & TALKS

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- **Neutrino 2022**, *Demonstration of a novel, ton-scale, single-phase LArTPC with pixelated readout* (poster), Seoul, South Korea (remote), May 2022
- **ROOT Users Workshop**, *Mu2e Analysis Models*, CERN (remote), May 2022
- **HEP Software Foundation Frameworks Working Group**, *Mu2e and its Framework Usage*, Fermilab (remote), May 2022
- **APS April Meeting 2022**, *Demonstration of a novel, ton-scale, single-phase LArTPC with pixelated readout*, New York, United States Apr. 2022
- **PHYS 290E invited seminar**, *Machine Learning and Artificial Intelligence at the intensity frontier*, University of California Berkeley, Mar. 2022
- **WIDG invited seminar**, *Demonstration of a novel, ton-scale, single-phase LArTPC with pixelated readout*, Wright Lab, Yale University, Nov. 2021
- **Machine Learning Group Meeting invited talk**, *Simulation of a neutrino detector using GPU algorithms*, Lawrence Berkeley National Laboratory, Sept. 2021

- **APS April Meeting 2021**, *Highly-parallelized simulation of a 3D pixelated charge readout for liquid argon time projection chambers*, Apr. 2021
- **PHYSTAT-nu 2019**, *Status of the MicroBooNE low-energy excess and evaluation of the systematic uncertainties* (poster), CERN, Switzerland, Jan. 2019
- **Research Progress Meeting invited seminar**, *Search for a low-energy excess at MicroBooNE*, Lawrence Berkeley National Laboratory, Jan. 2019
- **Neutrino 2018**, *Electron-neutrino reconstruction and selection in the MicroBooNE LArTPC using the Pandora pattern recognition* (poster), Heidelberg, Germany, June 2018
- **MASS 2018**, *MicroBooNE status and recent results*, University of Southern Denmark, Odense, Denmark, May 2018
- **DPF 2017**, *Cosmic-ray reconstruction efficiency and detector performances in the MicroBooNE experiment*, Fermilab, United States, July 2017
- **WIN 2017**, *Detector performance and cosmic-ray reconstruction efficiency in MicroBooNE*, University of California Irvine, United States, June 2017
- **NNN 2016**, *Cosmic-ray reconstruction efficiency with the MicroBooNE detector*, IHEP, Beijing, China, Nov. 2016
- **NuPhys 2015**, *The Muon Counter System of the MicroBooNE experiment*, Queen Mary University, London, United Kingdom, Dec. 2015
- **IFAE 2015**, *Characterization of the prototype for the Mu2e electromagnetic calorimeter*, University of Rome Tor Vergata, Rome, Italy, Apr. 2015
- **SIF National Congress**, *The electromagnetic calorimeter of the Mu2e experiment*, University of Pisa, Pisa, Italy, Sept. 2014

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- [1] P. Abratenko *et al.* [MicroBooNE], “Search for an anomalous excess of charged-current  $\nu_e$  interactions without pions in the final state with the MicroBooNE experiment,” Phys. Rev. D **105**, no.3, 035501 (2022) [doi:10.1103/PhysRevD.105.112004](https://doi.org/10.1103/PhysRevD.105.112004) [[arXiv:2110.14065](#)] [[hep-ex](#)]
  - [2] P. Abratenko *et al.* [MicroBooNE], “Search for an Excess of Electron Neutrino Interactions in MicroBooNE Using Multiple Final State Topologies,” Phys. Rev. Lett. **128** (2022) no. 24, 241801 [doi:10.1103/PhysRevLett.128.241801](https://doi.org/10.1103/PhysRevLett.128.241801) [[arXiv:2110.14054](#)] [[hep-ex](#)]
  - [3] A. Edmonds *et al.* [AlCap], “A Measurement of Proton, Deuteron, Triton and Alpha Particle Emission after Nuclear Muon Capture on Al, Si and Ti with the AlCap Experiment,” Phys. Rev. C **105**, no.3, 035501 (2022) [doi:10.1103/PhysRevC.105.035501](https://doi.org/10.1103/PhysRevC.105.035501) [[arXiv:2110.10228](#)] [[physics.ins-det](#)].
  - [4] A. A. Abud *et al.* [DUNE], “Deep Underground Neutrino Experiment (DUNE) Near Detector Conceptual Design Report,” Instruments **5** (2021) no.4, 31 [doi:10.3390/instruments5040031](https://doi.org/10.3390/instruments5040031) [[arxiv:2103.13910](#)] [[hep-ex](#)].
  - [5] A. A. Abud *et al.* [DUNE], “Low exposure long-baseline neutrino oscillation sensitivity of the DUNE experiment,” Phys. Rev. D **105**, no.7, 072006 (2022) [doi:10.1103/PhysRevD.105.072006](https://doi.org/10.1103/PhysRevD.105.072006) [[arxiv:2109.01304](#)] [[hep-ex](#)].
  - [6] A. A. Abud *et al.* [DUNE], “Design, construction and operation of the ProtoDUNE-SP Liquid Argon TPC,” JINST **17**, no.01, P01005 (2022) [doi:10.1088/1748-0221/17/01/P01005](https://doi.org/10.1088/1748-0221/17/01/P01005) [[arxiv:2108.01902](#)] [[physics.ins-det](#)].
  - [7] A. A. Abud *et al.* [DUNE], “Searching for Solar KDAR with DUNE,” JCAP **10**, 065 (2021) [doi:10.1088/1475-7516/2021/10/065](https://doi.org/10.1088/1475-7516/2021/10/065) [[arxiv:2107.09109](#)] [[hep-ex](#)].
  - [8] P. Abratenko *et al.* [MicroBooNE], “Cosmic Ray Background Rejection with Wire-Cell LArTPC Event Reconstruction in the MicroBooNE Detector,” Phys. Rev. Applied **15** (2021) no.6, 064071 [doi:10.1103/PhysRevApplied.15.064071](https://doi.org/10.1103/PhysRevApplied.15.064071) [[arxiv:2101.05076](#)] [[physics.ins-det](#)].
  - [9] P. Abratenko *et al.* [MicroBooNE], “Measurement of the flux-averaged inclusive charged-current electron neutrino and antineutrino cross section on argon using the NuMI beam and the MicroBooNE detector,” Phys. Rev. D **104** (2021) no.5, 052002 [doi:10.1103/PhysRevD.104.052002](https://doi.org/10.1103/PhysRevD.104.052002) [[arxiv:2101.04228](#)] [[hep-ex](#)].
  - [10] P. Abratenko *et al.* [MicroBooNE], “Measurement of the atmospheric muon rate with the MicroBooNE Liquid Argon TPC,” JINST **16** (2021) no.04, P04004 [doi:10.1088/1748-0221/16/04/P04004](https://doi.org/10.1088/1748-0221/16/04/P04004) [[arxiv:2012.14324](#)] [[physics.ins-det](#)].
  - [11] P. Abratenko *et al.* [MicroBooNE], “Semantic segmentation with a sparse convolutional neural network for event reconstruction in MicroBooNE,” Phys. Rev. D **103** (2021) no.5, 052012 [doi:10.1103/PhysRevD.103.052012](https://doi.org/10.1103/PhysRevD.103.052012) [[arxiv:2012.08513](#)] [[physics.ins-det](#)].
  - [12] P. Abratenko *et al.* [MicroBooNE], “High-performance Generic Neutrino Detection in a LArTPC near the Earth’s Surface with the MicroBooNE Detector,” [[arxiv:2012.07928](#)] [[hep-ex](#)], *submitted to JINST*.

- [13] P. Abratenko *et al.* [MicroBooNE], “Neutrino event selection in the MicroBooNE liquid argon time projection chamber using Wire-Cell 3D imaging, clustering, and charge-light matching,” JINST **16** (2021) no.06, P06043 [doi:10.1088/1748-0221/16/06/P06043](#) [[arxiv:2011.01375](#) [[physics.ins-det](#)]].
- [14] P. Abratenko *et al.* [MicroBooNE], “Convolutional neural network for multiple particle identification in the MicroBooNE liquid argon time projection chamber,” Phys. Rev. D **103** (2021) no.9, 092003 [doi:10.1103/PhysRevD.103.092003](#) [[arxiv:2010.08653](#) [[hep-ex](#)]].
- [15] P. Abratenko *et al.* [MicroBooNE], “Measurement of differential cross sections for  $\nu_\mu$ -Ar charged-current interactions with protons and no pions in the final state with the MicroBooNE detector,” Phys. Rev. D **102** (2020) no.11, 112013 [doi:10.1103/PhysRevD.102.112013](#) [[arxiv:2010.02390](#) [[hep-ex](#)]].
- [16] P. Abratenko *et al.* [MicroBooNE], “The continuous readout stream of the MicroBooNE liquid argon time projection chamber for detection of supernova burst neutrinos,” JINST **16** (2021) no.02, P02008 [doi:10.1088/1748-0221/16/02/P02008](#) [[arxiv:2008.13761](#) [[physics.ins-det](#)]].
- [17] P. Abratenko *et al.* [MicroBooNE], “Measurement of space charge effects in the MicroBooNE LArTPC using cosmic muons,” JINST **15** (2020) no.12, P12037 [doi:10.1088/1748-0221/15/12/P12037](#) [[arxiv:2008.09765](#) [[physics.ins-det](#)]].
- [18] P. Abratenko *et al.* [MicroBooNE], “Vertex-finding and reconstruction of contained two-trackneutrino events in the MicroBooNE detector,” JINST **16** (2021) no.02, P02017 [doi:10.1088/1748-0221/16/02/P02017](#) [[arxiv:2002.09375](#) [[physics.ins-det](#)]].
- [19] P. Abratenko *et al.* [MicroBooNE], “Search for Heavy Neutral Leptons Decaying into Muon-Pion Pairs in the MicroBooNE Detector,” Phys. Rev. D **101** (2020) no.5, 052001 [doi:10.1103/PhysRevD.101.052001](#) [[arxiv:1911.10545](#) [[hep-ex](#)]].
- [20] C. Adams *et al.* [MicroBooNE], “Reconstruction and Measurement of  $\mathcal{O}(100)$  MeV Energy Electromagnetic Activity from  $\pi^0 \rightarrow \gamma\gamma$  Decays in the MicroBooNE LArTPC,” JINST **15** (2020) no.02, P02007 [doi:10.1088/1748-0221/15/02/P02007](#) [[arxiv:1910.02166](#) [[hep-ex](#)]].
- [21] C. Adams *et al.* [MicroBooNE], “A method to determine the electric field of liquid argon time projection chambers using a UV laser system and its application in MicroBooNE,” JINST **15** (2020) no.07, P07010 [doi:10.1088/1748-0221/15/07/P07010](#) [[arxiv:1910.01430](#) [[physics.ins-det](#)]].
- [22] C. Adams *et al.* [MicroBooNE], “Calibration of the charge and energy loss per unit length of the MicroBooNE liquid argon time projection chamber using muons and protons,” JINST **15** (2020) no.03, P03022 [doi:10.1088/1748-0221/15/03/P03022](#) [[arxiv:1907.11736](#) [[physics.ins-det](#)]].
- [23] P. Abratenko *et al.* [MicroBooNE], “First Measurement of Inclusive Muon Neutrino Charged Current Differential Cross Sections on Argon at  $E_\nu \sim 0.8$  GeV with the MicroBooNE Detector,” Phys. Rev. Lett. **123** (2019) no.13, 131801 [doi:10.1103/PhysRevLett.123.131801](#) [[arxiv:1905.09694](#) [[hep-ex](#)]].
- [24] S. R. Soleti, “Search for a low-energy excess of electron neutrinos in MicroBooNE,” PhD thesis, [doi:10.2172/1502821](#)
- [25] C. Adams *et al.* [MicroBooNE], “Design and construction of the MicroBooNE Cosmic Ray Tagger system,” JINST **14** (2019) no.04, P04004 [doi:10.1088/1748-0221/14/04/P04004](#) [[arxiv:1901.02862](#) [[physics.ins-det](#)]].

- [26] C. Adams *et al.* [MicroBooNE], “Rejecting cosmic background for exclusive charged current quasi elastic neutrino interaction studies with Liquid Argon TPCs; a case study with the MicroBooNE detector,” Eur. Phys. J. C **79** (2019) no.8, 673 doi:[10.1140/epjc/s10052-019-7184-7](https://doi.org/10.1140/epjc/s10052-019-7184-7) [arxiv:[1812.05679](https://arxiv.org/abs/1812.05679) [physics.ins-det]].
- [27] C. Adams *et al.* [MicroBooNE], “First measurement of  $\nu_\mu$  charged-current  $\pi^0$  production on argon with the MicroBooNE detector,” Phys. Rev. D **99** (2019) no.9, 091102 doi:[10.1103/PhysRevD.99.091102](https://doi.org/10.1103/PhysRevD.99.091102) [arxiv:[1811.02700](https://arxiv.org/abs/1811.02700) [hep-ex]].
- [28] C. Adams *et al.* [MicroBooNE], “Deep neural network for pixel-level electromagnetic particle identification in the MicroBooNE liquid argon time projection chamber,” Phys. Rev. D **99** (2019) no.9, 092001 doi:[10.1103/PhysRevD.99.092001](https://doi.org/10.1103/PhysRevD.99.092001) [arxiv:[1808.07269](https://arxiv.org/abs/1808.07269) [hep-ex]].
- [29] C. Adams *et al.* [MicroBooNE], “Comparison of  $\nu_\mu$ -Ar multiplicity distributions observed by MicroBooNE to GENIE model predictions,” Eur. Phys. J. C **79** (2019) no.3, 248 doi:[10.1140/epjc/s10052-019-6742-3](https://doi.org/10.1140/epjc/s10052-019-6742-3) [arxiv:[1805.06887](https://arxiv.org/abs/1805.06887) [hep-ex]].
- [30] C. Adams *et al.* [MicroBooNE], “Ionization electron signal processing in single phase LArTPCs. Part II. Data/simulation comparison and performance in MicroBooNE,” JINST **13** (2018) no.07, P07007 doi:[10.1088/1748-0221/13/07/P07007](https://doi.org/10.1088/1748-0221/13/07/P07007) [arxiv:[1804.02583](https://arxiv.org/abs/1804.02583) [physics.ins-det]].
- [31] C. Adams *et al.* [MicroBooNE], “Ionization electron signal processing in single phase LArTPCs. Part I. Algorithm Description and quantitative evaluation with MicroBooNE simulation,” JINST **13** (2018) no.07, P07006 doi:[10.1088/1748-0221/13/07/P07006](https://doi.org/10.1088/1748-0221/13/07/P07006) [arxiv:[1802.08709](https://arxiv.org/abs/1802.08709) [physics.ins-det]].
- [32] R. Acciarri *et al.* [MicroBooNE], “The Pandora multi-algorithm approach to automated pattern recognition of cosmic-ray muon and neutrino events in the MicroBooNE detector,” Eur. Phys. J. C **78** (2018) no.1, 82 doi:[10.1140/epjc/s10052-017-5481-6](https://doi.org/10.1140/epjc/s10052-017-5481-6) [arxiv:[1708.03135](https://arxiv.org/abs/1708.03135) [hep-ex]].
- [33] R. Acciarri *et al.* [MicroBooNE], “Measurement of cosmic-ray reconstruction efficiencies in the MicroBooNE LArTPC using a small external cosmic-ray counter,” JINST **12** (2017) no.12, P12030 doi:[10.1088/1748-0221/12/12/P12030](https://doi.org/10.1088/1748-0221/12/12/P12030) [arxiv:[1707.09903](https://arxiv.org/abs/1707.09903) [hep-ex]].
- [34] R. Acciarri *et al.* [MicroBooNE], “Noise Characterization and Filtering in the MicroBooNE Liquid Argon TPC,” JINST **12** (2017) no.08, P08003 doi:[10.1088/1748-0221/12/08/P08003](https://doi.org/10.1088/1748-0221/12/08/P08003) [arxiv:[1705.07341](https://arxiv.org/abs/1705.07341) [physics.ins-det]].
- [35] R. Acciarri *et al.* [MicroBooNE], “Michel Electron Reconstruction Using Cosmic-Ray Data from the MicroBooNE LArTPC,” JINST **12** (2017) no.09, P09014 doi:[10.1088/1748-0221/12/09/P09014](https://doi.org/10.1088/1748-0221/12/09/P09014) [arxiv:[1704.02927](https://arxiv.org/abs/1704.02927) [physics.ins-det]].
- [36] P. Abratenko *et al.* [MicroBooNE], “Determination of muon momentum in the MicroBooNE LArTPC using an improved model of multiple Coulomb scattering,” JINST **12** (2017) no.10, P10010 doi:[10.1088/1748-0221/12/10/P10010](https://doi.org/10.1088/1748-0221/12/10/P10010) [arxiv:[1703.06187](https://arxiv.org/abs/1703.06187) [physics.ins-det]].
- [37] O. Atanova *et al.* “Measurement of the energy and time resolution of a undoped CsI + MPPC array for the Mu2e experiment,” JINST **12** (2017) no.05, P05007 doi:[10.1088/1748-0221/12/05/P05007](https://doi.org/10.1088/1748-0221/12/05/P05007) [arxiv:[1702.03720](https://arxiv.org/abs/1702.03720) [physics.ins-det]].
- [38] R. Acciarri *et al.* [MicroBooNE], “Design and Construction of the MicroBooNE Detector,” JINST **12** (2017) no.02, P02017 doi:[10.1088/1748-0221/12/02/P02017](https://doi.org/10.1088/1748-0221/12/02/P02017) [arxiv:[1612.05824](https://arxiv.org/abs/1612.05824) [physics.ins-det]].



- [39] M. Auger *et al.* “A Novel Cosmic Ray Tagger System for Liquid Argon TPC Neutrino Detectors,” *Instruments* **1** (2017) no.1, 2 [doi:10.3390/instruments1010002](https://doi.org/10.3390/instruments1010002) [[arxiv:1612.04614](https://arxiv.org/abs/1612.04614) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [40] R. Acciarri *et al.* [MicroBooNE], “Convolutional Neural Networks Applied to Neutrino Events in a Liquid Argon Time Projection Chamber,” *JINST* **12** (2017) no.03, P03011 [doi:10.1088/1748-0221/12/03/P03011](https://doi.org/10.1088/1748-0221/12/03/P03011) [[arxiv:1611.05531](https://arxiv.org/abs/1611.05531) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [41] M. Angelucci *et al.* “Longitudinal uniformity, time performances and irradiation test of pure CsI crystals,” *Nucl. Instrum. Meth. A* **824** (2016), 678-680 [doi:10.1016/j.nima.2015.11.042](https://doi.org/10.1016/j.nima.2015.11.042) [[arxiv:1606.07110](https://arxiv.org/abs/1606.07110) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [42] N. Atanov *et al.* “Design and status of the Mu2e electromagnetic calorimeter,” *Nucl. Instrum. Meth. A* **824** (2016), 695-698 [doi:10.1016/j.nima.2015.09.074](https://doi.org/10.1016/j.nima.2015.09.074) [[arxiv:1608.02652](https://arxiv.org/abs/1608.02652) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [43] N. Atanov *et al.* “Energy and time resolution of a LYSO matrix prototype for the Mu2e experiment,” *Nucl. Instrum. Meth. A* **824** (2016), 684-685 [doi:10.1016/j.nima.2015.09.051](https://doi.org/10.1016/j.nima.2015.09.051) [[arxiv:1605.09419](https://arxiv.org/abs/1605.09419) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [44] S. R. Soleti, “The Muon Counter System for the MicroBooNE experiment,” *Proceedings of NuPhys 2015*, [[arxiv:1604.07858](https://arxiv.org/abs/1604.07858) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [45] N. Atanov *et al.* “Characterization of a  $5 \times 5$  LYSO Matrix Calorimeter Prototype,” *IEEE Trans. Nucl. Sci.* **63** (2016) no.2, 596-604 [doi:10.1109/TNS.2016.2522818](https://doi.org/10.1109/TNS.2016.2522818)
- [46] N. Atanov *et al.* “Characterization of a prototype for the electromagnetic calorimeter of the Mu2e experiment,” *Nuovo Cim. C* **39** (2016) no.1, 267 [doi:10.1393/ncc/i2016-16267-0](https://doi.org/10.1393/ncc/i2016-16267-0)
- [47] N. Atanov *et al.* [Mu2e], “Measurement of time resolution of the Mu2e LYSO calorimeter prototype,” *Nucl. Instrum. Meth. A* **812** (2016), 104-111 [doi:10.1016/j.nima.2015.12.055](https://doi.org/10.1016/j.nima.2015.12.055) [[arxiv:1509.04468](https://arxiv.org/abs/1509.04468) [[physics.ins-det](https://arxiv.org/archive/physics)]].
- [48] S. R. Soleti, “Study of requirements and performances of the electromagnetic calorimeter for the Mu2e experiment at Fermilab,” *Master thesis*, [doi:10.2172/1223803](https://doi.org/10.2172/1223803)
- [49] L. Bartoszek *et al.* [Mu2e], “Mu2e Technical Design Report,” [doi:10.2172/1172555](https://doi.org/10.2172/1172555) [[arxiv:1501.05241](https://arxiv.org/abs/1501.05241) [[physics.ins-det](https://arxiv.org/archive/physics)]].