Loreto Peter Alonzi III

School of Data Science		
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Professional Experience

- Assistant Professor of Data Science, General Faculty, University of Virginia, 2022 August -present
- Open Data Lab Project Manager and Data Scientist, School of Data Science, University of Virginia, 2018 October - 2022 August
- Senior Research Data Scientist, Research Data Services, University Library, 2014 October - 2018 October

Education

- Postdoctoral Research Associate, University of Washington, Department of Physics, Center for Experimental Nuclear Physics and Astrophysics, 2012 June - 2014 September
- Ph.D. Physics, *University of Virginia*, 2012.
- M.A. Physics, *University of Virginia*, 2007.
- B.S. Physics with Honors et Magna cum Laude, *The College of William and Mary in Virginia*, 2005.

Honors and Awards

- SEDSI Best Paper in Innovation Track, The Future of Data Science Education, 2024
- SEIDS Best Paper, 2024.
- University of Virginia Society of Fellows, Junior Fellow, 2010.
- Eagle Scout, BSA NEIC Troop 5, 1999.

Publications and Scholarly Work

Archival Peer Reviewed Journal Articles

- M.A.McCulloch, **L. P. Alonzi**, S. C. White, F. Haregu, and M. D. Porter. "Pediatric Donor Heart Acceptance Practices in the United States: What Is Really Being Considered?" Pediatric Transplantation 28, no. 1 (November 2023). https://doi.org/10.1111/petr.14649.

- **Top Journal, 1,849 citations** – B. Abi, et al. "Measurement of the Positive Muon Anomalous Magnetic Moment to 0.46 ppm" (Muon $g-2$ Collaboration) Phys. Rev. Lett. 126, 141801 (2021)

- J. Grigsby, et al. "Deep learning analysis of deeply virtual exclusive photoproduction" Phys. Rev. D 104, 016001 (2021)

- **Top Journal** – D. Blyth, et al. "First Observation of P-odd γ Asymmetry in Polarized Neutron Capture on Hydrogen" (NPDGamma Collaboration) Phys. Rev. Lett. 121, 242002 (2018)

- D. Počanić, et al. "PEN: a low energy test of lepton universality", *PoS HQL* 2016 (2017) 042

- **L.P.Alonzi**, et al. "The calorimeter system of the new muon $g-2$ experiment at Fermilab", *Nucl.Instrum.Meth. A* 824 (2016) 718-720

- Muon $g-2$ collaboration, "The Measurement of the Anomalous Magnetic Moment of the Muon at Fermilab", *J.Phys.Chem.Ref.Data* 44 (2015) no.3, 031211

- A.T. Fienberg, et al. "Studies of an array of PbF2 Cherenkov crystals with large-area SiPM readout", *Nucl.Instrum.Meth. A* 783 12-21 (2015)

- D. Počanić, et al. "Nab: Measurement Principles, Apparatus and Uncertainties", *Nucl.Instrum.Meth. A* 611, 211-215 (2009).

- D. Počanić(Virginia U.), L.P. Alonzi(Virginia U.), V.A. Baranov(Dubna, JINR), W. Bertl(PSI, Villigen), Yu.M. Bystritsky(Dubna, JINR) et al. (PEN Collaboration), Investigation of Rare Pion Decays with the PIBETA Spectrometer, *Phys.Part.Nucl.Lett. 15 6, 610-620* (2018).

- **Top Journal** – NPDGamma Collaboration, First Observation of P-odd γ Asymmetry in Polarized Neutron Capture on Hydrogen, *Phys.Rev.Lett 121 24 242002* (2018).

- E. Frlez L.P. Alonzi for the PEN Collaboration, Precise Measurement of $\pi^+ \to e^+\nu$ Branching Ratio, *New Trends in High-Energy Physics 2008, 97-106* (2008).

Archival peer reviewed conference proceedings, books, book chapters, and other categories

- B. Wright, **L. P. Alonzi**, A. Rivera. "The Future of Data Science Education" 53rd Annual Southeast Decision Science Institute (March 2024). Best paper in innovation track. https://arxiv.org/abs/2407.11824.
- B. Wright, **L. P. Alonzi**, A. Rivera. "What story can you tell from your cell phone apps?: A Data Science Lab Exercise" 53rd Annual Southeast Decision Science Institute (March 2024).
- "Machine Learning for global fitting of CFF from sparse data", Data Science Roadmap to compton form factors of quarks and gluons, Center for Nuclear Femtography, September 2020.
- "Data Science and Femtography", CNF2019 Symposium, SURA Headquarters, August 2019.
- "The New Muon g-2 Experiment: E989 Status and Progress Update", SESAPS 81st annual meeting, November 2014.
- L.P. Alonzi for the PEN Collaboration, "Precision Measurements of Rare Pion Decay Channels", University of Washington, CENPA, March 2012.
- L.P. Alonzi for the g-2 Collaboration, "The New Muon g-2 Experiment: E989 Status and Progress Update", *APS NW Section Meeting* (2014).
- L.P. Alonzi for the PEN Collaboration, "A Mini Time Projection Chamber of the PEN Experiment", *April APS Meeting* (2010).
- C.J. Glaser for the PEN Collaboration, 'PEN experiment: a precise test of lepton universality", *CIPANP* (2018).
- L.P. Alonzi for the Nab Collaboration, "Precision Measurement of a and b in Neutron Beta Decay: The Nab/abBA Experimental Program", *April APS Meeting* (2009).
- D. Počanić for the PEN collaboration, "New Results in Rare Allowed Muon and Pion Decays", *Int.J.Mod.Phys.Conf.Ser. 35 (2014) 1460437, 9^{th} International Workshop on e+ e- Collisions "From phi to psi 2013"* (2014).
- D. Počanić for the PEN collaboration, "New Results in Rare Allowed Muon and Pion Decays", *AIP Conf.Proc. 1560 (2013) 1, 128-130 to CIPANP 2012* (2013).
- S. Baessler for the NAB collaboration, Neutron Beta Decay Studies with Nab, *AIP Conf.Proc. 1560 (2013) 1, 114-116 to CIPANP 2012* (2012).

- D. Kawall for the New Muon g-2 Collaboration, "The New Muon g-2 Experiment at Fermilab", *11^{th} Conference on the Intersections of Particle and Nuclear Physics (2012)*, *AIP Conf.Proc. 1560 (2013) 106-108* (2013)

- S. Baessler for the Nab Collaboration, "Neutron Beta Decay Studies with Nab", *11^{th} Conference on the Intersections of Particle and Nuclear Physics* (2012).

- D. Počanić for the PEN collaboration, "Rare Pion and Muon Decay Measurements: The PIBETA and PEN Experiments", *6^{th} International Workshop on Chiral Dynamics* (2009).

- D. Počanić for the PEN collaboration, "PEN Experiment: A Precise Measurement of the $\pi^+ \to e^+\nu$ Decay Branching Fraction", *10^{th} Conference on the Intersections of Particle and Nuclear Physics conference* (2009).

- A. Palladino for the PEN Collaboration, "Maximum Likelihood Analysis for the PEN Experiment", *April APS Meeting* (2010).

- A. Palladino for the PEN collaboration, "The PEN Experiment at PSI: Testing Lepton Universality", *Seminar on Particle and Astrophysics, Universität Zürich* (2010).

- L. Barron-Palos, et al., "Measurement of parity-violating neutron capture gamma asymmetries at low-energies" XXXII Symposium on Nuclear Physics, Revista Mexicana de Fisica Vol. 55, 2 (2009) 18-22.

  Barron-Palos L, Alarcon R, Alonzi LP, B.Lauss, et al. "Measurement of parity-violating neutron capture gamma asymmetries at low-energies" XXXII Symposium on Nuclear Physics, Hotel Hacienda, Morelos, Mexico, January 5-8,2009, Revista Mexicana De Fisica Vol. 55, 2 (2009) 18-22.

- E. Frlež for the PEN collaboration, "Central Particle Tracking Detectors in the PEN Experiment", *Fall APS DNP Meeting* (2008).

- E. Frlež for the PEN collaboration, "Precise Measurement of the $\pi^+ \to e^+\nu$ Branching Ratio", *New Trends in High Energy Physics, Yalta* (2008).

- S. Ritt for the PEN collaboration, "Precise Measurement of the $\pi^+ \to e^+\nu$ Branching Ratio", *Swiss Institute for Particle Physics Annual Meeting (CHIPP)* (2008).

- D. Počanić for the Nab Collaboration, "Nab: Measurement Principles, Apparatus and Uncertainties", *International Workshop for Particle Physics with Slow Neutrons* (2008).

- A. Palladino for the PEN collaboration, "Waveform Analysis for a Precision Pion Decay Measurement", *Fall APS DNP Meeting* (2008).

- D. Počanić for the Nab Collaboration, "The Nab Neutron Decay Correlation Experiment", *American Conference on Neutron Scattering* (2008).

- D. Počanić for the PEN collaboration, "PEN: A Sensitive Search for Non-(V-A) Weak Process", *18^{th} International Conference on Particles and Nuclei* (2008).
- D. Počanić for the PEN collaboration, "Rare Pion and Muon Decays: Summary of Results and Prospects", *Low Energy Precision Electroweak Physics in the LHC Era* (2008).

h-index and citation count

- h-index: 10 – see Profile on inSPIREHEP
- citation count: 2,548 – see Profile on inSPIREHEP

Graduate Students

Doctoral

- Michael Murray, University of Washington, Graduated PhD 2017, Current: Lead Data Scientist at OneBridge Solutions
- Matthias Smith, University of Washington, Graduated PhD 2017, Current: ML Scientist at Flexport
- Aaron Feinberg, University of Washington, Graduated PhD 2019, Current: Machine Learning Researcher at BlackBerry

Undergraduate Students

- Kazimir Wall, University of Washington, $g-2$
- Aditi Jain, UVA, *EBDM*
- Amelia Norman, UVA. *EBDM*
- Michela Nardi, UVA. *EBDM*
- Carter Levinson, UVA. *EBDM*
- Meredith Lawrence, UVA. *EBDM*
- Audrey Kamauff, UVA. *EBDM*
- James Wilby, UVA. *EBDM*
- William Burge, UVA. *EBDM*
- Paul Dalton, UVA. *EBDM*

- Kathryn Murray, UVA. *EBDM*
- Thomas Owen, UVA. *EBDM*
- Charles Rowe, UVA. *EBDM*
- Ashwin Sundaram, UVA. *EBDM*
- Adam Will , UVA. *EBDM*
- Emma Boland, UVA. *EBDM*
- Caroline O'Brien, UVA. *EBDM*
- John Henry Oliphant, UVA. *EBDM*
- Josh Williams, UVA. *EBDM*
- Henry Bramham, UVA. *EBDM*
- Claire Deaver, UVA. *EBDM*
- Sean Domnick, UVA. *EBDM*
- Emma Hand, UVA. *EBDM*
- Emily Ledwith, UVA. *EBDM*
- Noah O'Neill, UVA. *EBDM*
- Callie Weiler, UVA. *EBDM*
- Bella Lu, UVA, *EBDM*, https://orcid.org/0009-0007-6152-072X
- Grace Boland, UVA. *EBDM*
- Colin Cool, UVA. *EBDM*
- Nathaniel Donkoh-Moore, UVA. *EBDM*
- Patrick Leonard, UVA. *EBDM*
- Maddie McNult, UVA. *EBDM*
- George Corbin, UVA. *EBDM*
- Nora Dale, UVA. *EBDM*
- Aatmika Deshpande, UVA. *EBDM*
- Katherine Korngiebel, UVA. *EBDM*
- Paige Krablin, UVA. *EBDM*
- Emma Wilt, UVA. *EBDM*

- Stella Banino, UVA. *EBDM*
- Chris Craft, UVA. *EBDM*
- Laura Phillips, UVA. *EBDM*
- Sally Sydnor, UVA. *EBDM*
- George Boulos, UVA. *EBDM*
- Josh Dornfeld, UVA. *EBDM*
- Imani Hankinson, UVA. *EBDM*
- Livia Hughes, UVA. *EBDM*
- Sarah Murphy, UVA. *EBDM*
- Ronica Peraka, UVA. *EBDM*
- McBride Rawson, UVA. *EBDM*

Funded and Under Review Grant Proposals as PI/Co-PI

- Criminal Justice Data Training Center (2024) $191,562 total and targeted
  - (PI) **L.P.Alonzi**
  - The Jefferson Trust, pending review Jan 2015- Dec 2017
- Building Inclusive Student-Informed Courses (2023) $9,600
  - (PI) R. Schmidt; (Co-PI): **L.P.Alonzi**
  - Inclusive Excellence award from UVA Division for Diversity, Equity, and Inclusion
- Data Science Active Learning Lab (2022) $150,000
  - (PI) B.Wright; (Co-PI): **L.P.Alonzi**
  - President and Provost's Fund for Institutionally Related Research
- Optimizing pediatric donor heart utilization using big data analytics (2022) $133,078
  - (PI) M.McCulloch; (Co-PI): **L.P.Alonzi**, M. Porter
  - Jefferon Trust
- SIWIF: Summer Institute on Wigner Imaging and Femtography (2019) $50,000

    - (PI) S.Liuti; (Co-PIs): **L.P.Alonzi**, M.Burkhardt, D.Keller, O.Pfister
    - Southeastern Universities Research Association, Inc. Grant Agreement No. C2020-FEMT-006-05 (continuation supplemental)
- SIWIF: Summer Institute on Wigner Imaging and Femtography (2019) $30,000
    - (PI) S.Liuti; (Co-PIs): **L.P.Alonzi**, M.Burkhardt, D.Keller, O.Pfister
    - Southeastern Universities Research Association, Inc. Grant Agreement No. C2020-FEMT-006-05
- Wigner Imaging (2018) $50,000
    - (PI) S.Liuti; (Co-PIs): **L.P.Alonzi**, M.Burkhardt, D.Keller, O.Pfister
    - Southeastern Universities Research Association, Inc. Grant Agreement No. C2019-FEMT-002-04

Presentations, Invited

- "Introduction to R", DAACS Open Academy, Fall 2021
- "What Entropy and Impedance Mean in Data Science", Jefferson Lab AI Lunch Series, November 2020
- "Machine Learning for global fitting of CFF from sparse data", Data Science Roadmap to compton form factors of quarks and gluons, Center for Nuclear Femtography, September 2020.
- "Data Science and Femtography", CNF2019 Symposium, SURA Headquarters, August 2019.
- "Intro to Data Science", CSInstitute, July 2019.
- "The New Muon g-2 Experiment: E989 Status and Progress Update", SESAPS 81st annual meeting, November 2014.
- "Using the Library to Advance Scientific Data Practices", University of Virginia, July 2014.
- L.P. Alonzi for the PEN Collaboration, "Precision Measurements of Rare Pion Decay Channels", University of Washington, CENPA, March 2012.

Internal Service

- Undergraduate Committee, 2020-present, (School)
- Academic Committee, 2023-present, (School)

- Deputy Director of Undergraduate Programs, 2024-present (School)
- Darden Collaboratory Steering Committee, 2022-present (School)
- ADSTP Hiring Committee, 2023, (School)

Professional Services

- Academic Data Science Alliance, Annual Meeting 2024, Program Committee
- Center for Teaching Excellence, 2023 Innovations in Pedagogy Summit, Program Committe

ORCID

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Teaching Experience

Full record see: github.com/alonzi/cv

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