FOLEY & LARDNER LLP

Samantha L. Pagan

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Samantha Pagan, Ph.D., is a patent engineer in Foley's Intellectual Property Department and a member of the firm's Electronic Practice group. She completed a Ph.D. in experimental physics, specializing in nuclear and particle physics, and is based in the Boston office.

Before transitioning to the legal industry, Samantha was a Graduate Researcher and Postdoctoral Associate at Yale University's Physics Department and a member of the Cryogenic Underground Observatory for Rare Events (CUORE) and CUORE Upgrade with Particle Identification (CUPID) Collaborations, which are international research collaborations involving about 100 scientists. During this time, Samantha led data analyses and hardware research and development for studying dark matter and rare nuclear processes. She mentored undergraduate students on research and presented scientific findings to various audiences. Samantha also served on the Outreach Board for CUORE, working to communicate their science to broad audiences.

Presentations and Publications

- Co-author, "Performance of a SiPM-based, plastic scintillator muon veto prototype for CUPID" arXiv preprint 2505.06129 (2025) https://arxiv.org/abs/2505.06129
- Author, "Physics at the keV Energy Scale with CUORE: A Search for Solar Axions" Yale University PhD Dissertation (2024).
- Co-author, "With or without ?? Hunting for the seed of the matter-antimatter asymmetry" arXiv preprint 2404.04453 (2024) https://doi.org/10.48550/arXiv.2404.04453
- Co-author, "Search for Majorana neutrinos exploiting millikelvin cryogenics with CUORE" Nature 604.7904 (2022), pp. 53–58. doi:10.1038/s41586-022-04497-4
- Co-author, "Using machine learning to select high-quality measurements" Journal of Instrumentation 16.08 (2021), T08010. doi: 10.1088/1748- 0221/16/08/T08010
- Author, "A surface low energy characterization technique for high purity germanium detectors" UNC Chapel Hill Honors Thesis (2019). url: https://doi.org/10.17615/pz4z-j219

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Practice Areas

- Electronics

Education

- Yale University (Ph.D. in 2024; M.S., 2022)
  - *Awards: NSF Graduate Research Fellowship Program (GRFP) Fellow*
- The University of North Carolina at Chapel Hill (B.S., 2019)
  - Major, Physics and Astronomy
  - Minor, Mathematics
  - *Awards: UNC Chapel Hill Chancellor's Science Scholar*

Admissions

- U.S. Patent and Trademark Office