

ANTHONY BADEA

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EDUCATION

Harvard University

Expected June 2023

- Ph.D. in Physics, Advisor: John Huth

Massachusetts Institute of Technology

June 2019

- Dual B.S. in Physics and Mathematics (GPA 4.8/5.0), Advisors: Yen-Jie Lee & Jesse Thaler
- Thesis: Search for Quark-Gluon Plasma in e^+e^- Collisions at $\sqrt{s} = 91.2$ GeV with Archived ALEPH LEP1 Data

AWARDS

- Certificate of Distinction in Teaching for Elementary Particle Physics w/ Melissa Franklin, Fall 2020
- Frederick Sheldon Traveling Fellowship, Harvard University, 2021 - 2022
- Graduate Prize Fellowship, Harvard University, 2019 - 2023
- Malcom Cotton Brown Outstanding Senior Experimentalist, MIT Physics Department, 2019
- Rhodes Scholarship Finalist, Rhodes Foundation, 2019

INVOLVEMENT

- Micromegas Trigger Processor Commissioning of New Small Wheel, ATLAS, CERN, 2019 – Present
- Search for pair production in all hadronic final states with many jets, ATLAS, CERN, 2020 - Present

PRESENTATIONS

- Testing Micromegas Trigger with Cosmic Data, ATLAS Muon Week, May 2021
- Tackling the permutation nightmare: ML for event reconstruction, 5th ATLAS ML Workshop, April 2021
- Cosmic Tests and Micromegas Trigger Algorithm for New Small Wheel (invited), NSW General, March 2021
- Micromegas Trigger Integration in BB5, ATLAS Muon Week, February 2021
- RPV-Multijets Machine Learning, SUSY Background Forum, February 2021
- QCD Measurements in LEP data, Lessons for FCC-ee (invited), 4th FCC Physics Workshop, November 2020
- The World of Open Data: ALEPH at LEP (Invited), Snowmass, Online, August 2020
- Multi-Differential and Unbinned Measurements of Hadronic Event Shapes in e^+e^- Collisions at $\sqrt{s} = 91.2$ GeV from ALEPH Open Data, ICHEP, Online, July 2020
- Advancing Unfolding with Machine Learning using Open Data, BOOST 2020 Webinars, Online, July 2020
- Micromegas Trigger Connectivity Tests, Project Readiness Review for ATLAS NSW, January 2020
- Two-Particle Correlation in Archived ALEPH Data, JETSCAPE, Texas A&M University, January 2019
- Two-Particle Correlation in Archived ALEPH Data, ICHEP, Seoul, July 2018
- Study of Events Shapes and Thrust in Archived ALEPH Data (Poster), Quark Matter, Venice, May 2018

SELECTED PUBLICATIONS

- Solving Combinatorial Problems at Particle Colliders Using Machine Learning, Phys. Rev. D 106 (2022) 1, 016001, Jan. 2022
- Measurements of two-particle correlations in e^+e^- collisions at 91 GeV with ALEPH archived data, Phys. Rev. Lett., 123(Nov. 2019) 212002
- Validating and Modeling the Impact of High-Frequency Rapid Antigen Screening on COVID-19 Spread and Outcomes, Journal of Clinical Trials Vol. 11 Iss. 6 No: 1000483