

CHRISTINE A. AIDALA
Curriculum vitae as of September 2017

Physics Department, University of Michigan
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High-energy experimental nuclear physics; nucleon structure; parton dynamics in QCD.

EDUCATION:

Columbia University Ph.D. program, Physics, 2002-05. M.A. 2004. M.Phil. 2005. Ph.D. 2005.
University of Chicago Ph.D. program, Physics, 1999-2000. Medical leave starting March 2000.
Yale University 1995-99. B.S. in Physics, B.S. in Music 1999.

RESEARCH POSITIONS HELD:

September 2016-present. **Associate Professor of Physics, University of Michigan.**

September 2012-August 2016. **Assistant Professor of Physics, University of Michigan.**

January-July 2012. **Scientist 2, Los Alamos National Laboratory.** PHENIX Experiment at the Relativistic Heavy Ion Collider (RHIC), Brookhaven National Laboratory, and E906/SeaQuest, Fermi National Accelerator Laboratory.

January 2009-December 2011. **Frederick Reines Distinguished Postdoctoral Fellow, Los Alamos National Laboratory,** PHENIX and E906/SeaQuest.

January 2006-December 2008. **Postdoctoral Research Associate, UMass Amherst,** PHENIX.

September 2002-December 2005. **Graduate Research Assistant, Columbia University,** PHENIX.
Thesis advisor: B.A. Cole.

September 2001-August 2002. **Physics Associate, Brookhaven National Laboratory,** PHENIX.

June 1999-January 2000. **Graduate researcher, U. of Chicago,** OPAL Experiment at CERN. J. Pilcher.

1998-99. **Senior thesis, Yale U.,** polarized proton studies for the HERA e+p collider. V.W. Hughes.

Summer 1998. **CERN Summer Student Program,** data acquisition for silicon. P. Weilhammer.

Summer 1997. **BNL Summer Student Program,** STAR Experiment at RHIC. T.J. Hallman.

Summer 1996. **Wright Nuclear Structure Lab, Yale,** low-energy nuclear structure. R.F. Casten.

RESEARCH FUNDING:

External funding:

National Science Foundation. *CAREER: Valence and Sea Quark Dynamics at Fermilab*, July 1, 2015-June 30, 2020. Sole PI.

Department of Energy Office of Nuclear Physics. *Partonic transverse momentum effects in PHENIX and beyond*, April 15, 2015-April 14, 2018. Sole PI.

2015 Sloan Research Fellowship. Sole PI.

Internal U. of Michigan funding:

MCubed Program. *From physical principles to Hamiltonian and Lagrangian dynamics*. In collaboration with David J. Baker (Philosophy), Lydia Bieri (Mathematics), Gabriele Carcassi (Physics).

2015 Michigan Memorial Phoenix Project. *Development of a prototype liquefied noble gas detector to measure 200 keV to 10 MeV neutrons*. Sole PI.

2014 Elizabeth Caroline Crosby Faculty Grant. Sole PI.

2013 Transforming Learning for Third Century QuickWins. *Student experiments in biomedical physics: A journey to inner space*. Co-PI with Fred Becchetti, Thomas Schwarz, and Ramon Torres-Isea.

AWARDS AND RECOGNITION:

Kavli Fellow, 2016.

Sloan Research Fellowship, 2015.

National Science Foundation CAREER Award, 2015.

Willie Hobbs Moore: Aspire, Advance, Achieve Award, for outstanding service as a mentor to the U-M Society of Women in Physics, University of Michigan, 2014.

Nominee, Alexander M. Cruickshank Award, Board of Trustees, Gordon Research Conferences, 2014.

Essayist for *Blazing the Trail: Essays by Leading Women in Science*. E. Ideal and R. Meharchand, eds. CreateSpace Independent Publishing, 2013.

Distinguished Women Physicists Lecture Series colloquium speaker, U. of Connecticut, 2012.

Invited Fellow, 50th anniversary celebration of the International School on Subnuclear Physics, Erice, Italy, June–July 2011. Organized by G. 't Hooft and A. Zichichi.

Sambamurti Memorial Lectureship, BNL, 2008. *"For her contributions to the RHIC Spin Program, notably her leadership in the measurement of the transverse spin structure of the proton using pions."*

Vernon Hughes Travel Fellowship, 2004.

Luise Meyer-Schutzmeister Award, Association for Women in Science, 2004.

GAANN Fellowship, U.S. Department of Education, through University of Chicago, 1999.

Scholarship Recipient, Long Island Chapter of the **American Nuclear Society**, 1999.

Nominee for Barry M. Goldwater Scholarship, Yale University, 1998.

TEACHING AND MENTORSHIP EXPERIENCE:

Teaching at U. of Michigan:

Physics 401: **Intermediate Mechanics**, Fall 2016, Fall 2017.

Physics 288/489: **The Physics of Music**, Winter 2015, Winter 2016, Winter 2017.

Physics 405: **Intermediate Electricity and Magnetism**, Fall 2014, Fall 2015.

Physics 351: **Mathematical Methods of Theoretical Physics I**, Fall 2012, Winter 2013, Fall 2013.

Lecturer, 26th International Conf. on Ultrarelativistic Heavy Ion Collisions (Quark Matter) Student Day, *The Electron-Ion Collider: A New Tool for Studying QCD*. Chicago, IL, Feb 2017.

Lecturer, 31st Hampton University Graduate Studies (HUGS) Program at Jefferson Lab, *Transverse-Momentum-Dependent Parton Distributions and Color Entanglement*. Jefferson Lab, June 2016. Six hours of lectures aimed at graduate students in hadronic physics.

Guest Lecturer, U. of Kansas, Graduate Nuclear Physics, March 2015.

Lecturer, European Graduate School on Complex Systems of Hadrons and Nuclei (HANUC), *The Structure of the Nucleon*. Turin, Italy, March 2009. Three hours of lectures aimed at graduate students in hadronic physics.

Teaching development activities:

University Musical Society Mellon Faculty Institute on Arts Academic Integration, 2015–2017.

American Association of Physics Teachers New Faculty Workshop, June 2015.

U. of Michigan LSA Teaching Academy, August 2012.

Student advising and thesis committee membership:

- Thesis advisor, B.J. Ramson, May 2013-present
- Thesis advisor, J.D. Osborn, May 2014-present
- Thesis advisor, C. Ayuso, January 2015-present
- Thesis advisor, N.A. Lewis, May 2016-present
- Thesis advisor, W. Dean, May 2017-present
- Thesis co-advisor, M. Febraro, May 2013-August 2014

- Undergraduate research advisor for N. Shankar, E. Loyd, H. Hansen, Y. Jia, R. Araj, N.W. Kamp, E.C. Camras, E.D. Lesser, R.T. Read, I. Mooney, M. Barber, R. Cernak, M. Wood, E. Cizmas, A.S. White, C.M. Culkin, U. of Michigan; A. Cavanagh, P. Ma, Mt. Holyoke College; M. Tanner, Lock Haven U.
- Research advisor for high school students B. Kovacs, S. Akunuri, S. Deshmukh
- Thesis committee, H.C. Cheng, M. Bales (Physics), M. Monterial, M. Paff, A. Trahan (Nuclear Engineering), U. of Michigan; T. Engelmores, Columbia U.
- Prospectus committee, R. Fitzpatrick, C. Barnes, C. Hendrus, D. Morton, A. Tewsley-Booth, S. Su, Z. Qu (Physics), U. of Michigan; I. Mooney, J. Pan, G. Kaur, Wayne State U.
- Sponsor for D. Manna as a Visiting Scholar, 2016-present
- Sponsor for R.J. Belmont, Vanderbilt U., as a Visiting Scholar at U. of Michigan to complete thesis, 2012
- Supervision of A. Datta, UMass Amherst, throughout thesis analyses, Sep 2007-Feb 2012
- Supervision of R. Han, Peking U., in completion of thesis analysis, May-Dec 2007

CONFERENCE, WORKSHOP, AND SCHOOL ORGANIZATION:

International Advisory Committee, 27th International Conf. on Ultrarelativistic Heavy Ion Collisions (Quark Matter), Venice, Italy, May 13-19, 2018.

Co-organizer, Institute for Nuclear Theory Workshop on The Flavor Structure of the Nucleon Sea, Seattle, WA, Oct 2-13, 2017.

Scientific Advisory Committee, Electron-Ion Collider User Group Meeting, Trieste, Italy, Jul 18-22, 2017.

International Advisory Committee, 26th International Conf. on Ultrarelativistic Heavy Ion Collisions (Quark Matter), Chicago, IL, Feb 5-11, 2017.

Local Program Committee, 22nd International Symposium on Spin Physics, Urbana-Champaign, IL, Sep 25-30, 2016.

Scientific Committee, Electron-Ion Collider User Group Meeting, Berkeley, CA, Jan 6-9, 2016.

Local Organizing Committee, American Physical Society (APS) Division of Particles and Fields Meeting, Ann Arbor, MI, Aug 3-7, 2015.

Organizing Committee, 2015 Workshop of the APS Topical Group on Hadronic Physics, Baltimore, MD, Apr 8-10, 2015.

Local Organizing Committee, APS Conference for Undergraduate Women in Physics, Ann Arbor, MI, Jan 16-18, 2015.

Chair, Workshop on Opportunities for Polarized Physics at Fermilab, May 20-22, 2013.

International Organizing Committee, 3rd Workshop on the QCD Structure of the Nucleon (QCD-N12), Bilbao, Spain, Oct 22-26, 2012.

Program Committee, 19th Particles and Nuclei International Conference (PANIC 2011) and Co-organizer for session on Quarks and Gluons in Hadrons, MIT, Jul 24-29, 2011.

Co-organizer, Workshop on Transverse-Momentum-Dependent Distributions, ECT*, Trento, Italy, Jun 21-25, 2010.

Principal organizer, Symposium on Educational and Public Outreach, sponsored by the RHIC-AGS Users Executive Comm. and the National User Facility Organization, BNL, Jun 9, 2010.

Co-convenor, Spin Physics Working Group, 18th International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2010), Florence, Italy, Apr 17-23, 2010.

Co-organizer, Workshop on Transverse Spin Physics, RHIC-AGS Users Mtg, BNL, Jun 2009.

Principal organizer, 4th PHENIX Spinfest School on QCD Physics, BNL, Aug 2008.

Co-organizer, 2nd PHENIX Spinfest School on QCD Physics, BNL, Aug 2006.

Principal organizer, Workshop on the Helicity Structure of the Nucleon, RHIC-AGS Users Meeting, BNL, Jun 2006.

Co-organizer, Workshop on Proton Spin Physics, RHIC-AGS Users Meeting, BNL, Jun 2005.

OTHER SERVICE AND EXPERIENCE:

Committee on a U.S.-Based Electron-Ion Collider Science Assessment, U.S. National Academy of Sciences, 2016-18.

U. of Michigan ADVANCE Advisory Board for the College of Literature, Science, and Arts, 2017-18.

Program Committee, APS Division of Nuclear Physics, 2017-18.

U. of Michigan Physics Dept. Executive Committee, 2017-19.

Elected Institutional Board Chair, Electron-Ion Collider User Group, 2016-18. Also ex-officio member of EIC User Group Steering Committee.

U. of Michigan Faculty Senate Assembly, elected representative for College of Literature, Science, and Arts, 2015-18.

Co-convenor, sPHENIX Cold QCD Topical Group, August 2016-present.

Level-3 Manager, sPHENIX Calorimeter Electronics: Optical Sensors. Silicon photomultiplier quality assurance, 2016-present.

U. of Michigan Physics Dept. Diversity, Equity, and Inclusion Committee, 2016-present.

U. of Michigan Physics Dept. Rackham Graduate School Diversity Ally, 2016-present.

U. of Michigan representative, sPHENIX Institutional Board, August 2015-present.

U. of Michigan representative, PHENIX Institutional Board, November 2012-present.

M. Hildred Blewett Fellowship Selection Committee, APS, 2017.

U. of Michigan Physics Dept. HEP/Astro/Nuclear Seminar organizer, 2012-17. **Chair** 2013-14, 2015-16, 2016-17.

U. of Michigan Physics Dept. Graduate Admissions Committee, 2016-17.

Panelist, Panel discussion: Undergraduate research, APS Conference for Undergraduate Women in Physics, Wayne State University, Jan 2017.

Nominating Committee, APS Topical Group on Hadronic Physics, 2016.

Member, Electron-Ion Collider User Group Charter Writing Committee, 2016.

Member, Relativistic Heavy Ion Collider Cold QCD Plan Writing Committee, 2015-16.

Faculty advisor, U. of Michigan Society of Women in Physics (SWIP), Sept 2012-Aug 2016.

Member, sPHENIX Collaboration Bylaws Committee, 2015.

Member, PHENIX Collaboration Spokesperson Nominating Committee, 2015.

Member, U. of Michigan Willie Hobbs Moore Award Selection Committee, 2015.

Member, U. of Michigan Physics Dept. Undergrad Curriculum and Concerns Committee, Sept 2012-May 2015.

Elected Member-At-Large, Executive Committee of the APS Topical Group on Hadronic Physics, 2014-15.

Elected member, PHENIX Executive Council, 2011-2016. The EC is responsible for establishing scientific priorities for the experiment, with members selected for their "scientific judgment, technical expertise, and commitment to the experiment."

Moderator, Panel discussion: Women In Physics Career Panel, APS Conference for Undergraduate Women in Physics, Ann Arbor, MI, Jan 2015.

Member, APS Topical Group on Hadronic Physics Dissertation Award Committee, 2014.

Member, Relativistic Heavy Ion Collider Thesis Award Committee, 2014, 2011.

Elected member, National User Facility Organization (NUFO) Steering Committee, 2011-14. <http://www.nufo.org>

Nuclear Physics Day on Capitol Hill, May 2013. Met with staff members for Michigan Senators Levin and Stabenow and Representative Dingell to discuss funding for nuclear physics research.

Member, BNL Work-Life Balance Committee, April 2010-June 2012.

Elected member, RHIC-AGS Users Executive Committee, June 2009-June 2012.

Moderator, Panel discussion: The Future of RHIC Upgrades, RHIC Users Open Forum Meeting, Meeting of the APS Division of Nuclear Physics, October 2011.

Member, PHENIX Decadal Plan Writing Committee, March-September 2010.

Member, PHENIX Speakers Bureau, April 2009-February 2010.

Member, PHENIX Forward Calorimeter Upgrade Internal Review Comm., Jan-Feb 2009.

Co-convenor, PHENIX Spin Physics Working Group, January 2007-April 2009. Oversaw and coordinated all analysis activities within Working Group; approved scientific results for public release by the collaboration.

Member, PHENIX Spokesperson Selection Task Force, May-July 2006.

Elected Student/Postdoc Representative, RHIC-AGS Users Executive Comm., 2004-05.

INVITED CONFERENCE AND WORKSHOP PRESENTATIONS:

Seminars and colloquia listed separately below.

For a complete listing of all presentations, please see <http://www-personal.umich.edu/~caidala/index.html>.

12th Conference on Electromagnetic Interactions with Nucleons and Nuclei, Paphos, Cyprus, Oct-Nov 2017. *Status and Plans for the Electron-Ion Collider.* (Plenary)

APS Division of Nuclear Physics Fall Meeting, Pittsburgh, PA, Oct 2017. *Spin-Momentum Correlations, Aharonov-Bohm, and Color Entanglement in Quantum Chromodynamics.* (Plenary)

Kavli Frontiers of Science Symposium, National Academy of Sciences, Irvine, CA, Oct 2016. *Peering Into the Proton: Proton Substructure and Internal Dynamics.*

Gordon Conference on Photonuclear Reactions, Holderness, NH, Aug 2016. *SeaQuest: Probing Protons and Nuclei with Dileptons.*

APS Conference for Undergraduate Women in Physics, Newport News, VA, Jan 2016. *Probing the Proton: Entangled Personal and Particle Paths.*

ECT* Workshop: From 1-D Fragmentation to 3-D Correlated Fragmentation, Trento, Italy, October 2015. *The Future of Hadronization: Thoughts from an Experimentalist.*

APS Division of Particles and Fields Meeting, Ann Arbor, MI, August 2015. *Advancing the Era of Quantitative QCD: Experiment.* (Plenary)

Conference on the Intersections of Particle and Nuclear Physics, Vail, CO, May 2015. *The Relativistic Heavy Ion Collider and Large Hadron Collider: Pushing Forward the Era of Quantitative QCD.* (Plenary)

International Workshop on Structure and Spectroscopy, Suzdal, Russia, May 2015. *Recent Results and Future Plans for Studying Proton Structure at Fermilab.*

APS Conference for Undergraduate Women in Physics, Ann Arbor, MI, Jan 2015. *Probing the Proton: Entangled Personal and Particle Paths.*

4th International Workshop on Nucleon Structure at Large Bjorken-x, Frascati, Italy, November 2014. *Nucleon Structure Physics at the Relativistic Heavy Ion Collider.*

APS Division of Nuclear Physics Fall Meeting, Waikoloa, HI, October 2014. *Accelerator Studies for Polarized Protons at the Fermilab Main Injector.*

Gordon Conference on Photonuclear Reactions, Holderness, NH, August 2014. *Parton Correlations In and Across Nucleons.*

4th International Workshop on Transverse Polarization Phenomena in Hard Processes (Transversity 2014), Chia, Italy, June 2014. *Transversity 2014 Closing Remarks: Moving Forward in the Era of Quantitative QCD.* (Workshop closing talk)

APS Division of Nuclear Physics Fall Meeting, RHIC Users Forum, Newport News, VA, October 2013. *Advancing QCD at RHIC by Studying the Partonic Bound States of Everyday Matter.*

APS Division of Nuclear Physics Fall Meeting, Newport Beach, CA, October 2012. *Entering the Electronic Age at RHIC: eRHIC.*

APS Division of Nuclear Physics Fall Meeting, East Lansing, MI, October 2011. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out.*

Quarks, Hadrons, and LHC, Mumbai, India, August 2011. *Transverse-Momentum-Dependent Distributions and Transverse Spin Phenomena at RHIC.*

Gluons and the Quark Sea at High Energies: Workshop to develop the physics case of a high-energy Electron-Ion Collider, INT, U. of Washington, September-November 2010. *Probing QCD in Hadrons Through Transverse-Momentum-Dependent Distributions at RHIC—Or—Why Use*

Messy $p+p$ Collisions to Study What's Happening Inside the Nucleon?

Electromagnetic Interactions with Nucleons and Nuclei (EINN 2009) Workshop on Partonic Transverse Momentum Distributions, Milos, Greece, September-October 2009. *Single-Spin Asymmetries and Transverse-Momentum-Dependent Distributions at RHIC.*

18th International Symposium on Spin Physics (SPIN2008), Charlottesville, VA, October 2008. *Spin in Hadron Reactions.* (Plenary)

Gordon Conference on Photonuclear Reactions, Tilton, NH, August 2008. *Transverse Spin Physics at RHIC.*

2nd International Workshop on Transverse Polarization Phenomena in Hard Processes (Transversity 2008), Ferrara, Italy, May 2008. *Transversity and Transverse-Momentum-Dependent Distribution Measurements from PHENIX and BRAHMS.*

24th Winter Workshop on Nuclear Dynamics, South Padre Island, TX, April 2008. *Peering into Hadronic Matter: The Electron-Ion Collider.*

International Workshop on Structure and Spectroscopy, Freiburg, Germany, March 2007. *Recent Spin Physics Results from RHIC.*

Spin Structure of the Nucleon Workshop, Nashville, TN, October 2006. *Recent Spin Physics Results from PHENIX.*

International Workshop on Transversity: New Developments in Nucleon Spin Structure, ECT*, Trento, Italy, June 2004. *Single Transverse Spin Asymmetries at RHIC.*

SEMINARS, COLLOQUIA, AND PUBLIC LECTURES:

Public lecture: U. of Michigan Saturday Morning Physics series, Feb 2017. *The Antiups and Antidowns of Life: Studying Antiquarks in Hydrogen and Carbon.* <https://youtu.be/52x10-8MPoM>

Nuclear and Particle Physics Colloquium: MIT, Nov 2016. *Spin-Momentum Correlations, Aharonov-Bohm, and Color Entanglement in Quantum Chromodynamics.*

Seminar: UCLA, Oct 2016. *Spin-Momentum Correlations, Aharonov-Bohm, and Color Entanglement in Quantum Chromodynamics.*

Colloquium: U. of Michigan, Oct 2015. *Frontiers in Quantum Chromodynamics.*

Colloquia: U. of Kansas, William & Mary, Mar, Jan 2015. *Spin-Momentum Correlations, Aharonov-Bohm, and Color Entanglement in Quantum Chromodynamics.*

Seminar: Jefferson Lab, Jan 2015. *Spin-Momentum Correlations, Aharonov-Bohm, and Color Entanglement in Quantum Chromodynamics.*

Seminar: Penn State U., Jan 2015. *Measuring Polarization Effects in Proton-Proton and Muon-*

Nucleon Scattering.

Seminar: Southern Methodist U., Dec 2014. *Investigating Proton Structure at the Relativistic Heavy Ion Collider.*

Seminar: Ohio U., Jan 2014. *Investigating Proton Structure at the Relativistic Heavy Ion Collider.*

Colloquium: U. of Notre Dame, Jan 2014. *From Quarks and Gluons to the World Around Us: Advancing Quantum Chromodynamics by Probing Nucleon Structure.*

Public lecture: U. of Michigan Saturday Morning Physics series, Mar 2013. *Peering Into the Proton.* https://www.youtube.com/watch?v=iLNches_G6M

Seminar: University of D0, Fermilab, Mar 2013. *Investigating Proton Structure at the Relativistic Heavy Ion Collider.*

Seminar: Wayne State U., Jan 2013. *Investigating Proton Structure at the Relativistic Heavy Ion Collider.*

Colloquium: Triangle Nuclear Theory series, Duke U., Feb 2012. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out.*

Colloquium: UConn, Jan 2012. *From Quarks and Gluons to the World Around Us: Understanding Quantum Chromodynamics by Exploring Nucleon Structure.*

Seminars: Los Alamos National Lab, Rutgers U., Sep - Oct 2011. *The PHENIX Decadal Plan: Crafting the Future of the Relativistic Heavy Ion Collider.*

Seminar: Stony Brook U., Feb 2011. *From Quarks and Gluons to the World Around Us: Advancing into the Era of Quantitative QCD via Investigation of Nucleon Structure.*

Seminars: DESY-Hamburg, DESY-Zeuthen, Germany, Oct 2010. *Investigating the Spin Structure of the Proton at the Relativistic Heavy Ion Collider.*

Seminar: Istituto Nazionale di Fisica Nucleare (INFN), Ferrara, Italy, Jun 2010. *Investigating the Spin Structure of the Proton at RHIC: Recent Results.*

Colloquium, Catholic U. of America, Dec 2009. *Getting Protons to Study Themselves: Investigating Proton Structure at the Relativistic Heavy Ion Collider.*

Seminar: Los Alamos National Lab, Oct 2009. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out.*

Seminar: Jefferson Lab, May 2009. *Investigating the Spin Structure of the Proton at RHIC.*

Seminars: Los Alamos National Lab, Columbia U., Jan - Feb 2009. *Frontiers in Nucleon Structure.*

Seminars: Michigan State U., U. of Kentucky, Kent State U., 2008. *The Emerging QCD Frontier: The Electron-Ion Collider.*

Seminar: INFN Torino, Italy, Jun 2008. *Recent Spin Physics Results from RHIC.*

Seminar: INFN Pavia, Italy, Jun 2008. *Recent Results from the PHENIX Experiment at RHIC.*

Colloquium: Old Dominion U., Sep 2007. *A Novel Shakedown of the Proton Spin Breakdown: How the Field Has Become Wider with a Polarized Proton Collider.*

Seminars: UMass Amherst, INFN Cagliari, Italy, 2006. *Recent Spin Physics Results from PHENIX.*

Seminar: Mt. Holyoke College, 2006. *The Whole Story Behind a Half: The Quest to Understand the Protons Spin.*

Seminars: Indiana University Cyclotron Facility, Los Alamos National Lab, Lawrence Berkeley National Lab, 2005. *Studying the Transverse Spin Structure of the Proton at PHENIX.*

Seminars: CERN, Switzerland; Laboratori Nazionali di Frascati, Italy; INFN Torino, Italy; INFN Ferrara, Italy, 2004. *Recent Spin Results from PHENIX.*

Outreach seminars promoting physics graduate study: Bryn Mawr, Mt. Holyoke, Smith, Vassar, Barnard, Wellesley, and Amherst Colleges, 2003-04. Sponsored by Columbia University.

Colloquium: Vassar College, Dec 2003. *Flying High with PHENIX: Surveying the Landscape for Quark-Gluon Plasma and the Secrets of the Protons Spin.*

CHRISTINE A. AIDALA
PUBLICATION LIST AS OF September 30, 2017
PAPERS SUBMITTED FOR PUBLICATION:

1. **Topology and experimental distinguishability.** C.A. Aidala, G. Carcassi, M.J. Greenfield. arXiv:1708.05492
2. **From physical assumptions to classical and quantum Hamiltonian and Lagrangian particle mechanics.** G. Carcassi, C.A. Aidala, D.J. Baker, L. Bieri. arXiv:1702.07052
3. **The SeaQuest Spectrometer at Fermilab.** C.A. Aidala et al. (SeaQuest Collaboration). arXiv:1706.09990
4. **Design and Beam Test Results for the sPHENIX Electromagnetic and Hadronic Calorimeter Prototypes.** C.A. Aidala et al. arXiv:1704.01461

PHENIX Collaboration papers (significant contribution made to those in ***bold italic***):

1. Lévy-stable two-pion Bose-Einstein correlations $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions. A. Adare et al. arXiv:1709.05649
2. Measurements of azimuthal anisotropy in d +Au collisions at $\sqrt{s_{NN}} = 200, 62.4, 39,$ and 19.6 GeV. C. Aidala et al. arXiv:1708.06983
3. Measurements of multiparticle correlations in d +Au collisions at $200, 62.4, 39,$ and 19.6 GeV and p +Au collisions at 200 GeV and implications for collective behavior. C. Aidala et al. arXiv:1707.06108
4. Nuclear dependence of the transverse-single-spin asymmetry for forward neutron production in polarized p +A collisions at $\sqrt{s_{NN}} = 200$ GeV. C. Aidala et al. arXiv:1703.10941
5. B-meson production at forward and backward rapidity in p + p and Cu+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. C. Aidala et al. arXiv:1702.01085
6. Beam energy and system-size dependence of the space-time extent of the pion emission source produced in heavy ion collisions. A. Adare et al. arXiv:1410.2559

PUBLICATIONS IN PEER-REVIEWED JOURNALS:

1. **Four-twist helix snake to maintain polarization in multi-GeV proton rings.** F. Antoulinakis et al. Phys. Rev. Accel. Beams, 20:091003, 2017.
2. **Limits on transverse-momentum-dependent evolution from semi-inclusive deep-inelastic scattering at moderate Q .** C.A. Aidala, B. Field, L.P. Gamberg, and T.C. Rogers. Phys. Rev. D89:094002, 2014.
3. **The PHENIX Forward Silicon Vertex Detector.** C. Aidala et al. Nucl. Instrum. Meth. A755:44, 2014.
4. **The spin structure of the nucleon.** C.A. Aidala, S.D. Bass, D. Hasch, and G.K. Mallot. Rev. Mod. Phys. 85:655, 2013. (Invited submission)

5. **Global analysis of fragmentation functions for eta mesons.** C.A. Aidala, F. Ellinghaus, R. Sassot, J.P. Seele, and M. Stratmann. Phys. Rev. D83:034002, 2011.
6. **Towards an understanding of nucleon spin structure: from hard to soft scales.** S.D. Bass and C.A. Aidala. Int. J. Mod. Phys. A21:4407-4424, 2006.
7. **A hadron-blind detector for PHENIX.** C. Aidala et al. Nucl. Instrum. Meth. A502:200-204, 2003.

PHENIX Collaboration papers (significant contribution made to those in ***bold italic***):

1. Measurements of e^+e^- pairs from open heavy flavor in $p + p$ and $d + A$ collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C96:024907, 2017.
2. ***Nonperturbative-transverse-momentum effects and evolution in dihadron and direct photon-hadron angular correlations in $p + p$ collisions at $\sqrt{s} = 510$ GeV.*** A. Adare et al. Phys. Rev. D95:072002, 2017.
3. Measurements of $B \rightarrow J/\psi$ at forward rapidity in $p + p$ collisions at $\sqrt{s} = 510$ GeV. C. Aidala et al. Phys. Rev. D95:092002, 2017.
4. Angular decay coefficients of J/ψ mesons at forward rapidity from $p + p$ collisions at $\sqrt{s} = 510$ GeV. A. Adare et al. Phys. Rev. D95:092003, 2017.
5. Measurement of the relative yields of $\psi(2S)$ to $\psi(1S)$ mesons produced at forward and backward rapidity in $p + p$, $p + \text{Al}$, $p + \text{Au}$, and $^3\text{He} + \text{Au}$ collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C95:034904, 2017.
6. Measurement of long-range angular correlations and azimuthal anisotropies in high-multiplicity $p + \text{Au}$ collisions at $\sqrt{s_{NN}} = 200$ GeV. C. Aidala et al. Phys. Rev. C95:034910, 2017.
7. Measurements of double-helicity asymmetries in inclusive J/ψ production in longitudinally polarized $p + p$ collisions at $\sqrt{s} = 510$ GeV. A. Adare et al. Phys. Rev. D94:112008, 2016.
8. Centrality-dependent modification of jet-production rates in deuteron-gold collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. Lett. 116:122301, 2016.
9. Azimuthally anisotropic emission of low-momentum direct photons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C94:064901, 2016.
10. Measurements of directed, elliptic, and triangular flow in Cu+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C94:054910, 2016.
11. Measurement of parity-violating spin asymmetries in W^\pm production at midrapidity in longitudinally polarized $p + p$ collisions. A. Adare et al. Phys. Rev. D93:051103, 2016.
12. Measurements of identified particle higher harmonic flow in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C93:051902, 2016.
13. Single electron yields from semileptonic charm and bottom hadron decays in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C93:034904, 2016.
14. Forward J/ψ production in U+U collisions at $\sqrt{s_{NN}} = 193$ GeV. A. Adare et al. Accepted by Phys. Rev. C93:034903, 2016.

15. ϕ meson production in the forward/backward rapidity region in Cu+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. A. Adare et al. Phys. Rev. C93:024904, 2016.
16. Transverse energy production and charged-particle multiplicity at midrapidity in various systems from $\sqrt{s_{NN}} = 7.7$ to 200 GeV. A. Adare et al. Phys. Rev. C93:024901, 2016.
17. ***Dielectron production in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV.*** A. Adare et al. Phys. Rev. C93:014904, 2016.
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