Curriculum Vitae

Dr. Peter Alan Steinberg
Senior Physicist
Brookhaven National Laboratory

General:

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Birth:	November 21, 1969 in Chicago, Illinois, USA
Nationality:	U.S.A.

Employment History:

12/19 - present	Senior Scientist, BNL Physics Department
03/09 - 12/19	Physicist in PHENIX Research Group, BNL Physics Department
01/07 - 3/09	Physicist in Heavy Ion Research Group, BNL Physics Department
04/06	Awarded Tenure in BNL Chemistry Department
10/04 - 01/07	Physicist at Brookhaven National Laboratory, Chemistry Department
4/02 - 10/04	Associate Scientist at Brookhaven National Laboratory, Supervisor: M. Baker
8/02 - 2/03	Fulbright Scholar at the University of Cape Town, South Africa, Host: J. Cleymans
12/99 - 4/02	Assistant Scientist at Brookhaven National Laboratory Chemistry Department, PHOBOS Group, Supervisor: M. Baker
2/98 - 11/99	Post-doc at Columbia University, Nevis Labs, Supervisors: B.A. Cole and W.A. Zajc.

Research Interests:

Experimental Nuclear and High-Energy Physics.
Study of terakelvin QCD matter using bulk properties and hard probes.
Study of electromagnetic processes in heavy ion collisions, ultraperipheral collisions.
Zero-degree calorimetry for centrality characterization and tagging of electromagnetic processes.
Silicon Detectors, event building and high-level trigger systems.
Software environments and tools for high energy physics collaborations.

Current Research & Affiliations:

Research Group:	PHENIX, BNL Physics Department (Principal investigator: D. Morrison)
Experiments:	ATLAS at CERN, Spokesperson: K. Jakobs (CERN)
	sPHENIX at RHIC, Spokespeople: D. Morrison (BNL), G. Roland (MIT)

Education:

2/98	PhD. Received "Search for Disoriented Chiral Condensates in 158 AGev Pb+Pb Collisions"
9/93 - 1/98	PhD. Student in Physics at the Massachusetts Institute of Technology Thesis advisor - Bolek Wyslouch.
9/92 - 6/93	Physics coursework at Yale University
5/92	Completion of B.A. in Political Science at Yale University
9/88 - 5/92	Yale University, New Haven, Connecticut
9/74 - 5/88	Francis W. Parker School, Chicago, Illinois

Awards and Honors:

9/17	Fellow of the APS Division of Nuclear Physics
7/03 - 7/06	Honorary Research Associate at University of Cape Town, South Africa
8/02 - 3/03	Fulbright Award for Lecturing and Research in Cape Town, South Africa
5/92	Philo S. Bennett Prize for Best Senior Essay in Political Philosophy
9/88	National Merit Scholarship

Responsibilities:

04/19 - present	Co-convenor, ATLAS Heavy Ion Physics ultraperipheral (UPC) subgroup
10/18 - present	Project leader, ATLAS Zero Degree Calorimeter (ZDC)
10/16 - 10/18	Co-convenor, ATLAS Heavy Ion Physics Group
05/15 - 10/16	Project leader, ATLAS ZDC
03/15 - 03/18	Elected to BNL Council
11/14 - 10/16	Co-convenor of ATLAS Heavy Ion Electroweak/Quarkonia subgroup
10/08 - 10/11	Co-convenor of ATLAS Heavy Ion Physics Group
11/05 - 10/08	ATLAS-HI Computing Liaison, ATLAS-HI Global Physics Group
04/05 - 04/12	PHOBOS Computing Liaison
08/03 - 05/06	Project Manager of PHOBOS Experiment (decommissioned)
02/01 - 08/03	Head of PHOBOS Computing
03/00 - 01/06	Co-convenor of Multiplicity Physics Working Group
11/99 - 02/01	Head of PHOBOS Online Computing
02/98 - 11/99	Development and Implementation of PHENIX Event Builder

Organizational and editorial responsiblities:

06/20	International Organizing Committee, Hard Probes 2020, Austin, Texas (online)
06/19	International Organizing Committee, Initial Stages 2021, Rehoot, Israel
06/19	co-Chair, Initial Stages 2019, New York City, USA
05/18	International Organizing Committee, Quark Matter 2018, Venice, Italy
09/17	International Organizing Committee, Initial Stages 2017, Krakow, Poland
05/16	International Organizing Committee, Initial Stages 2016, Lisbon, Portugal
05/15	International Organizing Committee, Hard Probes 2015, Montreal Canada
02/15	International Organizing Committee, ICPAQGP 2015, Kolkata, India
12/14	Local Organizing Committee, Initial Stages 2014, Napa, CA
11/13	Local Organizing Committee, Hard Probes 2013, Cape Town, South Africa, November 2013
11/12	Co-editor of volume "Strongly correlated quantum fluids: ultracold quantum gases, quantum chromodynamic plasmas and holographic duality", New Journal of Physics, Volume 14, November 2012.
08/12	Local Organizing Committee, Quark Matter 2012, Washington, DC,

	August 13-18, 2012
05/12	International Advisory Committee, Hard Probes 2012, Calgiari, Sardegna, May 27 - June 1, 2012
06/11	Organizer of RHIC/AGS Users Meeting, June 2011
05/11	International Advisory Committee, Quark Matter 2011, Annecy, France, May 23-28, 2011
02/11	Scientific Organizing Committee, Les Houches QCD 2011, Feb. 13-18, 2011
06/10	Elected incoming chair of RHIC/AGS Users Executive Committee (until 6/13)
09/09	Session organizer for ISMD 2009, Gomel, Belorussia, September 1-7, 2009.
06/09	Co-organizer of "Baryon stopping & Entropy production" at RHIC/AGS Users' Meeting 2009, Brookhaven National Laboratory.
04/09	International Advisory Committee, Quark Matter 2009, Knoxville, TN, March 30-April 4, 2009
02/09	Co-organizer (with W.A. Zajc) of "Quest for the Perfect Liquid: Connecting Heavy Ions, String Theory, and Cold Atoms", symposium at AAAS2009, Chicago, Illinois, February 15, 2009.
01/09-present	Co-editor "RHIC News" and "InsideRHIC" at Brookhaven National Laboratory
06/06	Co-organizer of "From High Energy to High μ_B", Workshop at the RHIC/AGS Users Meeting, June 5, 2006
05/06	Co-organizer of "Boulder Workshop 2006", UC Boulder, May 2006
03/05	Co-organizer of "Boulder Workshop 2005", UC Boulder, March 2005
11/04-	Co-organizer of "New Directions" Working Group in the "RHIC II Science" Effort, with Prof. James Nagle, UC Boulder
09/04	Local co-organizer of "Strange Quark Matter 2004", 9/10-15/2004, Cape Town, South Africa.
05/04	Co-organizer of "Bulk Dynamics" Workshop at RHIC/AGS Users Meeting, May 10-14, 2004, BNL.
04/04	Co-organizer of "RHIC II Physics and Perspectives on a New Comprehensive Detector", Yale University.
12/03-	Working group for a New RHIC II Detector (R2D)
08/03-	Nuclear Physics Planning Group - Brookhaven National Laboratory
08/03-12/03	RHIC Planning Committee - Brookhaven National Laboratory
01/01	Local Organizing Committee and Organizer for Student Pre-Conference Symposium, Quark Matter 2001, Stony Brook, NY.

Teaching Experience

3/03 - 5/03	Honours Module on Particle Physics (textbook: D.H. Perkins)
2/03 - 5/03	Laboratory Instructor & Grader for PHY110A, University of Cape Town, South Africa

Research highlights:

- Fellow of the APS Division of Nuclear Physics (September 2017)
- Co-convenor of ATLAS heavy ion physics group (2008-2011, 2016-2018)
- Co-project leader of ATLAS Zero Degree Calorimeter (2015, 2018-)
- Several reviews and journal volumes on heavy ion physics "Glauber modeling in high energy nuclear collisions" M.L.Miller, K.Reygers, S.J.Sanders and P.Steinberg, Ann. Rev. Nucl. Part. Sci. 57 (2007) - 1801 citations on Google Scholar, 1116 citations on Inspire.
- "Observation of a Centrality-Dependent Dijet Asymmetry in Lead-Lead Collisions at $\sqrt{s_{NN}}$276 with the ATLAS Detector at the LHC", Phys. Rev. Lett. 105, 252303 (2010) - 745 citations on Inspire.
- co-chair of Initial Stages 2019, at Columbia University
- Co-author of PHOBOS Glauber Monte Carlo, code still used widely in field and under constant development
- Speaker at many cross-disciplinary workshops, including heavy ion physics.

Selected Publications and conference proceedings:

- "Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb^{-1} of Pb+Pb data with the ATLAS detector", submitted to JHEP
- "Z boson production in Pb+Pb collisions at 5.02 TeV measured by the ATLAS experiment", Phys. Lett. B 802 (2020) 135262.
- "Measurement of W boson production in the muon channel in Pb+Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV", Eur. Phys. J. C 79 (2019) 935
- "Observation of light-by-light scattering in ultraperipheral Pb+Pb collisions with the ATLAS detector", Phys. Rev. Lett. 123, 052001 (2019)
- "Measurement of photon-jet transverse momentum correlations in 5.02 TeV Pb + Pb and pp collisions with ATLAS", ATLAS Experiment, Phys. Lett. B 789 (2019) 167.
- "Observation of centrality-dependent acoplanarity for muon pairs produced via two-photon scattering in Pb+Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with the ATLAS detector", Phys. Rev. Lett. 121 (2018) 212301
- "Evidence for light-by-light scattering in heavy-ion collisions with the ATLAS detector at the LHC", Nature Physics 13 (2017) 852
- "Femtoscopy with identified charged pions in proton-lead collisions at $\sqrt{s_{NN}}$=5.02 TeV with ATLAS", Phys. Rev. C 96 (2017) 064908
- "Photo-nuclear dijet production in ultra-peripheral Pb+Pb collisions", ATLAS-CONF-2017-011 (2017)
- "Centrality, rapidity and transverse momentum dependence of isolated prompt photon production in lead-lead collisions at $\sqrt{s_{NN}}$=2.76 TeV measured with the ATLAS detector", Phys. Rev. C 93 (2016) 034914.
- "Measurement of the centrality dependence of the charged-particle pseudorapidity distribution in proton-lead collisions at sqrt(sNN)=5.02 TeV with the ATLAS detector", European Physical Journal C, April 2016, 76:199
- "Z boson production in p+Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV measured with the ATLAS detector", Phys Rev C92 044915 (2015).
- "Measurement of the dependence of transverse energy production at large rapidity on the hard scattering kinematics of proton-proton collisions at $\sqrt{s_{NN}}$=2.76 TeV with ATLAS", Phys. Lett. B 756 (2016) 10-28.
- "Measurement of high-mass dimuon pairs from ultraperipheral lead-lead collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV with the ATLAS detector at the LHC", ATLAS-CONF-2016-025 (2016)
- "Observation of Associated Near-side and Away-side Long-range Correlations in $\sqrt{s_{NN}}$=5.02 TeV Proton-lead Collisions with the ATLAS Detector", Phys.Rev.Lett. 110 182302 (2013).
- "Measurement of the pseudorapidity and transverse momentum dependence of the elliptic flow of charged particles in lead-lead collisions at $\sqrt{s_{NN}}$ = 2.76 TeV with the ATLAS detector", Phys.Lett. B707 (2012) 330-348.
- "Measurement of the centrality dependence of the charged particle pseudorapidity distribution in lead-lead collisions at $\sqrt{s_{NN}}$=2.76 TeV with the ATLAS detector", arXiv:1108.6027, submitted to Phys. Lett. B. Phys.Lett. B710 (2012) 363-382.
- "Measurement of elliptic flow and higher-order flow coefficients with the ATLAS detector in $\sqrt{s_{NN}}$ = 2.76 TeV TeV Pb+Pb collisions", ATLAS-CONF-2011-074 (2011).

- "Centrality dependence of Jet Yields and Jet Fragmentation in Lead-Lead Collisions at $\sqrt{s_{NN}}$ = 2.76 TeV with the ATLAS detector at the LHC", ATLAS-CONF-2011-075 (2011).
- "Measurements of W Boson Yields in Pb+Pb at 2.76 TeV/nucleon via single muons with the ATLAS detector", ATLAS-CONF-2011-078 (2011).
- "Measurement of the centrality dependence of charged particle spectra and R_{CP} in lead-lead collisions at $\sqrt{s_{NN}}$ = 2.76 TeV with the ATLAS detector at the LHC", ATLAS-CONF-2011-079 (2011).
- "Measurement of the centrality dependence of J/ψ yields and observation of Z production in lead-lead collisions with the ATLAS detector at the LHC", Physics Letters B697, 294-312 (2011).
- "Observation of a Centrality-Dependent Dijet Asymmetry in Lead-Lead Collisions at $\sqrt{s_{NN}}$276 with the ATLAS Detector at the LHC", Phys. Rev. Lett. 105, 252303 (2010).
- "Phobos results on charged particle multiplicity and pseudorapidity distributions in Au+Au, Cu+Cu, d+Au, and p+p collisions at ultra-relativistic energies", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. C 83, 024913 (2011).
- "Event-by-event fluctuations of azimuthal particle anisotropy in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. Lett. 104, 142301 (2010).
- "High transverse momentum triggered correlations over a large pseudorapidity acceptance in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. Lett. 104, 062301 (2010).
- "System size dependence of cluster properties from two-particle angular correlations in Cu+Cu and Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. C81, 024904 (2010).
- "Quantitative and conceptual considerations for extracting the Knudsen number in heavy ion collisions", J. Nagle, P. Steinberg and W.A. Zajc, Phys. Rev. C 81, 024901 (2010).
- "Soft Physics from RHIC to LHC", P. Steinberg, Nucl.Phys. A827, 128C-136C (2009).
- "System size, energy and centrality dependence of pseudorapidity distributions of charged particles in relativistic heavy ion collisions", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. Lett. 102, 142301 (2009).
- "Quasi-Particle Degrees of Freedom versus the Perfect Fluid as Descriptors of the Quark-Gluon Plasma", L. A. Linden Levy, J. L. Nagle, C. Rosen (U. Colorado), P. Steinberg, Phys. Rev. C 78, 044905 (2008).
- "The PHOBOS Glauber Monte Carlo", B. Alver, M. Baker, C. Loizides, P. Steinberg, (arxiv:0805.4411, code on HepForge) (2008).
- "The Importance of Correlations and Fluctuations on the Initial Source Eccentricity in High-Energy Nucleus-Nucleus Collisions", B. Alver, et al (PHOBOS Collaboration), Phys. Rev. C77, 014906 (2008).
- "Consequences of Early Thermalization at Low and High p_T", P. Steinberg, Proceedings for "High p_T physics at LHC", Jyvaskyla, Finland, March 23-27, 2007, PoS(LHC07)033 (2007).
- "Heavy ion physics at the LHC with the ATLAS detector", P. Steinberg for the ATLAS Collaboration, J. Phys. G34:S527-534 (2007).

- "Inclusive Pseudorapidity Distributions in p(d)+A Collisions Modeled With Shifted Rapidity Distributions", P. Steinberg, Submitted to Physics Letters B (nucl-ex/0703002)
- "Hotter, Denser, Faster, Smaller...and Nearly-Perfect: What's the matter at RHIC?", P. Steinberg, APS Topical Group on Hadronic Physics, Nashville, Tennesse, 22-24 Oct 2006, J. Phys.: Conf. Ser. 69 012032 (2007).
- "Glauber modeling in high energy nuclear collisions" M.L.Miller, K.Reygers, S.J.Sanders and P.Steinberg, Ann. Rev. Nucl. Part. Sci. 57 (2007).
- "Vertex Reconstruction Using a Single Layer Silicon Detector", E. Garcia et al, Nucl. Instrum. Meth. A570:536-542 (2007).
- "System size, energy, pseudorapidity, and centrality dependence of elliptic flow", B.B. Back et al, Phys.Rev.Lett.98:242302 (2007).
- "Cluster properties from two-particle angular correlations in p+p collisions at $\sqrt{s}$ = 200 and 410 GeV", B. Alver et al, Phys. Rev. C75, 054913 (2007).
- "Entropy Production at High Energy and mu(B)", P.Steinberg, proceedings for "Critical Point and Onset of Deconfinement", Florence, Italy, 3-6 Jul 2006, PoS CPOD2006:036 (2006).
- "Charged Particle Pseudorapidity Distributions in Au+Au collisions at $\sqrt{s_{NN}}$ = 62.4 GeV", B.B. Back, et al, Phys. Rev. C74, 021901(R) (2006).
- "Centrality and energy dependence of charged-particle multiplicities in heavy ion collisions in the context of elementary reactions", B.B. Back et al, Phys.Rev. C74, 021902 (2006).
- "Forward-backward multiplicity correlations in $\sqrt{s_{NN}}$ =200 GeV Au+Au collisions", B.B. Back, et al, Phys.Rev.C74:011901 (2006).
- "System size and centrality dependence of charged hadron transverse momentum spectra in Au+Au and Cu+Cu collisions at $\sqrt{s_{NN}}$=62.4 and 200 GeV", Phys. Rev. Lett. 96, 212301 (2006).
- "The Origin of the Difference Between Multiplicities in e+e- annihilation and heavy ion collisions", J. Cleymans, M. Stankiewicz, P. Steinberg, S. Wheaton (submitted to Physics Letters B, nucl-th/0506027) (2005).
- "Scaling of Charged Particle Production in d+Au Collisions at $\sqrt{s_{NN}}$=200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C72, 031901(R) (2005).
- "The PHOBOS Perspective on Discoveries at RHIC", B.B. Back, et al (PHOBOS Collaboration), Nucl. Phys. A757, 28 (2005).
- "Centrality dependence of charged hadron transverse momentum spectra in Au+Au collisions from $\sqrt{s_{NN}}$ = 62.4 to 200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 94, 082304 (2005).
- "Pseudorapidity dependence of charged hadron transverse momentum spectra in d+Au collisions at $\sqrt{s_{NN}}$=200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C70, 061901(R) (2004).
- "Collision Geometry Scaling of Au+Au pseudorapidity density from $\sqrt{s_{NN}}$ = 19.6 to 200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C70, 021902(R) (2004).
- "Particle production at very low transverse momenta in Au+Au collisions at $\sqrt{s_{NN}}$=200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C70, 051901(R) (2004).

- "Pseudorapidity Distribution of Charged Particles in d+Au collisions at $\sqrt{s_{NN}}$=200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 93, 082301 (2004).
- "Centrality Dependence of the Charged Hadron Transverse Momentum Spectra in d+Au Collisions at $\sqrt{s_{NN}}$ =200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 91, 072302 (2003).
- "Charged hadron transverse momentum distributions in Au+Au collisions at $\sqrt{s_{NN}}$= 200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Lett. B578, 297 (2004).
- "Significance of the fragmentation region in ultrarelativistic heavy ion collisions", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 91, 052303 (2003).
- "Centrality Dependence of the Charged Particle Multiplicity near Mid-Rapidity in Au+Au Collisions at $\sqrt{s_{NN}}$ = 130 and 200 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C65, 061901(R) (2002)
- "Energy dependence of particle multiplicities near mid-rapidity in central Au+Au collisions", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 88, 22302 (2002).
- X "Centrality Dependence of Charged Particle Multiplicity at Midrapidity in Au+Au Collisions at $\sqrt{s_{NN}}$ = 130 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. C65, 31901(R) (2002).
- "Charged-particle pseudorapidity density distributions from Au+Au collisions at $\sqrt{s_{NN}}$ = 130 GeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 87, 102303 (2001).
- "Charged particle multiplicity near mid-rapidity in central Au+Au collisions at $\sqrt{s_{NN}}$ = 56 and 130 AGeV", B.B. Back, et al (PHOBOS Collaboration), Phys. Rev. Lett. 85, 3100 (2000).
- "Search for disoriented chiral condensates in 158-GeV/A Pb + Pb collisions", M.M. Aggarwal, et al (WA98 Collaboration), Phys.Lett. B420 169-179 (1998).

Talks:

- "Ultraperipheral collisions", invited plneary talk at Quark Matter 2019, November 4-9, 2019 Wuhan, China.
- "Collectivity in hadronic collisions", invited talk at workshop "Hydrodynamics across the scales", University of Chicago, April 27-28, 2019.
- "Photon-photon collisions at RHIC and the LHC", plenary talk at the GHP2019 workshop, Denver, CO, April 10-12, 2019.
- "Physics with the ATLAS ZDC," talk at Forward Physics And Instrumentation From Colliders To Cosmic Rays, Stony Brook University, October 2018.
- "Electromagnetic processes with Quasireal photons in Pb+Pb collisions: QED, QCD, and the QGP", invited parallel talk at EIC users meeting, Catholic University, Washington, DC August 2018.
- "Jets in small systems", invited talk at Workshop on "Probing Quark-Gluon Matter with Jets" 23-27 July 2018, Brookhaven National Laboratory.
- "Electromagnetic processes with Quasireal photons in Pb+Pb collisions: QED, QCD, and the QGP", invited parallel talk at Quark Matter 2018, Venice, May 2018.
- "Electromagnetic processes in ultraperipheral Pb+Pb collisions with ATLAS", Initial Stages 2017 (IS2017), September 2017, 2017.

- "A Tale of Collectivity in Collisions of Ions, Large and Small," Talk/Seminar presented at Oxford workshop "Canterbury Tales of Hot QCD", July 2017.
- "Photon-jet correlations in sqrt(s_{NN})=5.02 TeV pp and Pb+Pb collisions with ATLAS at the LHC", invited parallel talk at Quark Matter 2017, Chicago, Illinois, February 2017.
- "How small is too small?", invited talk for workshop "ULtra-RelatIvistiCH HEavy IoNZ", CERN, Geneva, Switzerland, July 2016.
- "Measurement of exclusive dimuon production in ultra-peripheral collisions with ATLAS at the LHC", invited talk for the workshop "Proton and Photon-induced nuclear collisions at the LHC", CERN, Geneva, Switzerland, July 2016.
- "Measurement of exclusive dimuon production in ultra-peripheral collisions with ATLAS at the LHC", invited parallel talk at Initial Stages 2016, Lisbon, Portugal, May 2016.
- "Measurement of the dependence of transverse energy production at large pseudo-rapidity on the hard scattering kinematics of proton-proton collisions at $\sqrt{s_{NN}}$= 2.76 TeV", invited parallel talk at Hard Probes 2015, Montreal Canada, July 2015.
- "Jet measurements in p+Pb and Pb+Pb collisions with ATLAS", invited parallel talk at Initial Stages 2014, Napa, CA, December 2014.
- "Centrality, rapidity and transverse momentum dependence of isolated prompt photon production in lead-lead collisions at $\sqrt{s_{NN}}$=2.76 TeV measured with the ATLAS detector", invited parallel talk at Quark Matter 2014, Darmstadt, Germany, May 2014.
- "What have we learned about the quark-gluon plasma, using hard probes with the ATLAS experiment at the LHC", invited plenary talk at Hard Probes 2013, Cape Town, South Africa, November 2013.
- "Photons and electroweak probes in ATLAS", invited plenary talk for Quark Matter 2012, Washington, DC, August 2012.
- "Recent Heavy Ion Results with the ATLAS Detector at the LHC", invited talk at Division of Nuclear Physics meeting, East Lansing, MI, October 29, 2011.
- "Heavy Ion Physics with the ATLAS Detector at the LHC", talk at the Tomography/Holography 2011 workshop at Columbia University, October 20, 2011.
- "Recent Heavy Ion Results with the ATLAS Detector at the LHC", invited parallel talk at Division of Particle and Fields meeting, Brown University, Providence, RI, August 12, 2011.
- "Suppression of high p_T particles with the ATLAS Detector at the LHC", talk given at Symposium on Jet Physics at RHIC and the LHC, Hangzhou, China, July 21, 2011.
- "Running RHIC Beyond 2017", talk at RHIC Long Range Planning Workshop, BNL, June 22, 2011.
- "Recent Heavy Ion Results with the ATLAS Detector at the LHC", plenary talk at Quark Matter 2011, Annecy, France, May 23, 2011.
- "Hard Probes Measured with the ATLAS Detector at the LHC", talk at the LPC workshop "HI @ LHC", CERN, Geneva, March 4, 2011.
- "Heavy Ion Physics with the ATLAS Detector at the LHC", invited talk given at Les Rencontres de Physique de la Vallée d'Aoste 2011, March 1, 2011.
- "The Present and Future RHIC Program at Brookhaven National Laboratory", invited talk given at the 13th SAC Seminar "New Perspectives of High Energy Physics", Novosibirsk, Siberia, September 3, 2010.

- "Preparations for the ATLAS Heavy Ion Physics Program", parallel talk at INPC 2010, Vancouver, Canada, July 8, 2010.
- "Study of the Perfect Liquid at RHIC", invited symposium talk at "Fermions at Unitarity: Gravity, the Quark-Gluon Plasma, and Ultra-Cold Atoms", APS March Meeting 2010, March 17, 2010.
- "Apples with applies: comparing initial states in theory & experiment", talk at TECHQM/CATHIE Workshop, December 14, 2009.
- "The ATLAS Heavy Ion Program", talk at SA-CERN launch, iThemba Labs, Stellenbosch, South Africa, December 15, 2008.
- "Lectures on Heavy Ion Physics", talk at "Applications of AdS/CFT", stiαs, Stellenbosch, South Africa, December 10, 2008.
- "Soft Physics from RHIC to the LHC", invited plenary talk at PANIC 2008, Eilat, Israel, November 13, 2008.
- "Global Variables in Heavy Ion Collisions at the LHC with the ATLAS Detector", parallel talk given at Quark Matter 2008, Jaipur, India, February 9, 2008.
- "(Unintended) Consequences of the Glauber Initial State", talk given at the conference "Early Time Dynamics in Heavy Ion Collisions", McGill University, Montreal, Canada, July 17, 2007.
- "Introduction to the Study of Heavy Ion Collisions", three lectures given at the National Nuclear Physics Summer School, Florida State University, Tallahassee, Florida, July 9-11, 2007.
- "The Tao of PHOBOS", plenary talk given at the RHIC/AGS Users Meeting, Brookhaven, June 18, 2007.
- "Consequences of Early Thermalization at Low and High p_T", talk given at the workshop "High p_T Physics at the LHC", Jyvaskyla, Finland, March 2007.
- "Scientific Status of the RHIC Heavy Ion Program", talk given at the Nuclear Physics Long Range Planning workshop "Phases of QCD Matter", Rutgers University, January 12-14, 2007.
- "Heavy Ion Physics at the LHC with ATLAS", plenary talk given at Quark Matter 2006, Shanghai, China, November 19, 2006.
- "Hotter, Denser, Faster, Smaller...and Nearly-Perfect: What's the matter at RHIC?", Invited talk at Group on Hadron Physics 2006, Nashville, October 22, 2006.
- "Entropy at High E and μ_B", talk given at the workshop "Critical Point and the Onset of Deconfinement (CPOD2006)", Florence, Italy, 5 July 2006.
- "Workshops Summary", plenary talk given at the RHIC/AGS Users' Meeting, June 5, 2006.
- "Multiplicity Systematics at high E and μ_B", talk given at the workshop "From High Energy to High μ_B" at the RHIC/AGS Users' Meeting, June 5, 2006.
- "PHENIX Capabilities for the Low Energy RHIC Run", talk given at Workshop on the Critical Point at RHIC, March 9, 2006.
- "Hotter, Denser, Faster, Smaller...and Nearly-Perfect: What's the matter at RHIC?", Physics Colloquium at The Ohio State University, Columbus, OH, March 7, 2006.

- "Hotter, Denser, Faster, Smaller...and Nearly-Perfect: What's the matter at RHIC?" 410th BNL Lecture, December 21, 2005.
- "(Nearly) Perfect Fluids and Perturbative Probes: a Primer on RHIC Physics", Lecture given at the 2005 International School on Subatomic Physics, Erice, Sicily, August 29-September 7, 2005.
- "Forward-Backward Multiplicity Correlations Corrleations in Au+Au", parallel talk given at Quark Matter 2005, Budapest, Hungary, August 2005.
- "The Thermochemistry and Hydrodynamics of the Strong Interaction: Results from RHIC", talk given at the Gordon Research Conference, Bates College, Lewiston, Maine, July 12, 2005.
- "Some RHIC Advice for LHC Day-1 Physics" Talk given at ATLAS Week, CERN, Geneva February 14-18, 2005.
- "Particle Multiplicities in Heavy Ion Collisions" Invited talk at Group on Hadron Physics 2004 (GHP2004), Fermilab, Batavia, Illinois, October 24-26, 2004.
- "Stranger in a Strange Land (Conference Summary)" Invited talk at Strangeness in Quark Matter 2004 (SQM2004), Cape Town, South Africa, Sept 15-20, 2004.
- "Thoughts on Heavy Quark Production" Invited talk at Hot Quarks 2004 (HQ2004), Taos, New Mexico, July 18-24, 2004.
- "Bulk Dynamics in Heavy Ion Collisions" Invited talk at INPC 2004, Goteborg, Sweden, June 28 - July 2, 2004.
- "Landau Hydrodynamics and RHIC Phenomenology" presented at 20th Winter Workshop on Nuclear Dynamics, Jamaica, March 14-21, 2004.
- "The Landscape of Particle Production: Recent Results from PHOBOS" plenary talk presented at Quark Matter 2004, Oakland, CA, January 11-18, 2004.
- "High p_T Physics at RHIC: Glauber Summary", presented at the RIKEN workshop "High-p_T Physics at RHIC", Brookhaven National Laboratory, December 2-6, 2003.
- "Landau Hydrodynamics & RHIC Phenomenology", Invited talk presented at the RIKEN/BNL Workshop "Collective flow and QGP properties", 17-19 November 2003.
- "Status of Parton Saturation at RHIC", Invited talk presented at Forward Physics at RHIC Workshop, Brookhaven National Lab, 9 October 2003.
- "Status of Parton Saturation at RHIC", Invited talk presented at ISMD2003, Krakow, Poland, 5-11 September 2003.
- "Dynamics of Soft Particle Production in Heavy Ion Collisions", Invited talk presented at CIPANP2003, New York, NY, 19-24 May 2003.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Nuclear and Particle Physics Colloquium presented at Massachusetts Institute of Technology, Cambridge, MA, February 3, 2003.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Colloquium presented at Schonland Research Centre for Nuclear Sciences, University of the Witwatersrand, Johannesburg, South Africa, December 10, 2002.
- "Relativistic Heavy Ion Phyics: Results from AGS to RHIC". Colloquium presented at the University of Stellenbosch, South Africa, November 8, 2002.

- "Relativistic Heavy Ion Phyics: Results from AGS to RHIC". Colloquium presented at the University of Cape Town, South Africa, August 14, 2002.
- "Universal Behavior of Charged Particle Production in Heavy Ion Collisions". Parallel session at ICHEP 2002, Amsterdam, The Netherlands, July 24-31, 2002.
- "Universal Behavior of Charged Particle Production in Heavy Ion Collisions". Parallel session at Quark Matter 2002, Nantes, France, July 18-24, 2002.
- "Relativistic Heavy Ion Collisions: Recent Results". Invited talk presented at Physics in Collision XXII, Stanford, CA, June 20-22, 2002.
- "Everything Counts: Multiplicity Measurements in High Energy Collisions". Invited talk presented at the ITP Workshop "QCD in the RHIC Era", UC Santa Barbara, April 8-12, 2002.
- "Counting on QCD: Multiplicity Measurements in High Energy Collisions". Physics Department Colloquium at Brookhaven National Laboratory, December 4, 2001.
- "RHIC: QCD Matter in the Laboratory". Colloquium given at George Washington University, Washington, D.C., November 15, 2001.
- "Recent Results from PHOBOS @ RHIC". Invited talk presented at the International Symposium on Multiparticle Dynamics, Datong, China, September 1-7, 2001.
- "Energy and Centrality Dependence of Global Observables in Heavy Ion Collisions". Invited talk presented at the national meeting of the American Chemical Society, Chicago, August 25-29, 2001.
- "A Tale of Two Glauber Calculations: Monte Carlo and Optical Limit Approaches". Invited talk given at the Glauber2001 Workshop at Brookhaven National Laboratory, July 19, 2001.
- "Elliptic flow and Particle Ratios with PHOBOS". Invited talk at RHIC/INT Workshop, Lawrence Berkeley National Laboratory, May 31 - June 2, 2001.
- "RHIC Rapporteur II: Global and Flow Observables". Invited talk at Quark Matter 2001, Stony Brook, January 14-20, 2001.
- "Results from the PHOBOS Experiment at RHIC". Invited talk at the Annual Fall Meeting of the Division of Nuclear Physics (DNP) of the American Physical Society (APS), Williamsburg, Virginia, October 4-7, 2000.
- "Development of an ATM-based Event Builder for the PHENIX Experiment at RHIC". Talk given at CHEP98, Chicago, August 31 - September 4, 1988.
- "Searching for DCCs with the WA98 Experiment". Invited talk at the "Nuclear Chemistry Gordon Research Conference", New London, NH, June 17, 1998.
- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Invited talk at the "International Symposium on Multiparticle Dynamics '97", Frascati, Italy, September 11, 1997.

Invited Colloquia & Seminars:

- "Heavy Ion Physics with ATLAS at the LHC", Colloqiua presented at DESY Hamburg and DESY Zeuthen, Germany, July 2016
- "Two particle correlations in proton-lead collisions at the LHC", Colloqiua presented at DESY Zeuthen, Germany, June 2013

- "Heavy ion physics with ATLAS", Seminar presented at University of Chicago Physics Department, November 2012
- "Heavy ion physics with ATLAS", Seminar presented at New York University Physics Department, November 2012
- "Electroweak probes with ATLAS", Seminar presented at LBL, February 2012
- "Observation of a centrality-dependent dijet asymmetry in lead-lead collisions at $\sqrt{s_{NN}}$276 with the ATLAS Detector at the LHC," Brookhaven Physics Department Colloquium, December 14, 2010.
- "Study of the Perfect Liquid at RHIC", Seminar given at the University of Virginia Physics Department, April 9, 2010.
- "Puzzles in Soft Physics: from RHIC to the LHC", Seminar given at Perimeter Institute, Waterloo, Ontario, October 9, 2009.
- "A Large Range of 2-particle Corrrelations Measureents with PHOBOS", Brookhaven Nuclear Physics Seminar, February 3, 2009.
- "Entropy at high energy and μ_B", seminar at Columbia University, January 25, 2009.
- "Introduction to Heavy Ion Collisions: Three Lectures", P.Steinberg, Presented at the National Nuclear Physics Summer School, Florida State University, 9-11 July 2007.
- "Hotter, Denser, Faster, Smaller...and Nearly Perfect: What's the matter at RHIC", Colloquium at U.C. Riverside, May 17, 2007.
- "Hotter, Denser, Faster, Smaller...and Nearly Perfect: What's the matter at RHIC", Colloquium at Ohio State University, March 6, 2006.
- "Hotter, Denser, Faster, Smaller...and Nearly Perfect: What's the matter at RHIC", Brookhaven Lecture, December 22, 2005.
- "The Thermochemistry and Hydrodynamics of the Strong Interation: Results from RHIC (RHIC for Chemists)", Brookhaven Chemistry Department Colloquium, May 20, 2005.
- "The Landscape of the Strong Interaction: Results from PHOBOS", Seminar at Yale University, 19 February 2004.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Seminar presented at Triangle Nuclear Theory Seminar, Duke University, Durham, NC, January 20, 2003.
- "Systematics of Charged Particle Production at RHIC with the PHOBOS Detector". Seminar given at Lawrence Berkeley Laboratory, November 6, 2001.
- "Isospin Fluctuations in Heavy Ion Collisions". Invited Seminar given at MIT, Cambridge, MA, March 1999
- "Search for DCCs with WA98 at the CERN SPS". Invited Seminar given at Yale University, New Haven, CT, October 14, 1997.
- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Invited seminar at the University of Lund, Sweden, December 2, 1996.

Outreach and national media:

- Presentation of RHIC and LHC physics in "People Pie Pool" at Performa 2017, New York City.

- "What black holes teach about strongly coupled particles", C. Johnson and P. Steinberg, in May 2010 issue of Physics Today magazine (based on 2009 AAAS symposium) http://physicstoday.org/resource/1/phtoad/v63/i5. Translated into Japanese for Parity Magazine in 2011.
- "Creating the perfect liquid in heavy-ion collisions", B. Jacak and P. Steinberg, in May 2010 issue of Physics Today magazine (based on 2009 AAAS symposium) http://physicstoday.org/resource/1/phtoad/v63/i5. Translated into Japanese for Parity Magazine in 2011.
- Co-organizer (with W.A. Zajc) of "The Quest for the Perfect Liquid", symposium at AAAS2009, Chicago, Illinois, February 15, 2009.
- Blogger for InterAction's "Quantum Diaries", January 1, 2005 - December 31, 2005, http://qd.typepad.com/5
- Blogger for US-LHC blogs (now part of Quantum Diaries), http://www.quantumdiaries.org/author/peter-steinberg/
- Private blogger for "Entropy bound", http://entropybound.blogspot.com
- "Plot Device of Mass Destruction: Antimatter's True Story" for Discovery Space website, April 28, 2009, http://dsc.discovery.com/space/my-take/anti-matter-angels-and-demons.html
- "No mere cog: Blogging the LHC", essay for Symmetry Magazine, December 2007, http://www.symmetrymagazine.org/cms/?pid=1000573
- "Why I am a Physicist", guest post for Backreaction, February 18, 2007, http://backreaction.blogspot.com/2007/02/guest-post-peter-steinberg.html
- "What's in a Proton?" (excerpt from 2005 Brookhaven Lecture), Brookhaven National Laboratory YouTube channel, http://www.youtube.com/watch?v=MQL0l0lyKOQ
- "Quark-Gluon Plasma: A New State of Matter" (excerpt from 2005 Brookhaven Lecture), Brookhaven National Laboratory YouTube channel, http://www.youtube.com/watch?v=xBYKWEH4HfI
- "Colliding Nuclei at High Energy" (excerpt from 2005 Brookhaven Lecture), Brookhaven National Laboratory YouTube channel, http://www.youtube.com/watch?v=Vyq_AYWctSo