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Curriculum Vitae

Education

August 1992
June 1987

Ph. D., SUNY Stony Brook
B.S., The University of Chicago

Faculty appointments

March 2007-present
March 2009-present
November 2004-present
June 2002-March 2007
October 1998-June 2002

Senior Scientist, BNL
Adjunct Professor, SUNY Stony Brook
Deputy Group Leader, NT Group
Scientist with Tenure, BNL
Assist., Assoc. & Scientist appointments, BNL

Post-doctoral appointments

January 1997-October 1998

September 1994-December 1996

September 1992-August 1994

Fellow, Royal Danish Research Council &
Research Asst. Professor, Niels Bohr Institute

Research Associate, National Institute of Nuclear
Theory, Univ. of Washington

Research Associate, Theoretical Physics
Institute, University of Minnesota

Visiting Scientist appointments

July 2004- June 2005

1993-2000

Sabbatical leave at Saclay, Univ. of Bielefeld,
Univ. of Hamburg and ECT* Trento
Visiting Scientist appointments at LBNL, MPI
Munich, CERN, Saclay, Bochum, Helsinki,
Frankfurt & Heidelberg Universities

Honors

January 2010-

February 2008 - present
November 2007-present
March-April 2007
October 2004-March 2005
October 2000- July 2003
July-August 1990
September 1984 - June 1987

Intl. Scientific Associate, LHC Discovery Center,
Copenhagen, Denmark
Member & Secretary ('09), BNL Council
Fellow, American Physical Society
Visiting lecturer, UTFSM & Andes Foundation
US Research Fellow, A. Von Humboldt Foundation
Fellow, RIKEN-BNL Research Center
Leon Rosenfeld Fellow, Niels Bohr Institute.
Univ. of Chicago Undergraduate Scholarship

Publications in refereed journals and invited reviews

1. “Long range two-particle rapidity correlations in A+A collisions from high energy QCD evolution”, K. Dusling, F. Gelis, T. Lappi and R. Venugopalan, **arXiv:0911.2720**, submitted to *Nucl. Phys. A*.
2. “Non-perturbative computation of double inclusive gluon production in the Glasma”, T. Lappi, S. Srednyak and R. Venugopalan, **arXiv:0911.2068**, submitted to JHEP.
3. “Three particle correlation from glasma flux tubes”, K. Dusling, D. Fernandez-Fraile and R. Venugopalan, *Nucl. Phys. A* **828**:161 (2009).
4. “High energy factorization in nucleus-nucleus collisions. III. Long range rapidity correlations”, F. Gelis, T. Lappi and R. Venugopalan, *Phys. Rev. D* **79**:094017 (2009).
5. “Two introductory lectures on high energy QCD and heavy ion collisions”, D. Banerjee, J. Nayak and R. Venugopalan, **arXiv: 0810:3553** [hep-ph].
6. “How particles emerge from decaying classical fields in heavy ion collisions:towards a kinetic theory of the Glasma”, F. Gelis, S. Jeon and R. Venugopalan, *Nucl. Phys. A* **817**, 61 (2009).
7. “High energy factorization in nucleus-nucleus collisions. II. Multigluon correlations”, F. Gelis, T. Lappi and R. Venugopalan, *Phys. Rev. D* **78**, 054020 (2008).
8. “Nuclear enhancement and suppression of diffractive structure functions at high energies”, H. Kowalski, C. Marquet, T. Lappi and R. Venugopalan, *Phys. Rev. C* **78**, 045201 (2008).
9. “Glasma flux tubes and the near side ridge phenomenon at RHIC”, A. Dumitru, F. Gelis, L. McLerran and R. Venugopalan, *Nucl. Phys. A* **810**, 91 (2008).
10. “High energy factorization in nucleus-nucleus collisions. I.”, F. Gelis, T. Lappi and R. Venugopalan, *Phys. Rev. D* **78**, 054019 (2008).
11. “Nuclear enhancement of universal dynamics of high parton densities”, H. Kowalski, T. Lappi and R. Venugopalan, *Phys. Rev. Lett.* **100**, 022303 (2008).

12. “High Energy Scattering in QCD”, F. Gelis, T. Lappi and R. Venugopalan, *Int. J. Mod. Phys. E* **16**, 2595 (2007).
13. “Lectures on multi-particle production in the Glasma”, F. Gelis and R. Venugopalan, *Acta. Phys. Polon. B* **37** (2006).
14. “Universality of the saturation scale and the initial eccentricity in heavy ion collisions”, T. Lappi and R. Venugopalan, *Phys. Rev. C* **74**:054905 (2006).
15. “Particle production in field theories coupled to strong external sources. II. Generating functions”, F. Gelis and R. Venugopalan, *Nucl. Phys. A* **779**, 177 (2006).
16. “Limiting fragmentation in hadron-hadron collisions at high energies”, F. Gelis, A. Stasto and R. Venugopalan, *Eur. J. Phys. C* **48**, 489 (2006).
17. “The unstable glasma”, P. Romatschke and R. Venugopalan, *Phys. Rev. D* **74**:045011, (2006).
18. “Quark Pair Production in high energy pA collisions: General Features”, H. Fujii, F. Gelis and R. Venugopalan, *Nucl. Phys. A* **780**:146 (2006).
19. “Particle production in field theories coupled to strong external sources. I. Formalism and main results ”, F. Gelis and R. Venugopalan, *Nucl. Phys. A* **776**, 135 (2006).
20. “Collective non-Abelian instabilities in a melting Color Glass Condensate”, P. Romatschke and R. Venugopalan, *Phys. Rev. Lett.* **96**:062302 (2006).
21. “Quantitative study of the violation of k_t factorization in the hadroproduction of quarks at collider energies”, H. Fujii, F. Gelis and R. Venugopalan, *Phys. Rev. Lett.* **95**:162002 (2005).
22. “A classical Odderon in QCD at high energies”, S. Jeon and R. Venugopalan, *Phys. Rev. D* **71**:125003 (2005).
23. “Study of the Fundamental Structure of Matter with an Electron-Ion Collider”, A. Deshpande, R. Milner, R. Venugopalan, W. Vogelsang, *Ann. Rev. Nucl. Sci.* **55** (2005).
24. “The Color Glass Condensate: A summary of key ideas and recent developments”, R. Venugopalan, [arXiv:hep-ph/0412396](https://arxiv.org/abs/hep-ph/0412396), review, extended version of *AIP. Conf. Proc.* **739**:97 (2005).

25. “Random walks of partons in $SU(N_c)$ and classical representations of color charge in QCD at small x ”, S. Jeon and R. Venugopalan, *Phys. Rev. D* **70**: 105012 (2004).
26. High energy pA collisions in the color glass condensate approach. II Quark Production, J.-P. Blaizot, F. Gelis and R. Venugopalan, *Nucl. Phys. A* **743**:57 (2004).
27. High energy pA collisions in the color glass condensate approach. I. Gluon production and the Cronin effect, J.-P. Blaizot, F. Gelis and R. Venugopalan, *Nucl. Phys. A* **743**:13 (2004).
28. “Large mass Q-anti-Q production from the color glass condensate”, F. Gelis and R. Venugopalan, *Phys. Rev. D* **69**:014019 (2004).
29. “Finite size effects on nucleation in a first order phase transition”, E. Fraga and R. Venugopalan, *Physica A* **345/1-2**, 121 (2004).
30. “The Cronin effect, quantum evolution and the color glass condensate”, J. Jalilian-Marian, Y. Nara and R. Venugopalan, *Phys. Lett. B* **577**, 54 (2003).
31. “Classical gluodynamics of high energy nuclear collisions: An erratum and an update”, A. Krasnitz, Y. Nara and R. Venugopalan, *Nucl. Phys. A* **727**, 427, (2003).
32. “The color glass condensate and high energy scattering in QCD”, E. Iancu and R. Venugopalan, arXiv:[hep-ph/0303204](https://arxiv.org/abs/hep-ph/0303204), invited review, in QGP3, Eds. R.C. Hwa and X.-N. Wang, World Scientific Publishers.
33. “Gluon production in the color glass condensate model of ultrarelativistic finite nuclei”, A. Krasnitz, Y. Nara and R. Venugopalan, *Nucl. Phys. A* **717** :268 (2003).
34. Elliptic flow“ of colored glass in high energy heavy ion collisions”, A. Krasnitz, Y. Nara and R. Venugopalan, *Phys. Lett. B* **554**, 21 (2003).
35. “Classical computation of elliptic flow at large transverse momentum”, D. Teaney and R. Venugopalan, *Phys. Lett. B* **539** : 53 (2002).

36. "Anomalous chirality fluctuations in the initial stage of heavy ion collisions and parity odd bubbles", D. Kharzeev, A. Krasnitz and R. Venugopalan, *Phys. Lett. B* **545**, 298 (2002).
37. "Generalized scaling of the transverse mass spectrum at the Relativistic Heavy-Ion Collider", J. Schaffner-Bielich, D. Kharzeev, L. D. McLerran and R. Venugopalan, *Nucl. Phys. A* **705**: 494 (2002).
38. "Coherent gluon production in very high energy heavy ion collisions", A. Krasnitz, Y. Nara and R. Venugopalan, *Phys. Rev. Lett.* **87**, 192302 (2001).
39. "Hard thermal loops and beyond in the finite temperature world-line formulation of QED", R. Venugopalan and J. Wirstam, *Phys. Rev. D* **63**, 125022 (2001).
40. "From colored glass condensate to gluon plasma: Equilibration in high energy heavy ion collisions", J. Bjorker and R. Venugopalan, *Phys. Rev. C* **63**, 024609 (2001).
41. "The initial gluon multiplicity in heavy ion collisions", A. Krasnitz and R. Venugopalan, *Phys. Rev. Lett.* **86**, 1717 (2001).
42. "Wong's equations and the small x effective action in QCD", J. Jalilian-Marian, S. Jeon and R. Venugopalan, *Phys. Rev. D* **63**, 036004 (2001).
43. "Minding one's P's and Q's: From the one loop effective action in quantum field theory to classical transport theory", J. Jalilian-Marian, S. Jeon, R. Venugopalan and J. Wirstam, *Phys. Rev. D* **62**, 045020 (2000).
44. "The initial energy density of gluons produced in very high energy nuclear collisions" Krasnitz and R. Venugopalan, *Phys. Rev. Lett.*, **84**, (2000) 4309.
45. "Non-perturbative computation of gluon mini-jet production in nuclear collisions at very high energies", A. Krasnitz and R. Venugopalan, hep-ph/9809433, *Nucl. Phys. B* **557**, (1999) 237.
46. "Fock space distributions, structure functions, higher twists and small x", by L. McLerran and R. Venugopalan, *Phys. Rev. D* **59**, 094002 (1999).
47. "Classical methods in DIS and nuclear scattering at small x", R. Venugopalan, *Acta Phys. Polon. B* **30**, 3731 (1999).

48. "Introduction to light cone field theory and high energy scattering", R. Venugopalan, arXiv:**nucl-th/9808023**, invited review, Ed. J. Cleymans et al., *Springer Lecture Notes in Physics* (1998).
49. "Boost covariant gluon distributions in large nuclei", by L. McLerran and R. Venugopalan, *Phys. Lett. B* **424**, 15 (1998).
50. "Hydrodynamical Description of 200 A GeV/c S+Au Collisions: Hadron and Electromagnetic Spectra", by J. Sollfrank, P. Houvinen, M. Kataja, P. V. Ruuskanen, M. Prakash and R. Venugopalan *Phys. Rev. C* **55**, 392 (1997).
51. "Small x Parton Distributions and Initial Conditions for Ultrarelativistic Nuclear Collisions", by R. Venugopalan, *Comments in Nuclear and Particle Physics*, vol. **22**, no. **3** 113 (1997).
52. "Lattice Computations of Small x Parton Distributions in a Model of Parton Densities in Very Large Nuclei", by Rajiv Gavai and R. Venugopalan, *Phys. Rev. D* **54**, 5795 (1996).
53. "Quantum Corrections to the Weizsäcker-Williams Gluon Distribution Function at small x", by A. Ayala, J. Jalilian-Marian, L. McLerran and R. Venugopalan, *Phys. Rev. D* **53**, 458 (1996).
54. "The Gluon Propagator in non-Abelian Weizsäcker-Williams fields", by A. Ayala, J. Jalilian-Marian, L. McLerran and R. Venugopalan, *Phys. Rev. D* **52**, 2935 (1995).
55. "Nucleation of Quark-Gluon Plasma from Hadronic Matter" by J. Kapusta, A. Vischer and R. Venugopalan, *Phys. Rev. C* **51**, 901 (1995).
56. "Green's Functions in the Color Field of A Large Nucleus" by L. McLerran and R. Venugopalan, *Phys. Rev. D* **50**, 2225 (1994).
57. "Gluon Distribution Functions for Very Large Nuclei at Small Transverse Momentum" by L. McLerran and R. Venugopalan, *Phys. Rev. D* **49**, 3352 (1994).
58. "Computing Quark and Gluon Distribution Functions for Very Large Nuclei", by L. McLerran and R. Venugopalan, *Phys. Rev. D* **49**, 2233 (1994).
59. "Dynamical Growth Rate of a Diffuse Interface in First Order Phase Transitions", by R. Venugopalan and A. P. Vischer, *Phys. Rev. E* **49**, 5849 (1994).

60. “Screening Mass from Chiral Perturbation Theory, Virial Expansion, and the Lattice”, by V. L. Eletsky, J. I. Kapusta and R. Venugopalan, *Phys. Rev. D* **48**, 4398 (1994).
61. “How fast is equilibration in hot hadronic matter?”, by Madappa Prakash, Manju Prakash, R. Venugopalan and G. Welke, *Phys. Rev. Lett.* **70**, 1228 (1993).
62. “Non-equilibrium properties of hadronic mixtures”, by Madappa Prakash, Manju Prakash, R. Venugopalan and G. Welke, *Physics Reports* **227**, 321 (1993).
63. “Thermodynamics of interacting hadrons at finite temperature”, by R. Venugopalan and M. Prakash, *Nucl. Phys. A* **546**, 718 (1992).
64. “A quantum mechanical model of color transparency”, by J.-P. Blaizot, R. Venugopalan and M. Prakash, *Phys. Rev. D* **45**, 814 (1992).
65. “The speed of sound in an interacting pion gas”, by G. Welke, R. Venugopalan and M. Prakash, *Phys. Lett. B* **245**, 137 (1990).
66. “Anti-proton production as a baryometer in ultrarelativistic heavy ion collisions”, by S. Gavin, M. Gyulassy, M. Plümer and R. Venugopalan, *Phys. Lett. B* **234**, 175 (1990).
67. “Flow effects on transverse momentum spectra in ultrarelativistic nuclear collisions”, by R. Venugopalan and M. Prakash, *Phys. Rev. C* **41**, 221 (1990).

Publications in conference proceedings

68. “Long range rapidity correlations and the ridge in A+A collisions”, F. Gelis, T. Lappi and R. Venugopalan, Talk at QM2009, **arXiv:0907.4381** [hep-ph].
69. “Diffractive structure functions in nuclei”, in proceedings of DIS2009, T. Lappi, H. Kowalski, C. Marquet and R. Venugopalan, **arXiv:0906.3637** [hep-ph].
70. “QCD on the light cone and heavy ion collisions: the CGC, the Glasma and multi-gluon correlations”, in PoS: LC2008:**029**, (2008).

71. “The Glasma initial state and high energy factorization”, F. Gelis, T. Lappi and R. Venugopalan, **arXiv:0810.1610** [hep-ph], in proceedings of SEWM2008.
72. “From Glasma to Quark Gluon Plasma in heavy ion collisions”, R. Venugopalan, **arXiv:0806.1356** [hep-ph], in proceedings of Quark Matter 2008.
73. “Nuclear diffractive structure functions at high energies”, C. Marquet, H. Kowalski, T. Lappi and R. Venugopalan, **arXiv:0805.4809** [hep-ph], to appear in proceedings of the 43rd Rencontres de Moriond Conference.
74. “Melting the Color Glass Condensate at the LHC”, H. Fujii, F. Gelis, A. Stasto and R. Venugopalan, **arXiv:0707.1870**, to appear in Proceedings of the CERN Heavy Ion TH workshop.
75. “Universal features of QCD dynamics in hadrons and nuclei at higher energies, R. Venugopalan, **arXiv:0707.1867**, DIS 2007.
76. “Heavy flavor production in pA collisions”, H. Fujii, F. Gelis & R. Venugopalan, **arXiv:hep-ph/0702174**, in Proceedings of Quark Matter 2006.
77. “Multi-particle production in the Glasma at NLO and plasma instabilities”, R. Venugopalan, **arXiv:hep-ph/0702019**, in Proceedings of Quark Matter 2006.
78. “Particle production and AGK relations in the Color Glass Condensate”, F. Gelis and R. Venugopalan, **arXiv:hep-ph/0608118**, in proceedings of SEWM06, Hard Probes 2006, Moriond 2006.
79. “From HERA to LHC through the Color Glass Condensate”, in Proceedings (Part B) of “HERA and the LHC: a workshop”, **arXiv:hep-ph/0601013**, page 554.
80. “Hadronic scattering in the Color Glass Condensate”, **arXiv:hep-ph/0511117**, in Proceedings of XXth Blois Conference.
81. “A Weibel instability in the Color Glass Condensate”, **arXiv:hep-ph/0510292**, in Proceedings of workshop on Quark Gluon Plasma Thermalization, Eur. Phys. J A**29**:71 (2006).
82. “Violation of k_t factorization in quark production from the Color Glass Condensate”, **arXiv:hep-ph/0510053**, in Proceedings of Quark Matter 2005 and ISMD 2005.

83. "Quark production in high energy proton-nucleus collisions". H. Fujii, F. Gelis and R. Venugopalan, arXiv: **hep-ph/0502204**, in Proceedings of International Conference of Hard and Electromagnetic Probes of High Energy Nuclear Collisions", *Eur. Phys. J. C* **43**:139 (2005).
84. "The Color Glass Condensate: an overview", R. Venugopalan, arXiv:**hep-ph/0502190**, in Proceedings of International Conference of Hard and Electromagnetic Probes of High Energy Nuclear Collisions", *Eur. Phys. J. C* **43**: 337 (2005).
85. "Three lectures on the Color Glass Condensate", HADRON-RANP 2004, Angra Dos Reis, Brazil, AIP. Conf. Proc.739:97 (2005).
86. "The Color Glass Condensate", R. Venugopalan, in Proceedings of International Conference on Physics and AstroPhysics of QGP (ICPAQGP 2005), to appear in *J. Phys. G*.
87. "Proton-Nucleus Collisions in the Color Glass Condensate Framework", J.-P. Blaizot, F. Gelis and R. Venugopalan, **hep-ph/0410032**, in Proceedings of 6th Conference on Strong and Electroweak Matter.
88. Finite Size constraints on nucleation of hadrons in a Quark-Gluon plasma, E. Fraga and R. Venugopalan, Presented at meeting on Hadronic Interactions, Sao Paolo, 28-30th May, 2003, *Braz. J. Phys.* **34**: 315 (2004).
89. Initial state effects in the Color Glass Condensate, F. Gelis and R. Venugopalan, talk at Quark Matter 2004, *J. Phys.* **G30:S995** (2004).
90. "Probing A Color Glass Condensate In High Energy Heavy Ion Collisions", A. Krasnitz, Y. Nara and R. Venugopalan, invited talk, XXV Workshop on Nuclear Physics in Brazil, Sao Pedro, 31 Aug - 4 Sep 2002, *Braz. J. Phys.* **33**, 223 (2003).
91. "Elliptic flow from color glass condensate", by A. Krasnitz, Y. Nara, and R. Venugopalan, in Proceedings of Quark Matter 2002, *Nucl. Phys. A* **715**, 669 (2003).
92. "Recent progress in computing initial conditions for high energy heavy ion collisions", A. Krasnitz, Y. Nara, and R. Venugopalan, invited talk by R.V., in Proceedings of Statistical QCD Workshop, Bielefeld, Eds. F. Karsch and H. Satz, *Nucl. Phys. A* **702**, 227 (2002).

93. “Scaling properties of the transverse mass spectra”, J. Schaffner-Bielich, D. Kharzeev, L. McLerran and R. Venugopalan, arXiv:nucl-th/0202054, in proceedings of *30th International Workshop on Gross Properties of Nuclei and Nuclear Excitation: Hirschegg 2002*.
94. “Recent progress in computing initial conditions for high energy heavy ion collisions”, R. Venugopalan, in *QCD Perspectives on Hot & Dense Matter*, Cargese Summer School, Ed.: J.-P. Blaizot & E. Iancu, Kluwer NATO Science Series (2002).
95. “Small x physics and the initial conditions in heavy ion collisions”, R. Venugopalan, hep-ph/0104168, plenary talk at Quark Matter 2001, *Nucl. Phys. A* **698**, 209 (2002).
96. “Multiparticle production at RHIC and LHC: A classical point of view”, A. Krasnitz and R. Venugopalan, **hep-ph/0102118**, invited talk by A. K., published in proceedings of ISMD2000, Tihany, Hungary, October 2000.
97. “Deeply inelastic scattering off nuclei at RHIC”, R. Venugopalan, **hep-ph/0102087**, invited talk, MIT EPIC Workshop, *AIP Conf. Proc.* **588**, 121 (2001).
98. “Solution of the Boltzmann equation for gluons after a heavy ion collision”, J. Bjorker and R. Venugopalan, **hep-ph/0011001**, published in the proceedings of *International Workshop on Strong and Electroweak Matter*, Marseille, June 2000.
99. “What's new at small x”, R. Venugopalan, Plenary talk at *6th Workshop in High Energy Physics Phenomenology*, Chennai, India, January 2000, *Pramana* **55**, 73 (2000).
100. “Non-perturbative gluodynamics of high energy heavy-ion collisions”, A. Krasnitz and R. Venugopalan, Invited talk by A. K at *5TH Workshop on QCD*, Villefranche-sur-Mer, France, Jan 2000, **hep-ph/0004116**.
101. “The first fermi in a high energy nuclear collision”, A. Krasnitz and R. Venugopalan, Invited talk, *19th International Symposium on Multiparticle Dynamics* (ISMD99), Providence, RI, 9-13 Aug. 1999, **hep-ph/9910391**.
102. “Parton saturation, production, and equilibration in high energy nuclear collisions”, R. Venugopalan, invited talk, *34th Rencontres de Moriond*, **hep-ph/9907209**.

103. "Making glue in high energy nuclear collisions", R. Venugopalan, invited talk, *8th Mexican School of Particles and Fields*, hep-ph/**9905319**.
104. "Real time simulations of nuclear collisions", R. Venugopalan, invited talk in proceedings of *3rd International workshop on continuous advances in QCD*, Minneapolis, MN, April 16th--19th, 1998; **hep-ph/9808332**.
105. "On colliding ultrarelativistic nuclei on a transverse lattice", R. Venugopalan, invited talk in proceedings of *3rd International Conference on Physics and Astrophysics of Quark Gluon Plasma*, March 1997, World Scientific publishers.
106. "A model of large parton densities in pQCD", R. Venugopalan, invited talk in proceedings of *Brookhaven HERA workshop*, November 17th--18th, 1995.
107. "Wee Partons in Large Nuclei: from Virtual Dreams to Hard Reality", plenary talk by R. Venugopalan, in Proceedings of Quark Matter 95, INT 95--00--85, *Nucl. Phys. A* **590** (1995) 147c.
108. "Photons and Hadrons from Hydrodynamical Simulations of Ultrarelativistic Nuclear Collisions", P. Huovinen, M. Kataja, V. Ruuskanen, J. Sollfrank and R. Venugopalan, *Physics Days*, Finland, 1995.
109. "Parton distributions of large nuclei at small x", invited talk by R. Venugopalan, in Proceedings of *V conference on the intersections of particle and nuclear physics*, St. Petersburg, FL, May 31st--June 6th, 1994.
110. "Parton distributions at small x", invited talk by R. Venugopalan, in Proceedings of *Rencontres de Moriond*, Meribel, France, March 17th--24th, 1994.
111. "The color field of a large nucleus at small x", invited talk by R. Venugopalan, in *Minnesota workshop on continuous advances in QCD*, TPI-MINN--94--29, Ed. A. Smilga, World Scientific (1994).
112. "Coupling of Longitudinal and Transverse Flows in the Hydrodynamics of in Ultrarelativistic Nuclear Collisions", by R. Venugopalan, M. Prakash, M. Kataja and V. Ruuskanen, *Nucl. Phys. A* **566**, (1994) 473c.
113. "How fast is Equilibration in Hot Hadronic Matter", by Madappa Prakash, Manju Prakash, R. Venugopalan and G. Welke, *Nucl. Phys. A* **566**, (1994) 403c.

114. "How fast is Equilibration in Hot Hadronic Matter", in Proceedings of *Interdisciplinary Workshop on Transport Phenomena*, Les Houches, February 1993.
115. "2+1-D hydrodynamics of secondaries in ultrarelativistic nuclear collisions", by R. Venugopalan, M. Prakash, M. Kataja and V. Ruuskanen, in Proceedings of *VII winter workshop on nuclear dynamics*, World Scientific, Singapore, (1991).
116. "Hadrons off-equilibrium", by Madappa Prakash, Manju Prakash, R. Venugopalan and G. Welke, in Proceedings of *VII winter workshop on nuclear dynamics*, World Scientific, Singapore, (1991).

Other publications

117. "A high luminosity, high energy electron ion collider", White paper submitted to NSAC LRP, April 2007, C. Aidala et al.
118. "Physics opportunities with e+A collisions at an electron ion collider", C. Aidala et al.
119. "White paper on the Electron-Ion Collider", R. Holt et al., submitted to the Nuclear Science Advisory Committee, March 2001.
120. Proceedings of eRHIC BNL summer meeting, Ed.: L. McLerran and R. Venugopalan, BNL Formal Report 52606.
121. Proceedings of 2nd eRHIC workshop, Ed. L. McLerran et al., BNL Formal Report 52592.

Conference Organization

- Co-Organizer, INT Workshop on Physics of a High Energy Electron Ion Collider, October 19th-23rd, 2009.
- Co-organizer, Session on Color Glass Condensate, RHIC AGS Users meeting, June 2nd, 2009.
- Co-Convenor, Session on Future Facilities, CIPANP, San Diego, May 26th-31st, 2009.
- Quantum Field Theory in Extreme Environments, Saclay and IAP Paris, April 23rd-25th, 2009.
- Program on Initial Conditions at RHIC and LHC, International Center, Dona Paula, Goa, India, Sept. 1st-19th, 2008.
- Trento workshop on the Electron Ion Collider, July 14th-18th, 2008.
- Co-Convenor, eA parallel session, 4th Electron Ion Collider Workshop, Hampton Univ., May 19th-23rd, 2008.
- Co-organizer, EIC working group meeting, MIT, April 6th-7th, 2007.
- Convenor, QCD Theory workshop, Washington DC, Dec. 15th-16th, 2006.
- EIC working group, BNL, October 2006-present.
- Co-organizer, workshop on Future Prospects in QCD, BNL, July 17th-21st, 2006.
- Co-organizer, RBRC workshop on RHIC Physics in context of the Standard Model, June 18th-23rd, 2006.
- Co-organizer, International Conference on Strong and Electroweak Matter, BNL, May 10th-13th, 2006.
- Co-organizer, Satzfest: 20 years of J/Psi suppression, BNL, May 9th, 2006.
- Co-organizer, RHIC-II and eRHIC Satellite Meeting, PANIC, Santa Fe, October 2005.
- Co-organizer, 2nd Electron Ion Collider workshop, JLAB, March 15th-17th, 2004.

- Co-organizer, eRHIC workshop, BNL, Jan.29th-31st, 2004.
- Co-organizer, RIKEN-BNL workshop on "High p_t physics at RHIC", BNL, Dec. 2nd-6th, 2003.
- Organizer, RBRC summer workshop on "Current and Future directions at RHIC", BNL, August 5th-22nd, 2002.
- Organizer, "Mini-symposium on topics in perturbative QCD", BNL, May 2002.
- Co-Chair, First EIC workshop, BNL, Feb. 28th-March 2nd, 2002.
- Co-Convenor, "pA sub-group of the LHC Yellow Report", Fall 2001-Fall 2002.
- Co-Convenor with W. Ochs, "QCD in multi-particle production", ISMD 2000, Lake Balaton, Hungary, October 9th-16th, 2000.
- Co-organizer, with L. McLerran, eRHIC summer meeting, BNL, June 26th-July 14th, 2000, BNL Formal Report 52606.
- Co-organizer, 2nd eRHIC workshop, Yale, April 6th-8th, 2000, BNL Formal Report 52592, with L. McLerran, S. Peggs, G. Garvey, V. Hughes, A. Deshpande, and J. Harris.
- Co-organizer, 1st eRHIC workshop, BNL, with T. Ludlam, L. McLerran, G. Garvey and M. Strikman, December 3rd-4th, 1999.
- Co-organizer, RIKEN-BNL Center Workshop on Hard parton physics in high energy nuclear collisions, March 1st-5th, 1999, With J. Carroll, C. Gale and M. Tannenbaum.
- Co-organizer, Workshop on Coherent QCD processes with nucleons and nuclei, with L. L. Frankfurt, G. Piller, M. Sargsian, W. Weise, W. Krasny and M. Strikman ECT*, Trento, August 31st - September 11th, 1998.
- Co-organizer, 2nd INT/RHIC workshop on Electromagnetic probes of the quark-gluon plasma, with J. Harris, R. Pisarski and W. Zajc, Seattle, January 24th-27th, 1996.

Invited Lectures

- Lectures at XIV Jorge Swieca Summer School in Nuclear Physics, Itaipava, **Brazil**, Jan. 25th – 31st, 2009.
- "Hadronic collisions at the LHC and QCD at high density", April 2008, Les Houches, **France** (missed due to illness)
- QGP Winter School, Jaipur, **India**, Jan. 31st-Feb. 3rd, 2008.
- Lectures on QCD at high energies, Universidad Technico Federico Santa Maria (UTFSM), Valparaiso, **Chile**, March 20th-April 6th, 2007.
- Lectures on Multiparticle production in QCD at high energies, at the 46th Zakopane Summer School in Physics, Zakopane, **Poland**, May 27th-June 5th, 2006.
- Lectures on QCD Phase Transitions and RHIC Physics at the International Center for Theoretical Physics (ICTP) Summer School in Particle Physics, Trieste, **Italy**, June 13th-24th, 2005.
- Lectures at International Graduate School, Univ.of Bielefeld, **Germany**, October 4th-10th, 2004.
- Lecture on the Color Glass Condensate at CTEQ summer school, **Madison**, WI, June 22nd-30th, 2004.
- Lectures on the Color Glass Condensate and RHIC physics at Hampton University Graduate School (**HUGS**), June 9th-11th, 2004.
- Three Lectures on the Color Glass Condensate, at Joint meeting of IX Hadrons 2004 and VII RANP, Angra Dos Reis, **Brasil**, March 28th-April 3rd, 2004.
- "QCD and heavy ion collisions", Graduate Student lecture, Quark Matter 2004, **Oakland**, Jan. 11th-17th, 2004.
- "High Energy Nuclear Physics in the Collider Era", National Nuclear Physics Summer School, **Knoxville**, TN, June 2003.
- "Small x physics in QCD", Summer School on QCD theory and RHIC Physics, Shandong Univ., Jinan, **China**, June 2002.
- "Initial conditions in heavy ion collisions", Cargese Summer School in physics, Corsica, **France**, August 2001.

- “Physics of Relativistic Nuclear Collisions”, a course taught jointly D. Kharzeev, M. Prakash, J. Schaffner-Bielich, **Stony Brook**, Fall 2000.
- Lectures on “Scattering in high energy QCD” at the XXXIX Cracow school of theoretical physics, Zakopane, **Poland**, May 29th--June 8th, 1999.
- “Light cone field theory and high energy scattering”, 11th Chris Engelbrecht summer school in theoretical physics, Cape Town, **South Africa**, February 4th--13th, 1998.
- Lectures at “Jyvaskyla International Summer School”, Jyvaskyla, **Finland**, August 1st--15th, 1997.

Invited talks and seminars (since Fall 1998)

2009

Plenary Talk, CATHIE-TECHQM workshop, BNL, Dec. 14th-18th, 2009

Graduate Student lecture, SUNY Stony Brook, Nov. 20th, 2009

Invited talk, EICAC Advisory Committee meeting, Jlab, November 1st-2nd, 2009

Invited talk, International Symposium “From Particles and Partons to Nuclei and Fields”, AIFest in honor of A.H. Mueller, Columbia Univ. October 23rd-25th, 2009

Invited talk, APS/JPS DNP meeting, Hawaii, October 13th-17th 2009

Invited talk, Small x meeting, Ischia, Italy, September 9th-13th, 2009

Plenary talk, STAR Analysis Workshop, July 9th, 2009

Seminar, Univ. of Connecticut, Storrs, July 7th, 2009.

Invited talk, RHIC AGS Users meeting, June 2nd, 2009

Invited talk, Parallel session, Sakharov Int. Conf. May 18th-23rd, 2009

Plenary Talk, 4th Sakharov International Conference, Moscow, May 18th-23rd, 2009

Seminar, Paris VI (Jussieu), April 29th, 2009

Invited (Parallel session) Talk, Quark Matter, March 29th-April 4th, 2009

Seminar, McGill University, Montreal, March 24th, 2009.

Seminar, Heavy Ion Tea, LBL, February 10th, 2009

Seminar extraordinario, Federal University, Rio De Janeiro, Brasil, February 2nd, 2009.

2008

Seminar, Penn State, Nov. 5th, 2008.

Invited talk, Ridge Workshop, BNL, Sept. 22nd-24th, 2008.

Opening talk, Program on Initial Conditions: QCD at high parton densities, International Center, Dona Paula, Goa, India, Sept. 1st, 2008

Invited Talk, Light Cone 2008, Mulhouse, France, July 7th-11th, 2008.

Invited Talk, AGS/RHIC users meeting, BNL, May 27th, 2008

Plenary Talk, 4th Electron Ion Collider Workshop, Hampton Univ., May 23rd, 2008.

Invited Talk, 6th Int. Conf. on Perspectives in Hadronic Physics, Trieste, May 12th-16th, 2008.

Invited Talk, RBRC workshop on Hydrodynamics, April 28th, 2008

Colloquium, George Washington U., April 10th, 2008.

Invited Talk, NFQCD08 workshop, Yukawa Institute, Kyoto, March 13th, 2008.

Discussion Leader, NFQCD08 Symposium, Kyoto, March 4th-7th, 2008.

Invited Talk, workshop on Hot & Dense Matter in the RHIC and LHC era, TIFR, Mumbai, Feb. 12th-14th, 2008.

Plenary Topical Overview Talk, Quark Matter 2008, Jaipur, India, Feb. 4th-10th, 2008

Nuclear Theory Seminar, Stony Brook, January 24th, 2008.

2007

TH-Seminar, CERN, Nov. 2nd, 2007.

Invited talk, Gordon Conference, July 14th-20th, 2007.

JLAB Seminar, May 14th, 2007.

Plenary talk, DIS 2007 April 16th-20th, 2007.

Heavy Ion Tea Seminar, LBNL, March 12th, 2007.

Seminar, Galileo Galilei Institute, Florence, February 28th, 2007.

Invited talk, Town Hall meeting on Phases of QCD Matter, January 12th-14th, (2007).

2006

Summary of theory talks at QM2006, BNL, Nov. 30th, 2006.

Invited Parallel session talk, Quark Matter 2006, Shanghai, Nov. 14th-20th, 2006

Seminars, Univ. of Maryland & George Washington U, Nov. 1st-2nd, 2006.

Seminar at U. Conn., October 23rd, 2006.

RBRRC Seminar, BNL, October 12th, 2006.

Invited talk, INT workshop on Quark Gluon Plasma Thermalization, Seattle, September 26th-30th, 2006.

Talk at BNL PAC, September 13th, 2006.

Talk at Workshop on Future Prospects in QCD, July 17th-21st, 2006.

Keynote Talk, STAR collaboration meeting, MIT, July 12th, 2006.

Plenary talk, Hard Probes 2006, Asilomar, June 9th-16th, 2006.

Invited Talk, AGS Users meeting, BNL, June 5th-9th, 2006.

Colloquium, Oak Ridge National Lab, May 25th, 2006.

Invited talk, APS Dallas Meeting, April 23rd, 2006.

Seminar, McGill Univ., April 12th, 2006.

Seminar, Univ. of New Hampshire, March 29th, 2006.

Colloquium, Univ. of New Hampshire, March 27th, 2006

Talk, BNL PAC, March 23rd, 2006.

Colloquium, Theory Division, Saclay, February 28th, 2006.

Talk, QCD in nuclei Discussion group, BNL, January 13th, 2006.

2005

Invited talk, RBRC Symposium, Dec. 15th, 2005.

Invited talk, RBRC workshop on Heavy Flavor Production, Dec. 12th-14th, 2005.

Seminar, Wayne State University, Dec. 9th, 2005.

Invited talk, LHC Satellite Meeting, PANIC, Santa Fe, Oct. 22nd, 2005.

Invited talk, RBRC workshop on the Odderon, Sept. 27th-29th, 2005

Colloquium, Theory Division, CERN, May 25th, 2005.

Plenary Talk, XX Blois Conference on Elastic & Diffractive Scattering, May 15th-19th, 2005.

Seminar, Theoretical Physics Dept., University of Florence, May 9th, 2005.

Seminar, Theory Group, University of Milano, May 2nd, 2005.

Invited Talk, HERA-LHC workshop, DESY, March 21st-23rd, 2005.

DESY Theory Seminar, February 23rd, 2005.

Plenary talk, International Conference on Physics and Astrophysics of the Quark-Gluon Plasma, February 8th-12th, 2005, Kolkata, India.

Physics department Colloquium, University of Arizona, January 21st, 2005.

Nuclear Theory Seminar, University of Arizona, January 20th, 2005.

Nuclear Theory Seminar, Julich, January 13th, 2005.

2004

Colloquium, Institute of Mathematical Sciences, Chennai, India, December 6th, 2004.

Plenary talk, DAE-HEP Symposium, Kolkata, India, Nov. 29th-December 3rd, 2004.

Invited talk, Conference on Teraflop Computing, Bielefeld Univ., Nov. 21st-25th, 2004.

Seminar, Frankfurt Univ., Nov. 18th, 2004.

Plenary talk, Hard Probes 2004, Ericeira, Portugal, Nov. 4th-10th, 2004.

Theoretical Particle Physics seminar, Oxford Univ., October 22nd, 2004.

Particle Physics seminar, Orsay, September 21st, 2004.

Plenary talk, Conference on QCD at Cosmic Energies, Erice, August 29th-September 5th, 2004.

Invited talk, NSAC meeting on high energy nuclear physics, BNL, June 2nd-5th, 2004.

RIKEN lunch seminar, BNL, May 27th, 2004.

Seminar, Case Western Reserve Univ., April 20th, 2004.

Seminar, Federal Univ., Rio de Janeiro, March 26th, 2004.

Invited talk, STAR collaboration meeting, Feb. 17th, 2004.

Invited parallel session talk, QM2004, Jan. 11th-17th, 2004.

2003

Invited talk, RHIC II planning meeting, BNL, Dec. 3rd, 2003.

Colloquium, UNAM, National Univ. of Mexico, Mexico City, Nov. 5th, 2003.

Nuclear Theory Seminar, Indiana Univ., Oct. 24th, 2003.

Particle Physics Seminar, Columbia Univ., Oct. 20th, 2003.

Invited Talk, Heavy Ion meeting, Faro, Portugal, October 10th-11th, 2003.

Seminar, McGill Univ., Montreal, Canada, Sept. 17th, 2003.

Invited Talk, HIC03, Montreal, Canada, June 25th-28th, 2003.

Invited Talk, Low x Workshop, Nafplio, Greece, June 4th-7th, 2003.

Invited Talk, NAPP2003, Dubrovnik, Croatia, May 26th-30th, 2003.

Plenary Talk, RHIC-AGS Users Meeting, May 15th-16th, 2003.

Seminar and Lecture, UCLA, April 8th, 2003.

Invited Talk, INT Program on the First Three Years of RHIC Physics, INT, Seattle, March 30th-April 7th, 2003.

T-8 Seminar, Los Alamos, Feb. 7th, 2003.

2002

CNS Seminar, Kent State, Nov. 19th, 2002.

Seminar, Yukawa Institute, Kyoto Univ., Nov. 8th, 2002.

Kanto Hadron Seminar, Univ. of Tokyo, Nov. 7th, 2002.

Invited Talk, WSO2/CNS Workshop, RIKEN, Japan, Nov. 5-6th, 2002.

Invited talk, ECT* Workshop on Coherent Effects at RHIC and LHC, Trento, Italy, October 14th-19th, 2002.

Seminar, UERJ, Rio De Janeiro, Sept. 10th, 2002.

Seminar, Institute for Theoretical Physics, Univ. of Sao Paulo, Sao Paulo, Brazil, Sept. 5th, 2002.

Plenary talk, XXV Brazilian National Nuclear Physics Conference (RTFNB), Sao Pedro, Brazil, August 30th-Sept. 4th, 2002.

Invited talk, Conference on RHIC Physics, Wuhan, China, June 17th-18th, 2002.

Invited talk, STAR collaboration meeting, Berkeley, May 3rd-5th, 2002.

Invited talk, Workshop at ITP Santa Barbara, April 8th-12th, 2002.

Colloquium, Univ. of Illinois Chicago, March 2002.

2001

Invited talk, Workshop on future of lepton-hadron colliders, Durham, UK, December 6th-7th, 2001.

Seminar, SUNY Stony Brook, November 15th, 2001.

Seminar, Univ. of Maryland, November 9th, 2001.

Seminar, Univ. of Virginia, November 7th, 2001.

Invited talk, DNP meeting, Hawaii, October 16th-20th, 2001.

Seminar, MIT, October 9th, 2001.

Invited talk, International Conference on the physics of the Quark Gluon Plasma Ecole Polytechnique, France, September 3rd-7th, 2001.

Invited talk, Statistical QCD, Bielefeld, Germany, August 26th-30th, 2001.

Invited talk, Gordon Conference on QCD at high T, high mu and small x, Newport, July 22nd-27th, 2001.

Invited talk, ThermalFest, BNL, July 20th-21st, 2001.

Seminar at McGill University, April 26th, 2001.

Seminar at Ohio State University, April 16th, 2001.

Colloquium at Iowa State University, April 9th, 2001.

Invited talk at Workshop on Lepton scattering, Hadrons, and QCD, March 26th-April 6th, 2001, Adelaide, Australia.

Plenary talk, Quark Matter 2001, Stony Brook, January 15th-19th, 2001.

2000

Plenary talk at DNP meeting, Williamsburg, October 2000.

Plenary talk at EPIC workshop, MIT, September 14th--16th, 2000.

Invited talk, LBNL summer workshop, August 31st, 2000.

Seminars at Munich, Heidelberg, and Frankfurt universities, August 1st-11th, 2000.

Invited talk, workshop on QCD in a nuclear environment, Regensburg, August 3rd-5th, 2000.

Invited talk, RBRC workshop on Phase Transitions and Cosmology, BNL, July 17th-28th, 2000.

Nuclear Theory Seminar at Argonne National Lab, May 18th, 2000.

Departmental Colloquium, BNL, April 18th, 2000.

Plenary talk, Yale eRHIC workshop, April 6th-8th, 2000.

Plenary talk, workshop on High Energy Physics Phenomenology, Chennai, India, January 4th--13th, 2000.

1999

Invited talk, INT workshop on Non-equilibrium dynamics, Seattle, November 23rd, 1999.

RHIC primer series lecture, BNL, October 25th, 1999.

RIKEN lunch seminar, October 8th, 1999.

High Energy Seminar at Penn State Univ., September 28th, 1999.

Invited talk at workshop on RHIC computing, September 2nd, 1999, BNL.

Invited talk, International conference on Multiparticle Dynamics, Brown Univ., August 9th--13th, 1999.

RHIC primer series lecture, BNL, July 26th, 1999.

Invited talk, RIKEN-BNL workshop on OSCAR, July 15th, 1999.

Invited talk, DESY workshop on eA physics, Hamburg, May 24th-26th, 1999.

RIKEN Lunch seminar, BNL, March 18th, 1999.

Triangle Colloquium, Duke Univ., April 6th, 1999.

Seminar, Univ. of Connecticut, February 23rd, 1999.

Colloquium, Ohio State University, February 8th, 1999.

Seminar, SUNY Stony Brook, January 1999.

1998

Colloquium, Univ. of Illinois (Chicago), November 1998.

Invited talk, Recontres du Moriond, March 20th-27th, 1999.

Invited talk, III INT/RHIC winter workshop, LBNL, January 7th-9th, 1999.

Invited talk, VIII Mexican school of particles and fields, November 20th-28th, 1998.

Invited talk, RIKEN-BNL workshop on In and out of Equilibrium, October 26th-30th, 1998.

Seminar, MIT, October 1998.

Grants and Committees

- I. International Advisory Committee, Int. Conf. on Physics and Astrophysics of Quark-Gluon Plasma (ICPAQGP) 2010.
- II. Principal Investigator, LDRD Grant from Brookhaven Science Associates, October 2009 – September 2012.
- III. Senior Scientist Promotion Committee, BNL 2009-
- IV. Junior Staff Promotions Committee, BNL 2009-
- V. International Advisory Committee, GHP 09 Workshop, Denver, April 29th-May 1st, 2009
- VI. APS Group on Hadron Physics Nomination Committee, 2008
- VII. Principal Investigator, LDRD grant from BSA, Oct. 2007-Sept. 2009
- VIII. Steering Committee, Electron Ion Collider, 2006-present
- IX. Chair, Colloquium Committee, BNL, Oct.2005 – Oct. 2006.
- X. Continuing Appointments Committee, Physics Dept., BNL, 2003-present.
- XI. Tenure Committee, Physics Dept., BNL, 2003-present.
- XII. STAR Advisory Committee on Forward Pion Detector, 2002.
- XIII. Member, Physics Dept. Library Committee, October 2001-present.
- XIV. Co-Principal Investigator, Program Development Fund from Brookhaven Science Associates, Feb. 2002-present.
- XV. Principal Investigator, LDRD grant from Brookhaven Science Associates, Oct. 1999-Oct. 2000; renewed Oct. 2000.

- XVI. External member on CERN grants CERN/P/FIS/1203/1998, CERN/P/FIS/15196/1999, CERN/P/FIS/40108/2000, CERN/FIS/43717/2001.
- XVII. Member and Chair, BNL Nucl. Theory/RIKEN & Nucl. Physics seminar committees, October 1999-October 2001, October 2009-2010.