CURRICULUM VITAE

LARRY D. McLERRAN

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Physics Department
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BORN:

- February 24, 1949 in Yakima Washington (US Citizen)

EDUCATION:

- Attended elementary and secondary schools in Washington State
- B.S. in Physics, University of Washington, 1971
- Ph.D. in Physics, University of Washington, 1975

TEACHING AND RESEARCH:

- Brookhaven National Laboratory
  Theory Group Leader Riken Brookhaven Research Center, 2003-present
- Brookhaven National Laboratory
  Senior Scientist and Group Leader of Nuclear Theory Group 1999-2004
- Nordic Institute for Theoretical Physics
  Visiting Professor 1996-1998

- University of Minnesota
  Member of Theoretical Physics Institute 1989-2000
  Director of Theoretical Physics Institute 1989-1992
  (Acting Associate Director of TPI 1988-1989)
  Professor 1988-2000

- Fermi National Accelerator Laboratory
  Scientist 1984-1989

- University of Illinois
  Adjunct Associate Professor 1984-1989

- University of Washington
  Teaching Assistant 1971-1972
  Research Assistant 1973-1975
  Assistant Professor 1981-1984
  Associate Professor 1984

- Massachusetts Institute of Technology
  Research Associate 1975-1978

- Stanford Linear Accelerator Center
  Research Associate 1978-1980

COMMUNITY SERVICE

- Referee for Physical Review D, Physical Review C, Nuclear Physics B, Physics Letters, Zeitschrift fur Physik C, and various other physics journals.

- Referee for DOE High Energy Physics and Nuclear Physics proposals, and for NSF Particle Physics and Nuclear Physics proposals.

- Senior Editor for Nuclear Physics A 2000-present

FELLOWSHIPS AND AWARDS:

- Alfred P. Sloan Foundation Fellow 1983 - 1984

- Alexander von Humboldt Prize Winner 1988-present

- American Physical Society Fellow 1990-present

- Foreign Member of the Finnish Academy of Arts and Sciences, 2000-present.

COMMITTEES AND BOARD MEMBERSHIPS

- Member of the Board of Trustees of Aspen Physics Institute 1987-1990
- RHIC Policy Committee 1985-1990
- BNL RHIC Advisory Panel 1985-1988
- Member of Advisory Committee for Nuclear Theory Center Proposal at Stony Brook
- Member of Advisory Committee for Nuclear Theory Center Proposal at University of Illinois
- Member of Experimental Program Advisory Committee, Stanford Linear Accelerator Center 1990-1992
- General Member of Aspen Physics Institute, 1990-1996.
- Member of the University of Chicago Review Committee for the High Energy Physics Division at Argonne National Laboratory, 1994-1998
- Member of the Brookhaven National Laboratory Program Advisory Committee, 1995-1998.
- Member of National Advisory Committee for Institute for Nuclear Theory, 1996-1999.
- Member of Board of Directors, European Center for Theoretical Nuclear Physics, Trento, Italy 1997-2000.
- Member of DOE Review Committee for Nuclear Theory at Brookhaven National Laboratory 1997.
- Member of Scientific Review Committee for RIKEN-BNL Center 1997-2000.
- Member of DOE Review Committee for Nuclear Physics at MIT 1998.
- Member of DOE Review Committee for Nuclear Theory at LBL 1998.
- Member of NSF Review Committee for MSU, 2000
- Member of NSF Panel for Review of Nuclear Theory Proposals, 2000

- Member of DOE Committee to Evaluate OJI Awards for DOE Nuclear Theory 2000.
- Member of Program Committee for DNP 2000-2002
- Chair of Organizing Committee for DNP Town Meeting at BNL, Jan. 2001
- Member of International Advisory Board for National Institute for Theoretical Physics, Adelaide, Australia, 2001-present.
- Member of US Nuclear Physics Long Range Plan writing group, 2001.
- Member of Nuclear Science Advisory Committee, 2002-present.
- Member of Fellowship Committee of American Physical Society 2003-present.
- Member of panel for DFG (German Science Foundation) to evaluate proposals for Center of Excellence, and Graduate Schools in Physics throughout Germany, 2005

ORGANIZING AND ADVISORY COMMITTEES FOR SCIENTIFIC MEETINGS

- Organizing Committee for Quark Matter 88 in Lowell, Mass, Sep. (1988).
- Organizing Committee for Physics and Astrophysics of Quark Gluon Plasma, Bombay India, Feb. (1988).
- Organizer of Workshop on Baryon Number Violation in Electroweak Theory, U. of Minnesota, October (1988).
- International Advisory Committee of Symposium on Thermal Field Theory, Cleveland, Ohio, October (1988).
- International Advisory Committee, Quark Matter 1990, Menton, Alpes-Maritimes, France May (1990).
- Organizing Committee, XX'th International Symposium on Multiparticle Dynamics, Wuhan, People's Republic of China, Sep. (1989) (postponed until 1990).
- Organizing Committee Baryon Number Violation at the SSC, Santa Fe New Mexico, April 28-30 (1990)

- Organizing Committee PANIC XII, International Conference on Particles and Nuclei, Boston Mass. June 25-29 (1990)
- International Advisory Committee New Topics in Electroweak Theory, Dallas Tex. May 29-31 (1990).
- International Advisory Committee, Baryon Number Violation at 100 TeV, Erice, Italy, Sep 15-22 (1990)
- Organizer of Aspen Workshop on QCD at High Energy Density, Aug. - Sep. (1991)
- International Advisory Committee for Quark Matter 1991, Gatlinburg, Tenn. Nov. (1991)
- International Advisory Committee for Quark Matter in Heavy Ion Collisions, Gomal University, Dear Ismail Khan, Pakistan, Jan. (1992).
- Workshop Organizer of Phase Transitions in Cosmology, Santa Barbara Institute for Theoretical Physics, Jan. -Jun. (1992).
- International Advisory Committee for Quark Matter 1993, Uppsala, Sweden (1993)
- Co-organizer of B+L Violation in Electroweak Theory, Aspen Physics Institute, Aug-Sep (1993)
- Organizing Committee, NATO Advanced Study Institute: Hot and Dense Nuclear Matter, Bodrum, Turkey, Sep 26 - Oct 9 (1993)
- Organizing Committee, NATO Workshop on Electroweak Physics at High Temperature, Lisbon, Portugal, March (1994)
- International Advisory Committee 4'th International Conference on Relativistic Aspects of Nuclear Physics Rio de Janeiro, August (1995)
- Organizing Committee, Quark Matter in Heavy Ion Collisions, Pakistan, January (1996)
- Organizing Committee, QCD and High Energy Hadronic Interactions, Recontres de Moriond, Les Arcs France, March 1996-present.
- Organizing Committee, Continuous Advances in QCD, University of Minnesota, Minneapolis, MN, March 1996

- Organizer of Great Lakes Cosmology Workshop, Minneapolis, MN May 1996
- Organizer of Ultrarelativistic Nuclei: From Structure Functions to the Quark Gluon Plasma, Program at Institute for Nuclear Theory, Sep.-Dec. (1996)
- Organizer of Workshop on Initial Conditions for Quarks and Gluons in Ultra-relativistic Heavy Ion Collisions, NORDITA, Copenhagen, Denmark, June 1996
- International Advisory Committee for Quark Gluon Plasma in Physics and Astrophysics, Jaipur India March 1997
- Organizer of Trends in Physics: A Program for Young Graduate Students from Nordic Countries and Neighboring Areas, NORDITA, Copenhagen, Denmark, August 1997.
- International Advisory Committee of Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil, August 1997.
- Organizing Committee of Continuous Advances in QCD, Minneapolis, April 1998.
- Organizer of Small x Physics, University of Paris, Jussieu, Paris, June 1999.
- Organizer of eA Workshop, Brookhaven National Lab. November 1999
- Organizer of Polarized ep and eA Workshop, Yale University, April 2000
- International Adivisory Committee of Relativistic Aspects of Nuclear Physics, October 2000, Tabatinga, Brazil
- Organizer of Nuclear Physics Summer School, Santa Cruz, Ca. July 2000.
- Organizing Committee of Quark Matter 2001, January, Brookhaven National Laboratory
- Program Committee of Quark Matter 2001, January, Brookhaven National Laboratory
- Organizing Committee of School on High Energy Nuclear Physics, Cargese, Corsica, France, August 2001
- International Advisory Committee for Physics and Astrophysics of Quark Gluon Plasma, Jaipur, India, November 2001

- Organizer of BNL-INT Workshop in Berkeley, Ca, May 2001.
- Organizer of Nuclear Physics Summer School, Bar Harbor, Maine June, 2001.
- International Advisory Committee for International Nuclear Physics Conference (INPC 2001) in Berkely, Ca. July-Aug. 2001.
- International Advisory Committee for PASI Latin American Summer School, Brazil, Jan. 2002.
- International Advisory Committee for Hirschegg 2002, Hirschegg Austria, Jan. 2002.
- International Advisory Commitee for Quark Matter 2002, Nantes, France, July 2002.
- International Advisory Committee "Strong and Electro-Weak Matter", Heidelberg, Germany, Sep. 2002.
- Organizer of "Coherent Effects at RHIC and LHC: Intitial Conditions and Hard Probes" ECT, Trento, Oct. 13-15.
- International Advisory Committee for "Ya. Pomeranchuk at the Turn of Centuries", Moscow, January, 2003.
- International Advisory Committee of 8'th International Conference on Nucleus-Nucleus Collisions, Moscow 2003.
- Parton Percolation and the Color Glass Condensate, ECT, Trento, June 2003.
- International Advisory Committee for Quark Matter 2004, Oakland, CA, USA, Jan. 2004
- International Advisory Committee for Relativistic Aspects of Nuclear Physics, Angra dos Rios, Brazil, April 2004
- International Advisory Committee for The QCD Phase Diagram, Skopelos, Greece, May 2004
- International Advisory Committee for Hard Probes 2004, Ericeira, Portugal, Nov. 2004
- International Advisory Committee for Quark Gluon Plasma in Physics and Astrophysics, Calcutta, India, Feb. 2005.

- International Advisory Committee for Quark Matter 2005, Budapest, Hungary August 2005
- International Advisory Committee for Italian School on Ultra-relativistic Heavy Ion Collisions, 2005
- Organizing Committee for SEWM06, May 2006, Brookhaven National Laboratory, Upton, NY.
- International Advisory Commitee for International Nuclear Physics Conference, Rio de Janeiro, Brazil, August-Sep 2006.
- International Advisory Commitee, Hard Probes 2006, Asilomar, CA, June 2006.
- Organizing Committee for Strangeness in Collisions, Upton, NY, Feb. 2006.
- Organizing Committee for Can We Discover the QCD Critical Point at RHIC?, Upton, NY March 2006.
- International Advisory Committee for Quark Matter 2006, Nov. 2006, in Shanghai, China.

SCIENTIFIC PUBLICATIONS

1974

"Analytical Calculation to All Orders in Z-Alpha of Vacuum Polarization at Short Distances" (with Lowell S. Brown and Robert Cahn), Phys. Rev. Lett. 33, 1591, (1974).

"Analytic Calculation to All Orders in Z-Alpha of Nuclear Size Effects in Vacuum Polarization" (with Lowell S. Brown and Robert N. Cahn), Phys. Rev. Lett. 32, 562 (1974).

1975

"Vacuum Polarization in a Strong Coulomb Field. 1: Induced Point Charge" (with Lowell S. Brown and Robert N. Cahn), Phys. Rev. D12, 581 (1975).

"Vacuum Polarization in a Strong Coulomb Field. 2: Short Distance Corrections" (with Lowell S. Brown and Robert N. Cahn), Phys. Rev. D12, 596 (1975).

"Vacuum Polarization in a Strong Coulomb Field. 3: Nuclear Size Effects" with Lowell S. Brown and Robert N.Cahn), Phys. Rev. D12, 609 (1975).

"The Physical Basis of the Reggeon Calculus and its S-Channel Structure" (with Marshall Baker) Proc. of VIII'th Recontre De Moriond, Vol. II, p. 125, ed. by J. Tran Thanh Van.

"Structure of the Reggeon-Reggeon Cut" (with J.H. Weis), Nucl. Phys. B100, 329 (1975).

1976

"Speculations on a Phase Transition Between Nuclear and Quark Matter at High Densities" (with Barry Freedman), MIT-CTP-541 (May 1976).

"A Hamiltonian Lattice Formulation of the Non-linear Sigma Model" (with Jorge Willemsen), Phys. Lett. 65B, 351 (1976).

1977

"Fermions and Gauge Vector Mesons at Finite Temperature and Density. 1. Formal Techniques" (with Barry Freedman), Phys. Rev. D16, 1130 (1977).

"Fermions and Gauge Vector Mesons at Finite Temperature and Density. 2. The Ground State Energy of a Relativistic Electron Gas" (with Barry Freedman), Phys. Rev. D16, 1147 (1977).

"Fermions and Gauge Vector Mesons at Finite Temperature and Density. 3. The Ground State Energy of a Relativistic Quark Gas" (with Barry Freedman), Phys. Rev. D16, 1169 (1977).

1978

"Quark Star Phenomenology" (with Barry Freedman), Phys. Rev. D17, 1109, (1978).

"String Representation for a Field Theory with Internal Symmetry" (with Roscoe Giles and Charles B. Thorn), Phys. Rev. D17, 2058 (1978).

"Massless Scalar QED as a Model of Color Confinement" (with J.E. Mandula), Phys. Lett. 73B, 193 (1978).

"A Non-Perturbative, Semi-Classical Approach to the Calculation of the Quark Force" (with Roscoe Giles), Phys. Lett. 79B, 447 (1978).

1979

"A Static Model of the Quark Potential, 1" (with Roscoe Giles), Phys. Rev. D19, 3732 (1979).

"Explosive Quark Matter and the Centauro Events" Phys. Rev. D20, 2353 (1979).

1980

"A Static Model of the Quark Potential 2" (with Roscoe Giles) Phys. Rev. D21, 1672 (1980).

"Central Collisions Between Heavy Nuclei at Extremely High Energies: The Fragmentation Region" (with R. Anishetty & P. Koehler) Phys. Rev. D22, 2793 (1980).

"The Problem of R in e+e- Annihilation" (with R. Michael Barnett, Michael Dine, Phys. Rev. D22, 594, (1980).

1981

"Quantum Chromodynamics in $2+\epsilon$ Dimensions" (with M. Dine and C. Litwin) Phys. Rev. D23, 451 (1981).

"A Monte Carlo Study of SU(2) Yang-Mills Theory at Finite Temperature" (with B. Svetitsky), Phys. Lett. 98B, 195 (1981).

“Quark Liberation at High Temperatures: A Monte Carlo Study of SU(2) Gauge Theory” (with B. Svetitsky), Phys. Rev. D24 450 (1981).

1982

“Penetrating Flavors” (with L. Stodolsky), Phys. Lett. 109B, 485 (1982).

“Order Parameters For The Confinement-Deconfinement Phase Transition in SU(N) Theories With Quarks.” (with C. DeTar), Phys. Lett. 119B , 171 (1982).

“Initial Conditions for Hydrodynamical Calculations of Ultra- Relativistic Nuclear Collisions.” (with K. Kajantie), Phys. Lett. 119B, 203 (1982).

1983

“Energy Densities, Initial Conditions and Hydrodynamical Equations for Ultra-relativistic Nucleus-Nucleus Collisions.” (with K. Kajantie), Nucl. Phys. B214, 261 (1983).

“Toward a Transport Theory of the Quark-Gluon Plasma in Ultra- relativistic Nuclear Collisions: An Example From Scalar Meson Theory.” (with Sai-ping Li). Nucl. Phys. B214, 417 (1983).

“Can The Fluctuations in Ultra-relativistic Heavy Ion Collisions be Large?” (with H. Ehtamo and J. Lindfors), Z. Phys. C18, 341 (1983).

“Deflagrations and Detonations as a Mechanism of Hadron Bubble Growth in Supercooled Quark Gluon Plasma” (with M. Gyulassy, K. Kajantie, H. Kurki-Suonio), Nucl. Phys. B237 477-501 (1984).

“The Quark-Gluon Plasma: A New State of Matter”, Comm. Nucl. Part. Phys. 12:85, (1983).

1984

“The Structure of ’Techni’ Jets” (with Edward W. Kolb), Phys. Lett. 143B 505, (1984).

1985

"Axial Gauge Propagators for Quarks and Gluons on the Polyakov- Wilson Lattice" (with Carleton DeTar, James E. King , Sai Ping Li), Nucl. Phys. B249, 621, (1985).

"Photon and Dilepton Emission from the Quark-Gluon Plasma: Some General Considerations" (with T. Toimela), Phys. Rev. D31, 545, (1985).

"Hidden Spurious Sources in Axial Gauge Propagators" (with Carleton DeTar, James E. King), Nucl. Phys. B249, 644, (1985).

"Coherent Photon Radiation from Nuclei as a Probe of Impact Parameter and Nucleon Velocity Distribution in Ultra-relativistic Nuclear Collisions" (with James D. Bjorken) , Phys. Rev. D31, 63, (1985).

"Is Cygnus X-3 Strange?" (with Gordon Baym, Edward W. Kolb, T.P. Walker (Fermilab), R.L. Jaffe (MIT, LNS)), Fermilab-Pub-85/98-A, July 1985 in Phys. Lett. 160B, 181 (1985)

"Correlation Between Transverse Momentum and Multiplicity for Spherically Exploding Quark-Gluon Plasmas" (with J. Kapusta, S. Pratt (Minnesota U.), H. von Gersdorff (Fermilab)), Fermilab-Pub-85/82-T, June 1985. Phys. Lett. 163B, 253 (1985)

"Thermodynamics of QCD in the Large N Limit" (with Ashoke Sen (Fermilab)), Fermilab-pub-85/55-T, April 1985 Phys. Rev D32, 2794 (1985).

1986

"Strangeness Production in Ultrarelativistic Heavy Ion Collisions. 1: Chemical Kinetics in the Quark-Gluon Plasma" (with T. Matsui & B. Svetitsky), Phys. Rev. D34, 783 (1986).

"Studies of the Hydrodynamic Evolution of Matter Produced in Fluctuations in anti-p p Collisions and in Ultra-relativistic Nuclear Collisions" (with H. von Gersdorff, M. Kataja and P. Ruuskanen), Phys. Rev. D34, 794 (1986).

“Transverse Flow in Di-Lepton Emission” (with K. Kajantie, M. Kataja, & P. Ruuskanen), Phys. Rev. D34, 811 (1986).

“Strangeness Production in Ultra-Relativistic Heavy Ion Collisions. 2: Evolution of Flavor Composition in Scaling Hydrodynamics”(with T. Matsui and B. Svetitsky), Phys. Rev. D34, 2047 (1986).

“Jets in Expanding Quark-Gluon Plasmas” (with J.-P. Blaizot), Phys. Rev.. D34, 2739 (1986).

“Dilepton Emission and the QCD Phase Transition in Ultra-relativistic Nuclear Collisions (with K. Kajantie, J. Kapusta, and A. Mekjian), Phys. Rev. D34, 2746 (1986).

“Studies of the Hydrodynamical Evolution of Matter Produced in Fluctuations in anti-p p Collisions and in Ultra-Relativistic Nuclear Collisions. 2: Transverse Momentum Distributions” (with H. von Gersdorff, M. Kataja and P. Ruuskanen), Phys. Rev. D34 2755 (1986).

“Making Quark Matter in Nuclear Collisions” (with B. Svetitsky) American Scientist September-October 1987, 490.

“The Physics of the Quark-Gluon Plasma”, Rev. Mod. Phys., 58, 1021 (1986)

1987

“N=2 No Scale Supergravity” (with H. Itoyama, T. Taylor, and J. van der Bij) Nucl. Phys, B279,380 (1987).

“Probes of Quark-Gluon Plasma in High Energy Collisions”, (with K. Kajantie), Annual Reviews of Particle and Nuclear Science, 37, 293 (1987).

“A Chiral Symmetry Order Parameter, the Lattice and Nucleosynthesis”, Phys. Rev. D36, 3291 (1987).

“Sphalerons, Small Fluctuations, and Baryon Number Violation in Electroweak Theory”, (with P. Arnold), Phys. Rev. D36, 581 (1987)

1988

"Cascade Simulation of Ultrarelativistic Collisions", (with G. Bertsch, M. Gong, V. Ruuskanen and E. Sarkinnen), Phys. Rev. D37, 1202 (1988).

"The Sphaleron Strikes Back", (with P. Arnold), Phys. Rev. D37, 1020 (1988).

1989

"What Can We Understand from Muon Anomalies in High Energy Showers From Point Sources?", (with J. Collins, A. Kaidalov, and A. Khodjamirian), Phys. Rev. D39, 1318 (1989) .

"Can the Observed Baryon Asymmetry be Produced at the Electroweak Phase Transition?", Phys. Rev. Lett. 62, 1075 (1989).

1990

"An Approximate Computation of the Determinant of Small Fluctuation in the Presence of a Sphaleron", (with L. Carson), Phys. Rev. D41, 647 (1990).

"The Weak Interactions are Strong at E about 10 TeV", (with A. Vainshtein and M. Voloshin), Phys. Rev. D42,171 (1990).

"Strong Instanton Amplitudes in a Weakly Coupled Theory", (with A. Vainshtein and M. Voloshin), Phys. Rev. D41, 180 (1990).

"Exact Computation of the Small Fluctuations Determinant Around a Sphaleron", (with L. Carson, Xu Li and R. T. Wang), Phys. Rev. D42, 2127 (1990).

"Instanton Induced Amplitudes in a Supersymmetric Theory", (with A. Vainshtein and M. Voloshin), Phys. Lett. B249, 261 (1990).

1991

"QCD Sphalerons and Axion Dynamics" (with E. Mottola and M. Shaposhnikov), Phys. Rev. D43, 2027 (1991).

"Why the Baryon Asymmetry of the Universe is Approximately 10**(-10)" (with M. Shaposhnikov, N. Turok and M. Voloshin), Phys. Lett. B256, 451 (1991).

"Correlated Random Phase Approximation Studies of Anyon Systems" (with B. H. Liu and X. Q. Wang), Phys. Rev. B43, 13736 (1991).

"Corrections to High Energy Particles Interacting through an Instanton as Quantum Fluctuations in the Position of the Instanton", (with X. Li and R. T. Wang), Phys. Rev. D44, 2899 (1991).

1992

"High Energy Anomalous Scattering: Is It Semi-Classical?", (with M. Mattis and L. Yaffe), Phys. Rev. D45, 4294 (1992).

"Rates for Di-lepton Production at RHIC and LHC between the J/Psi and Upsilon are Big", (with J. Kapusta and D. Srivastava), Phys. Lett. B283, 145 (1992)

"Bubble Nucleation and Growth at a Baryon Number Producing Phase Transition", (with Bao-Hua Liu and Neil Turok), Phys. Rev. D46, 2668 (1992).

1993

"Hydrodynamic Stability Analysis of Burning Bubbles in Electroweak Theory and QCD", (with P. Huet, K. Kajantie, R. Leigh and Bao-hua Liu), Phys. Rev. D48, 2477 (1993).

"Soft Photons at RHIC and LHC", (with A. Dumitru, H. Stocker, and W. Greiner), Phys. Lett. B318, 583 (1993).

1994

"Scattering in the Presence of Electroweak Phase Transition Bubble Walls", (with A. Ayala, J. Jalilian-Marian and A. Vischer), Phys. Rev. D49, 5559 (1994)

"Computing Quark and Gluon Distribution Functions for Very Large Nuclei", (with R. Venugopalan), Phys. Rev. D49, 2233, (1994).

"Computing Quark and Gluon Distribution Functions for Very Large Nuclei at Small Transverse Momentum", (with R. Venugopalan), Phys. Rev. D49, 3352 (1994)

"Green's Functions in the Color Field of a Very Large Nucleus", with R. Venugopalan, Phys. Rev. D50, 225 (1994).

1995

" The Gluon Propagator in Non-Abelian Weizsacker-Williams Fields, with Alajandro Ayala-Mercado, Jamal Jalilian Marian and Raju Venugopalan, Phys. Rev. D52, 2935 (1995)

" Really Computing Real Time Correlation Function", with D. Bodeker and A. Smilga, Phys. Rev. D52, 4675 (1995)

"Gluon Production from Non-Abelian Weizsacker-Williams Fields in Nucleus-Nucleus Collisions" with Alex Kovner and Heribert Weigert Phys. Rev. D52, 3809 (1995)

"Non-perturbative Quarkonium Dissociation in Hadronic Matter, with D. Kharzeev and H. Satz, Phys. Lett. B356, 349 (1995)

" Gluon Production at High Transverse Momentum in the McLerran-Venugopalan Model of Nuclear Structure Functions " with Alex Kovner and Heribert Weigert, Phys. Rev. D52, 3809 (1995)

1996

"Magnetic Fields Produced by Phase Transition Bubbles in the Electroweak Phase Transition" with G. Baym and D. Bodeker, Phys. Rev. D53, 662 (1996)

"Quantum Corrections to the Weizsacker-Williams Gluon Distribution Function at Small x" with A. Ayala, J. Jalilian-Marian and R. Venugopalan" Phys. Rev. D53, 458 (1996)

"Return of the Prodigal Goldstone Boson" with J. Kapusta and D. Kharzeev, Phys. Rev. D53, 5028 (1996)

1997

"The Intrinsic Glue Distribution at Small x " with J. Jalilian-Marian, A. Kovner and H. Weigert, Phys. Rev. D55, 5414 (1997)

"Yang Mills Radiation in Ultrarelativistic Nuclear Collisions " with M. Gyulassy, Phys. Rev. C56, 2219 (1997).

"Hot Neutron Stars as a Source for Gamma Ray Bursts at Cosmological Distance Scales, with H. Heiselberg, H. B. Tang and S. Jeon, astro-ph/9711169

1998

"Boost Covariant Gluon Distributions for Nuclei", with R. Venugopalan, Phys. Lett. B424, 15 (1998).

"Two Center Light Cone Calculation of Pair Production Induced by Ultrarelativistic Heavy Ions" with A. Baltz, Phys. Rev. C58, 1679 (1998).

1999

"Fock Space Distributions, Structure Functions, Higher Twists and Small x" with R. Venugopalan, Phys. Rev. D59:0940002 (1999).

"Diffractive Structure Functions in a Quasi-Classical Approximation" with Y. Kovchegov, Phys. Rev. D60:054025 (1999).

2000

"Key Issues in Hadronic Physics" with S. Capstick et. al., hep-ph/0012238.

"Open and Hidden Charm in Au + Au Collisions at RHIC Energies" with M. I. Gorenstein, A. P. Kostyuk, H. Stoecker and W. Greiner, hep-ph/0012292.

2001

"Intrinsic Broadening of the Transverse Momentum Spectra in Ultrarelativistic Heavy Ion Collisions?" with J. Schaffner-Bielich, Phys. Lett. B514, 29 (2001).

"Large Scale Rapidity Correlations in Heavy Ion Collisions" with Y. Kovchegov and G. Levin, Phys. Rev. C63:024903 (2001).

"Equilibration of the Gluon Minijet Plasma at RHIC and LHC" with G. Nayak, A. Dumitru and W. Greiner, Nucl. Phys. A687:457 (2001).

"Higher Twists and Maxima for DIS on Nuclei in High Density QCD Region" with E. Gotsman, E. Levin, U. Maor and K. Tuchin, Nucl. Phys. A683:383 (2001)

"Higher Twists and Maxima for DIS on Proton in High Density QCD Region" with E. Gotsman, E. Levin, U. Maor and K. Tuchin, Phys. Lett. B506: 289 (2001).

"Nonlinear Gluon Evolution in the Color Glass Condensate" with E. Iancu and A. Leonidov, Nucl. Phys. A692, 583 (2001).

"Coulomb Corrections to e+e- Production in Ultrarelativistic Nuclear Collisions" with A. Baltz, F. Gelis and A. Peshier, Nucl. Phys. A695, 395 (2001)

"The Renormalization Group Equation for the Color Glass Condensate" with E. Iancu and A. Leonidov, Phys. Lett. B510:133 (2001)

"Saturation and Universality in QCD at Small x", with E. Iancu, Phys. Lett. B510:145 (2001).

2002

"How Protons Shatter Colored Glass" with A. Dumitru, Nucl. Phys. A700, 492 (2002).

"Nonlinear Gluon Evolution in the Color Glass Condensate 2" with E. Ferreiro, E. Iancu and A. Leonidov. Nucl. Phys. A703, 489 (2002).

"Geometric Scaling above the Saturation Scale", with E. Iancu and K. Itakura, Nucl.Phys.A708: 327-352,(2002).

"R(out)/R(sid) and Opacity at RHIC", with S. Padula, nucl-th/0205028.

"Froissart Bound from Gluon Saturation", with E. Iancu and K. Itakura, Nucl. Phys. A710, 373 (2002).

2003

"Parton Saturation and Npart Scaling of Semi-Hard Processes in QCD, with D. Kharzeev and E. Levin, Phys. Lett. B561, 93 (2003).

"A Gaussian Effective Theory for Gluon Saturation", with K. Itakura and E. Iancu, Nucl. Phys. A724, 110 (2003).

"The Search for Universality: Small x and the Color Glass Condensate", Acta. Phys. Polon, B34, 3029 (2003).

"What Have We Learned from the Relativistic Heavy Ion Collider?" with T. Ludlam, Physics Today, 56N10, 48 (2003).

2004

"Baryon Stopping and Valence Quark Distributions at Small-x", with K. Itakura, Y. Kovchegov and D. Teaney, Nucl. Phys. A730, 160 (2004).

2005

Jet Azimuthal Correlations and Parton Saturation in the Color Glass Condensate with D. Kharzeev and E. Levin, Nucl. Phys. A748, 627 (2005)

New Forms of Matter Discovered at RHIC, with Miklos Gyulassy, Nucl. Phys. A750, 30 (2005).

Impact Parameter Dependence of the Balitsky-Kovchegov Equation, with T. Ikeda, Nucl. Phys. A756, 385 (2005).

Odderon in the Color Glass Condensate, with Y. Hatta, E. Iancu, K. Itakura and D. Triantyfolopoulos, Nucl. Phys. A760, 172 (2005).

Effective Hamiltonian for QCD Evolution at High Energy, with Y. Hatta, E. Iancu, A. Stasto and D. Triantyfolopoulos, Nucl. Phys. A764 (2006).

Color Dipoles from Bremsstrahlung in QCD Evolution, with Y. Hatta, E. Iancu and A. Stasto, Nucl. Phys. A762, 272 (2005).

INVITED CONFERENCE TALKS

1978

"What is Centauro?" (with J.D. Bjorken), SLAC-PUB-2250, talk at Joint U.S.-Japan Seminar, Newark, DE, October 16-21, (1978).

1980

"A Monte Carlo Study of Hot SU(2) Glue" (with B. Svetitsky) RLO- 1388-839, invited talk published in the proceeding of "Statistical Mechanics of Quarks and Hadrons", Bielefeld, Germany Aug 24-31, (1980).

"Perturbative QCD at Finite Temperature and Density: A Brief Technical Review", invited talk published in the proceeding of "Statistical Mechanics of Quarks and Hadrons" Bielefeld, Germany, Aug 24-31, 1980.

1981

"Nucleus-Nucleus Scattering at Extremely High Energies" invited talk published in the proceedings of Gross Properties of Nuclei and Nuclear Excitations, International Workshop IX, Hirschegg, Kleinwasertal, Austria, Jan 19-24 (1981).

"The Quark-Gluon Plasma and Ultra-Relativistic Nucleus-Nucleus Collisions" Invited talk published in the Proceedings of the 5th High Energy Heavy Ion Study, May 18-22, 1981, Lawrence Berkeley Laboratory, Berkeley, California.

"Di-leptons, Photons, and Nucleus-Nucleus Collisions." Invited talk published in the Proceedings of the Photon-Di-lepton Workshop, May 26-27, 1981, Lawrence Berkeley Laboratory, Berkeley, California.

"The Quark-Gluon Plasma and the Little Bang." Invited talks published in the Proceedings of Collision: High Energy ee/ep/pp Interactions, May 28-31, 1981, Blacksburg, Virginia; 12th International Symposium on Multi-particle Dynamics, Notre Dame, Indiana, June 21-26, 1981; 1981 European Physical Society Conference on High Energy Physics, Lisbon, Portugal, July 9-15, 1981.

1982

"Physical Conditions that Might Be Achieved in Ultra-Relativistic Heavy Ion Collision." Invited talk published in Proceedings of the 17th Recontre de Moriond, Les Arcs, France, April 1982; invited talk published in Proceedings of Quark Matter Production in Heavy Ion Collisions, Bielefeld, West Germany, May 1982; Physics Reports 88, 379 (1982).

"The Quark-Gluon Plasma; Three lectures presented at the Artic School of Physics." Proceedings of Artic School of Physics, Akaslampalo, Finland, August, (1982).

"Space Time Pictures of Ultra-relativistic Nucleus-Nucleus Collisions" invited talk published in the proceedings of Quark Matter Formation and Heavy Ion Collisions, 63-80, Bielefeld W. Germany (1982).

1983

"Eleven Lectures on the Physics of the Quark-Gluon Plasma" DOE/ER-40048-14 P4-mc (microfiche), September 1983. 195pp, Lectures given at a Workshop on the Physics of the Quark-Gluon Plasma, Wuhan, PRC, Sept 1983, updated version published in Reviews of Modern Physics 58, 1021 (1986).

"Summary of the Hydrodynamics Parallel Sessions: A Layman's Review", Plenary talk published in the proceeding of Quark Matter 83, Int. Conf. on Ultra-relativistic Nucleus-Nucleus Collisions, 3rd, Upton, N.Y. Sept 26-29, 1986.

"Ultra-relativistic Heavy Ions and the CBA" BNL-32688-mc (Microfiche), 1982. 29pp In Salt Lake City 1983, Proceedings, Cosmic Ray Workshop, 39-67 and Brookhaven Nat. Lab. Upton-BNL-32688

1984

“Mean Free Paths, Viscosity, and the Limitations of Perfect Fluid Hydrodynamics in the Description of the Quark-Gluon Plasma” Proceedings of 1st Int. Workshop on Local Equilibrium in Strong Interaction Physics, Bad Honnef, West Germany, September 3-6, (1984).

“Probes of the Quark-Gluon Plasma as it Might be Produced in Ultra-relativistic Nuclear Collisions” , Presented at the Conf. on Quark Matter 84, Helsinki, Finland, June 17-21, 1984 Published in Leipzig High Energy 1984 :352 (QCD161:H51:1984, V.#1) *Summary published in proceedings. Acta Physica Polonica B16,669 (1985)

“Working Group on Penetrating Probes at Fixed Target Facilities” (with J. Carroll, G. Igo (UCLA), M. Goldberg (Syracuse U.), W.E. Cleland (Pittsburgh U.), B. Cork, D. Hendrie, H. Matis, T.A. Mulera, G. Roch (LBL, Berkeley), L. Kluberg, R. Salmeron (Ecole Polytechnique, LPNHE), T. Ludlam, M. Tannenbaum (Brookhaven), L. Madansky (Johns Hopkins U.), I. Stumer (CERN), I. Tanihata (Tokyo U., INS)), 1985. In *Berkeley 1984, Proceedings, Detectors For Relativistic Nuclear Collisions*, 45-60.

1985

“Is Cygnus X-3 Strange?” (with Gordon Baym, Edward W. Kolb, T.P. Walker , R.L. Jaffe), Phys. Lett. 160B, 181 (1985), and Proceeding of DPF APS meeting Aug. 1985 Eugene Ore., also in proceeding of New Particles 85, May (1985) Madison Wisc.

“Cygnus X-3, Ultra-relativistic Nuclear Collisions, High Density Matter, and Other Stuff We Don’t Know Too Much About” Proceedings of Quark Confinement and Liberation; Numerical Results and Theory, Berkeley CA. May 1985.

1986

“Strangeness in the Central Region” Fermilab-Conf-86/68-T, Plenary session talk presented in the proceeding of Quark-Matter 86, Asilomar, USA (1986), Nucl. Phys. A461, 245 (1986)

“Review of Properties of Quark-Gluon Plasma and Ultra- Relativistic Nuclear Collisions”, Fermilab-Conf-86/134-T, Invited talk presented at 9’th Workshop on

High Energy Physics and Field Theory, Protvino, USSR, Jul. (1986).

"Report on the Parallel Session on High Energy Nuclear Interactions" Rapporteurs talk to be published in proceeding of XXIII International Conference on High Energy Physics, Berkeley, July (1986).

1987

"Small-x, Wigner Distribution Functions, and the Altarelli-Parisi Equations at High Temperature", Proceedings of International Workshop on Gross Properties of Nuclei XV, Hirschegg, Austria, Jan. 12-17, 1987, Hirschegg, Austria. (1987)

"An Introduction to the Quark-Gluon Plasma and High Energy Heavy Ion Collisions", Proceedings of Recontres de Moriond, March 15-20, (1987), Les Arcs, France

"A Review of the Quark-Gluon Plasma and High Energy Heavy Ion Collisions", Proceedings of Int. Symposium on Fundamental Properties of Matter, Les Houches, France, March 23-April 2, (1987)

"A Review of the Quark-Gluon Plasma, Gordon Conference on Nuclear Structure", Aug. 16-22, (1987); International Symposium on Multiparticle Dynamics, Sep. 8-12, (1987), Tashkent, USSR.

1988

"Lectures on the Space Time Structure of Ultra-Relativistic Nuclear Collisions and the Quark-Gluon Plasma", Proceedings of Jaipur Workshop on Quarks in Nuclei, Feb. 2-5, (1988); Proceedings of Hadron Physics, Rio de Janeiro. Brazil, April 2-8 (1988).

"A Review of Hanberry-Brown-Twiss Pion Interferometry", Proceedings of Quark-Gluon Plasma in Physics and Astro-Physics, Bombay India, Feb. 8-12 (1988).

"What Can We Learn From Hadron Production?" International Workshop on Relativistic Heavy Ions, Erice, Italy, April 22-28 (1988)

"Sphalerons and Cosmology", Proceedings of Workshop on Baryon Number Non-Conservation in Electroweak Theory, University of Minnesota, October (1988).

“Anomalies, Sphalerons, and Baryon Number Violation in Electro- weak Theory”, Presented in the XXVIII Crakow School of Theoretical Physics, Zakopane, Poland, May 31 - June 10 (1988) and published in Acta Phys. Polon., B20, 249 (1989).

“Sphalerons and Baryon Number Violation”, US-SU Meeting on the Fundamental Properties of Matter, Nor Amberd, Armenian SSR, USSR June (1988).

1989

“Can the Baryon Asymmetry of the Universe Arise at the Electro- weak Phase Transition?”, University of Minnesota Preprint and published in the proceedings of 25 Years of CP Violation, Blois, France, May (1989).

“Strange Matter: A Review”, University of Minnesota Preprint and published in the proceedings of Equation of State, a Nato Advanced Study Institute, Peniscola Spain, May (1989).

“Quark Gluon Plasma and Space-Time Picture of Ultra-relativistic Nuclear Collisions”, University of Minnesota preprint and published in proceedings of Hadronic Matter, a Nato Advanced Study Institute, Cargese, Corsica, August (1989).

"Baryon Number Violation in Electroweak Theory”, talk presented at Baryon Number Violation in Electroweak Theory, University of Minnesota, Nov. (1989).

1990

“B+L Nonconservation at High Energy”, Invited talk published in the proceeding of DPF 90, Houston Texas, Jan 2 - 7 (1990).

“B+L Nonconservation at High Energy”, Invited talk published in Recontres de Moriond, Les Arcs France, March (1990).

“ Baryon and Lepton Number Violation in Electroweak Theory”, Lectures published in proceedings of Spring School on Intermediate Energy Nuclear Physics, Republic of China, May (1990).

“ Recent Developments in Baryon Number Violation in Electroweak Theory ” Invited talk presented at Quarks 90, Talavi, Georgian SSR, USSR, May (1990).

1991

“Baryon Number Violation in Electroweak Theory”, a series of three invited lecture presented at the Workshop on Baryon Number Violation in Electroweak Theory, NORDITA, Copenhagen, Jan. (1991)

“Baryon Number Violation at High Temperature”, Invited Talk at Workshop on Baryogenesis at the Electroweak Scale, Princeton University, May (1991)

“ A Review of Recent Progress in Understanding Baryon Number Violation in High Energy Electroweak Processes” Plenary Session talk and to be published in proceedings of the 1st Andrei Sakharov Physics Conference, P. N. Lebedev Physical Institute, Moscow USSR, May (1991).

“Corrections to Instanton Induced Amplitudes for High Energy Scattering as Fluctuations in the Position of the Instanton”, Calculationshop on Baryon Number Violation in High Energy Scattering, CERN, Geneva Suisse June (1991).

“Baryon Number Violation in Electroweak Theory ”, Invited Series of Lectures to be published in proceedings of UK Institute for High Energy Physics, Aug. - Sep (1991), Cambridge, England

“Recent Developments in Theory of Baryon Number Violation in Electroweak Theory”, Proceedings of Hadron Structure 91, Stara Lesna, Czechoslavakia, Sep. (1991)

“Baryon Number Violation at High Temperature”, Invited Series of Lectures at DESY Theory Workshop, Oct. (1991)

1992

“An Overview of Issues Related to High Energy B+L Violation”, proceedings of Texas SSC Workshop at Yale, University, March (1992)

"Bubble Wall Propagation in the Electroweak Phase Transition", Invited talk at Workshop on Phase Transitions in Cosmology and Field Theory, Santa Barbara, April (1992).

"An Overview of Issues Related to High Energy B+L Violation", SSC Symposium, University of Wisconsin, April (1992).

"Propagation of Phase Transition Bubbles in Electroweak Theory", International Symposium in Thermal Field Theory, Bielefeld, Germany, May (1992)

"Rates for Dilepton Production are Big at LHC and RHIC", Invited talk in Proceedings of Recontres de Moriond, Les Arcs, France, March (1992)

"Lectures on B+L Violation at High Temperatures in Electroweak Theory", Invited series of lectures at ICTP School on High Energy Physics to be published in the proceedings, July (1992)

1993

"The Electroweak Phase Transition and the Baryon Asymmetry of the Universe ", Invited talk given at Aspen Winter Conference, Aspen Colorado, January (1993)

"Lectures on B+L Violation at High Temperatures in Electroweak Theory", Invited series of lectures at St. Petersburg School on High Energy Physics to be published in the proceedings, January, (1993)

"Electroweak B+L Non-Conservation" Invited talk at SUSY 93, Boston, Mass. April (1993).

"B+L Non-Conservation as a Semi-Classical Process", published in proceedings of XXXIII Crakow School of Physics, Poland, June 1-12 (1993)

"Recent Progress in Understanding Quark and Gluon Structure Functions for Large Nuclei at Small x", Invited talk presented at Hot and Dense Matter, NATO Advanced Study Institute, Bodrum, Turkey, Sep. 26 - Oct. 9 (1993)

1994

“Really Computing Real Time Correlation Functions”, Particle and Nuclear Astrophysics and Cosmology in the Next Millenium, June 29 - July 14, Snowmass Colorado

“Really Computing Real Time Correlation Functions”, Santa Fe Workshop on Computational Physics and Quark Gluon Plasma, July 16 - Aug 7, Santa Fe, New Mexico

“Small x Structure Functions of Very Large Nuclei”, Santa Fe Workshop on Computational Physics and Quark Gluon Plasma, July 16 - Aug 7, Santa Fe, New Mexico

“Lectures on B+L Violation in Electroweak Theory”, British Universities Summer School on High Energy Physics, September 1994, Liverpool, UK.

“Really Computing Real Time Correlation Functions”, Workshop on Topological Defects in Condensed Matter Physics, Cosmology and Particle Physics, Isaac Newton Institute for Mathematical Sciences, September 1994, Cambridge, UK.

“Small x Structure Functions for Large Nuclei”, Workshop on Parton Formation and Evolution in Heavy Ion Collisions, October 1994, Trento, Italy

1995

“Gluon Distribution Functions and Production for Heavy Nuclei ” Recontres de Moriond, March 19-26 1995, Les Arcs, France.

“Gluon Distribution Functions and Production for Heavy Nuclei ” International Symposium on Intensity Interferometry and Heavy Ion Collisions, April 17-20, Hiroshima, Japan .

“Gluon Distribution Functions and the Breakdown of Perturbation Theory” International Workshop on Parton Production and Evolution, European Center for Nuclear Theory, Trento Italy, June 12-14.

“Initial Conditions for Ultra-relativistic Nuclear Collisions”, Published in Proceedings of 4’th International Workshop on Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil, Aug 28-30.

"An Overview of Ultra-relativistic Nuclear Collisions", Plenary talk at XVII Reuniao de Trabalho em Fysica Nuclear no Brasil, Aguas de Lindoia, Brazil, Sept. 2-6.

"The Production of the η' in Heavy Ion Collisions" Max Born Symposium on Critical Properties of Hadronic Matter, Karpacz, Poland, Oct. 13-15.

"Structure Functions for Large Nuclei and Initial Conditions for Ultra-relativistic Nuclear Collisions" Max Born Symposium on Critical Properties of Hadronic Matter, Karpacz, Poland, Oct. 13-15.

"Structure Functions for Large Nuclei", Recontres du Vietnam, Saigon, Vietnam, Oct. 21-28.

"Structure Functions for Very Large Nuclei", Workshop on Quark Gluon Plasma, Bhubanashwar, India, Dec. 1-7

"The Electroweak Phase Transition in Cosmology", Workshop on Quark Gluon Plasma, Bhubanashwar, India, Dec. 1-7

1996

"Structure Functions for Very Large Nuclei at Small x", Physics of the Vacuum, George, South Africa, March.

"Small x Structure of Glue", Workshop on Particle Physics and Cosmology, Uppsala Sweden, May 1996.

"Small x Structure of Glue", Hadronic Matter at Very High Energy Density, Bielefeld, Germany, May 1996.

"Small x Structure of Glue ", Initial Conditions and Early Evolution in Relativistic Heavy Ion Collisions, Copenhagen, Denmmark, June 1996.

"Small x Structure of Glue ", Ultrarelativistic Nuclei: From Structure Functions to the Quark-Gluon Plasma, Sep - Dec. 1996, Institute for Nuclear Theory, Seattle WN.

"Small x Structure of Glue ", Workshop on Quantum Chromodynamics at the American University of Paris, June 1996.

"Three Lectures on High Energy Interactions with Nuclei", Nordic School of High Energy Physics, Sep 1996.

1997

"Small x Structure of Hadrons ", Nordic Winter Meeting on Nuclear Physics, Grestefallen, Sweden, Jan 7-10 (1997).

"Small x Physics and Why It Is Interesting" International Conference on the Quark Gluon Plasma in Physics and Astrophysics, Jaipur, India March 17-21 (1997).

"Small x Physics and Why It Is Interesting" Nordita Workshop on High Energy Nuclear Theory, April 7-8 (1997).

"Small x Physics and Classical Gluon Fields" International School on QGP, Hiroshima, Japan, June 1997.

"Small x Physics and Why It Is Interesting" International Workshop on QGP, Kyoto, Japan, June 1997.

"Small x Physics and Why It Is Interesting", Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil, August 1997.

"Classical Fields, Rayleigh-Jeans and Real Time Monte-Carlo", RIKEN Research Center Workshop on Non-Equilibrium Many Body Dynamics Sep 23-25.

1998

"Classical Gluon Fields and Small x Physics" Invited talk at Quarks 98, Suzdal Russia, May 1998.

"Fock Space Distributions and Structure Functions at Small x" talk at Coherent QCD Processes in Nuclei, Trento, Italy, Sep. 7-11 (1998)

"Three Lectures on the Physics of High Gluon Density", Lectures at the 8'th Mexican School of Particles and Fields, Oaxaca Mexico, Nov. 1998. hep-ph/9903536

"Initial Conditions for Parton Cascades", Lecture at RHIC Physics and Beyond, KKG Day, Upton NY Oct. 1998 nucl-th/9903047

1999

"Small x Physics", Lectures at Trends in Theoretical Physics, Jan. 1999, Tata Institute, Bombay India.

"Four Lectures on Phase Transitions and Cosmology", Lectures at the J. Swieca School of Nuclear Physics, Jan. 1999 Sao Paolo Brazil

"Theoretical Summary" Hard Probes in Nuclear Collisions, March 1999, RIKEN Institute, Brookhaven National Lab.

"Small x Physics", Heavy Ions at LHC and RHIC, March 1999, CERN

"Two Lectures on Small x Physics", Crakow School of Physics, Zakopane Poland, June 1999.

"Small x Physics" Small x Physics, June 1999, University of Paris, Paris.

"RHIC and eRHIC" Workshop on eA at eRHIC, Brookhaven National Lab., November 1999.

"Ultrarelativistic Heavy Ion Collisions" Proceedings of the Centenary Gregory Breit Symposium, November 1999, Yale University.

2000

" Recent Work on Renormalization Group for the Color Glass Condensate", International Workshop on Trends in QCD, Regensberg, Germany, August, 2000

"Conference Summary: In and Out of Equilibrium", Workshop on QCD In and Out of Equilibrium, Brookhaven National Lab., July, 2000.

“Recent Work on Renormalization Group Equations for the Color Glass Condensate”, Workshop on eRHIC, Brookhaven National Lab. Aug. 2000.

“Recent Exciting Physics from RHIC”, Symposium on Fundamental Issues in Elementary Matter, Bad Honnef, Germany, Sep. 2000.

2001

“What is Colored Glass”, Workshop on Perspective in Nuclear Physics at Intermediate Energies, Trieste, Italy May. 2001.

“The Color Glass Condensate and Small x Physics:Four Lectures”, Lectures at the 40’th Schladming Winter School: DENSE Matter, March 2001.

“Three Lectures on The Color Glass Condensate and Small x Physics”, Lectures at the 40’th Cracow School of Theoretical Physics, Zakopane, Poland,
June 2001.

“Color Glass Condensate” , Lecture at NATO Advanced Study Institute on QCD Perspectives on Hot and Dense Matter, Cargese, Corsica, Aug. 2001.

”What is the Color Glass Condensate” Statistical QCD, Bielefeld, Germany, August 2001.

“What Have We Learned from RHIC?”, Plenary Session talk at joint US DNP and Japan Physical Society Metting, Hawaii, Oct. 2001.

2002

”What Have We Learned from RHIC?”, 14’th Nordic Meeting on Intermediate and High Energy Nuclear Physics, Graftavallen, Sweden, Jan. 2002.

”The Color Glass Condensate”, Deep Inelastic Scattering 2002, Cracow, Poland, April-May 2002.

”Four Lectures on the Color Glass Condensate”, ECT Marie Curie Training Program, Trento, Italy, June, 2002.

”What Have We Learned from RHIC”, Third Sakharov Memorial Conference, Moscow, Russia, June 2002.

”What Have We Learned from RHIC”, Dominique Vautherin Memorial Symposium, Paris, France, July, 2002.

“RHIC Results: A Theorists Perspective”, SEWM Matter, Heidelberg, Germany, Sep. 2002.

“High pT Processes and Npart Scaling”, Coherent Processes at RHIC and LHC, ECT, Trento, It., Oct. 2002.

2003

“RHIC Physics: 3 Lectures”, Moscow Winter School of Physics, Moscow, Russia, Feb. 2003.

“RHIC Physics: The Quark Gluon Plasma and the Color Glass Condensate: 4 Lectures”, Bhabbha Atomic Research Center, Mumbai, India, Jan-Feb. 2003.

“RHIC Physics”, RBRC/CCAST Symposium on Spin Physics, Lattice QCD and RHIC Physics, April 2003.

“The Renormalization Group and the Color Glass Condensate”, Crakow School of Physics, Zakopane, Poland, June 2003.

“Summary Talk”, CMS Collaboration Meeting, Delphi, Greece, June 2003.

“Valence Quark Distributions and Small x”, Workshop on Color Glass Condensate and Parton Percolation, trento, Italy, June 2003.

“Four Lectures on the Quark Gluon Plasma and the Color Glass Condensate”, Prague Indian Summer School of Physics, Prague, Czech Republic, August 2003.

“Two Lectures on the Color Glass Condensate”, NATO Advanced Study Insitute, The Structure and Dynamics of Elementary Matter, Kemer, Turkey Sep-Oct 2003.

“The Color Glass Condensate: Recent Results”, A Small Meeting in the Algarve, Faro, Portugal, Oct. 2003.

“4 Lectures on the Quark Gluon Plasma and the Color Glass Condensate”, Italian School on Ultra-relativistic Heavy Ion Collisions, Torino, Italy, Dec. 2003.

2004

“The Color Glass Condensate”, Relativistic Aspects of Nuclear Physics, Angra dos Rios, Brazil, March 2004.

“The Color Glass Condensate in DIS and Heavy IOn Collisions”, DIS2004, Slovakia, April 2004.

“What is the Evidence for the Quark Gluon Plasma at RHIC”, The QCD Phase Diagram, Skopelos, Greece, May 2004.

“What is the Evidence for the Color Glass Condensate”, The QCD Phase Diagram, Skopelos, Greece, May 2004.

“What is the Evidence for the Color Glass Condensate”, International Conference on Nuclear Physics, Goteborg, Sweden, June, 2004.

“A Color Glass Condensate Primer”, Brahms Collaboration Meeting, Lawrence, Kansas, Ocotber 2004.

2005

“The Physics of Colored Glass”, Small x Meeting, Sinaia, Rumania, June-July 2005

“Recent Results about the Color Glass Condensate”, International Conference on the Physics and Astrophysics of the Quark Gluon Plasma, Calcutta, India, Feb. 2005.

“What is the Color Glass Condensate?”, Gordon Conference, Maine, July 2005

"Three Lectures on Heavy Ion Physics", CERN DUBNA School on High Energy Physics, Kitzbuehel, Austria, August, 2005.

"The Color Glass Condensate: An Intuitive Approach", International Conference on QCD and Hadronic Physics, Beijing, China, June 2005.

"The Color Glass Condensate", Wuhan2005 Workshop, Wuhan, China, June 2005.

"The Color Glass Condensate", International Symposium on Multiparticle Dynamics, Czech Republic, July, 2005.

SEMINARS AND COLLOQUIA: 1989-Present

1989

Baryon Number Violation in Electroweak Theory, Colloquium at University of Minnesota, Duluth.

Baryon Number Violation in Electroweak Theory, Seminar at University of Frankfurt, Frankfurt, W. Germany.

Baryon Number Violation in Electroweak Theory, Seminar at DESY, W. Germany.

Baryon Number Violation in Electroweak Theory, Seminar at MIT, Cambridge, Mass.

Baryon Number Violation in Electroweak Theory, Seminar at Bartol Research Institute, Delaware.

Baryon Number Violation in Electroweak Theory, Seminar at University of Florida, Gainesville, Florida.

Instantons, Baryon Number Violations and the Breakdown of Perturbation Theory, Seminar at Institute for Theoretical and Experimental Physics, Moscow USSR.

Instantons, Baryon Number Violation and the Breakdown of Perturbation Theory, Seminar at Leningrad Nuclear Physics Institute, Leningrad USSR.

Neutral Particles in Cosmic Rays from Cygnus X-3 and Hercules X-1, Seminar at Baksan Neutrino Lab. Neutrino Village, USSR.

Baryon Number Violation in Electroweak Theory, Seminar at Ohio State University.

1990

Baryon Number Violation in Electroweak Theory, Seminar at Brookhaven National Lab.

Baryon Number Violation in Electroweak Theory, Seminar at University of Florida.

Baryon Number Violation in Electroweak Theory, Seminar at Beijing Institute of Modern Physics, Beijing, China.

Baryon Number Violation in Electroweak Theory, Seminar at Shanxi University, Taijuan, China.

Baryon Number Violation in Electroweak Theory, Colloquium at University of Washington, Seattle.

Baryon Number Violation in Electroweak Theory, Colloquium at University of California, Davis, California.

Quark Gluon Plasma and Heavy Ion Collisions, Seminar at University of California, Davis, California.

1991

Baryon Number Violation in Electroweak Theory, Colloquium at University of Oregon, Eugene, Oregon.

Baryon Number Violation in High Energy Scattering, Seminar at University of Oregon, Eugene, Oregon.

Baryon Number Violation in Electroweak Theory, Seminar at ETH Zurich.

Baryon Number Violation in High Energy Scattering, Seminar at Institute for Theoretical Physics, Heidelberg, Germany.

Baryon Number Violation in Electroweak Theory, Colloquium at University of British Columbia.

Baryon Number Violation in Electroweak Theory, Colloquium at McGill University.

1992

Baryon Number Violation in Electroweak Theory, Colloquium at Iowa State University.

Baryon Number Violation in Electroweak Theory, Colloquium at University of Guelph.

Baryon Number Violation in Electroweak Theory, Colloquium at University of Virginia.

Rates for Dilepton Production at LHC and RHIC are Big, Seminar at State University of New York in Stony Brook.

Bubble Propagation at the Electroweak Phase Transition, Seminar at Brookhaven National Lab.

Electroweak B+L Violation, Seminar at Texas A and M University.

Electroweak B+L Violation, Seminar at University of Texas.

The Baryon Asymmetry of the Universe, Colloquium at University of Illinois, Urbana-Champaign.

High Energy Instanton Induced Scattering Amplitudes, Seminar at University of Illinois, Urbana-Champaign.

1993

High Energy Instanton Induced Amplitudes as and External Source Problem, Seminar at Institute for Nuclear Research, Moscow, Russia, February

The Baryon Asymmetry of the Universe, Colloquium at University of Kentucky

Electroweak B+L Violation, Seminar at Aspen Physics Institute, Aug.
Computing Distribution Functions for Very Large Nuclei at Small x, Seminar at DESY, Hamburg Germany, Oct.

Computing Distribution Functions for Very Large Nuclei at Small x, Seminar at Brookhaven National Laboratory, Nov.

Computing Distribution Functions for Very Large Nuclei at Small x, University of Pittsburg, Nov.

Computing Distribution Functions for Very Large Nuclei at Small x, Seminar at U of Oregon, December.

Computing Distribution Functions for Very Large Nuclei at Small x, Seminar at ITP Santa Barbara, December.

1994

Computing Distribution Functions for Very Large Nuclei at Small x, Seminar at University of Oregon, June.

1995

Gluon Distributions and Production for Very Large Nuclei, Seminar at Yukawa Institute, Kyoto, Japan, April.

Gluon Distributions and Production for Very Large Nuclei, Seminar at Iowa State University, Ames Iowa, May.

The Electroweak Phase Transition, Baryogenesis and Primeval Magnetic Fields, Colloquium at Niels Bohr Institute, June.

Gluon Distributions and Production for Very Large Nuclei, Seminar at Duke University, Durham, NC, Nov.

Gluon Distributions at Small x, Seminar at Saha Institute, Calcutta, India, Dec.

1996

Gluon Distributions at Very Small x, Seminar at University of Cape Town, Cape Town, South Africa, March.

Gluon Distributions at Very Small x, Seminar at Institute for Nuclear Theory, University of Washington, Seattle, April.

Small x Structure of Glue, Seminar at University of Helsinki, Helsinki, Finland, August.

Electron-Positron Pair Production in Strong Coulomb Fields, Seminar at Institute for Nuclear Theory, University of Washington, Seattle, Wash. Dec.

1997

Small x Structure of Hadrons, Seminar at SACLAY, Saclay France, Jan.

Small x Structure of Hadrons, Seminar at CERN, Geneva, Switzerland, Feb.

Small x Structure of Hadrons, Seminar at Marseille, France, March.

Real Time Monte Carlo and Renormalization, Seminar at Marseille, France, March.

Small x Structure of Hadrons, Seminar at the Tata Institute, Bombay, India, March.

Small x Structure of Hadrons, Seminar at GSI, Darmstadt, Germany, April.

Small x Physics and Why It Is Interesting, Colloquium, MIT LNS, Cambridge, MA Sep.

Small x Physics and Why It Is Interesting, Seminar at Los Alamos National Lab., Sep.

Small x Physics and Classical Fields, Seminar at Los Alamos National Lab. Sep.

Are Hot Neutron Stars Sources of Gamma Ray Bursts at Cosmological Distance Scales? Informal seminar at Los Alamos Lab. Sep.

Small x Physics and Why It Is Interesting, Seminar at University of Oregon, Dec.

1998

Small x Physics and Why It Is Interesting, Seminar at Penn State University, April.

Small x Physics and Classical Gluon Fields, Seminar at Lund University, June.

Small x Physics and Classical Gluon Fields, Seminar at DESY, September.

1999

Small x Physics and the High Energy Limit of QCD, Colloquium at Michigan State University, January.

Small x Physics and the High Energy Limit of QCD, Seminar at Brookhaven National Lab.. January.

Small x Physics and the High Energy Limit of QCD, Seminar at Columbia University, November.

2000

The Colored Glass Condensate and eRHIC, Seminar, Wayne State U., March.

The Colored Glass Condensate and eRHIC, Colloquium, Stony Brook, April.

The Colored Glass Condensate, Seminar at University of Stockholm, Sweden, May.

The Colored Glass Condensate and eRHIC, Colloquium at LBL Berkeley, Sep.

2001

The Color Glass Condensate, Colloquium at Rutgers University, Feb.

The Color Glass Condensate and Small x Physics, Seminar at U of Tel. Aviv. April.

The Color Glass Condensate and Small x Physics, Seminar at Ecole Polytechnique, Sep.

What Have We Learned from RHIC?, Colloquim at U of Conn., Dec.

2002

What have We Learned from RHIC?, Seminar at Duke University, Feb.

What Have We Learned from RHIC? Colloquium at Ohio State Univ., Feb.

What is Colored Glass? Seminar at BNL., May

What is Colored Glass? Seminar at Columbia University., June

What is Colored Glass? Seminar at Yale University. Nov.

What is Colored Glass? Seminar at JLAB. Dec.

What Have We Learned from RHIC? Seminar at McGill University. Dec.

2003

What is Colored Glass? Seminar at U. of Maryland, May

2004

What is the Evidence for the Color Glass Condensate? Colloquium at Argonne National Lab., March 2004

What is the Evidence for the Color Glass Condensate? Seminar at University of Paris., March 2004

New Forms of Matter at RHIC, Colloquium at University of British Columbia, September 2004

What is the Color Glass Condensate?, Colloquim at U of Indiana, November 2004

New Forms of Matter at RHIC, Colloquium at U of Michigan, Dec. 2004

2005

What is the Color Glass Condensate?, Colloquium at U of Indiana, Jan. 2005.

What is the Color Glass Condensate? Seminar at Yale University, Oct, 2005.

What is the Color Glass Condensate?, Colloquium at U. of Minnesota, Oct. 2005.

BIOGRAPHICAL SKETCHES

“Keijo Kajantie and Heavy Ion Collisions” published in Commentationes Physica-Mathematicae, ”Forty Years of Theoretical Physics”, Essays in the Honor of Professor of Theoretical Physics Keijo Kajantie, Jan. 2000, published by Societas Scientarium Fennica.

”Exploring the Quark Gluon Plasma with Bikash Sinha”, to be published in the proceedings of International Conference on the Physics and Astrophysics of the Quark Gluon Plasma, Calcutta, India, Feb 2005.

“The High Energy Gribov: Some Recollections”, to be published in the proceedings of GRIBOV-75 Memorial Workshop on Quark, Hadrons, and Strong Interactions, Budapest, Hngary, May, 2005.