# CURRICULUM VITAE

# Michael Lublinsky

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#### PERSONAL DATA

Date of Birth: October 6, 1972
Place of Birth: St-Petersburg, Russia
Date of Emigration: February 25, 1993

#### **EDUCATION**

2002 Ph. D. in Physics Technion – Israel Institute of Technology.

Field: High Energy Physics (Theory) Thesis: Nonperturbative QCD Effects in

Deep Inelastic Scattering.

Supervisors: Prof. B. Blok and Prof. E. Levin.

1997 M. Sc. in Physics Technion – Israel Institute of Technology.

Field: High Energy Physics (Theory).

Thesis: Low Energy Hadron Properties in QCD. Supervisors: Prof. M. Moshe and Prof. B. Blok.

1994 B. Sc. in Physics

(Cum Laude)

Technion – Israel Institute of Technology.

1989 - 1993 Undergraduate Student

Department of Plasma Physics,

St-Petersburg State Technical University, Russia.

## POSITIONS HELD

July 2017 – Present Full Professor.

Physics Department, Ben-Gurion University of the Negev,

Beer Sheva, Israel.

March 2013 – June 2017 Associate Professor (Tenured).

Physics Department, Ben-Gurion University of the Negev,

Beer Sheva, Israel.

October 2009 – February 2013 — Senior Lecturer.

Physics Department, Ben-Gurion University of the Negev,

Beer Sheva, Israel.

October 2006 – September 2009 Research Associate.

Department of Physics, Uni. at Stony Brook, USA.

October 2004 – September 2006 – Research Associate.

Physics Department, Uni. of Connecticut, USA.

October 2002 – September 2004 Postdoctoral Fellow.

DESY Theory Group, Hamburg, Germany.

March 2002 – September 2002 – Postdoctoral Fellow.

Department of High Energy Physics,

Tel Aviv University, Israel.

#### SHORT TERM VISITORSHIPS

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01.02.18 - 25.02.18
                      CERN Theory Division, Geneva.
26.03.18 - 05.04.18
01.10.17 - 13.10.17
                     SPhT, CEA Saclay, Paris, France.
24.10.15 - 29.10.15
                     SUNY at Stony Brook, USA.
05.12.14 - 18.12.14
                     Federico Santa Maria Technical University, Valparaiso, Chile.
05.07.14 - 21.07.14
                      University of Santiago de Compostela, Spain.
01.08.11 - 20.10.11
                      University of Connecticut, USA.
01.09.12 - 30.09.12
                      31.01.13 - 25.02.13; 24.07.13 - 14.10.13; 03.02.14 - 22.02.14
04.08.14 - 03.09.14
                     02.02.15 - 20.02.15; \quad 01.09.16 - 16.10.16;
                                                                 28.01.17 - 13.02.17
25.05.08 - 14.06.08
                      GGI, Florence, Italy.
30.03.15 - 17.04.15
28.01.08 - 15.02.08
                     KITP, Santa Barbara, USA.
25.03.05 - 08.04.05
                     Tel Aviv Uni. and Technion, Haifa, Israel.
22.04.07 - 04.05.07
19.01.05 - 22.01.05
                     Brookhaven National Lab, USA
09.09.03 - 12.09.03
                     25.07.11 - 05.08.11; 19.07.16 - 29.07.16; 13.02.17 - 18.02.17
05.09.04 - 12.09.04
                     SPhT, SACLAY, Paris, France.
03.07.03 - 09.07.03
                      CERN Theory Division, Geneva.
13.03.06 - 18.03.06
                      23.08.10 - 04.09.10
08.06.03 - 15.06.03
                     Technion, Haifa, Israel.
01.04.03 - 10.04.03
                     INT, Uni. of Washington, Seattle, USA.
                     07.04.08 - 17.04.08; 24.07.10 - 03.07.10; 13.07.15 - 24.07.15
13.11.06 - 24.11.06
14.10.02 - 25.10.02
                     ECT* Trento, Italy.
16.07.01 - 15.10.01
                     II. Institut für Theoretische Physik, Universität Hamburg.
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Work for Community: Referee for Physical Review D, C, Physical Review Letters, Nuclear Physics A, Physics Letters B, European Physical Journal C.

Member of the management committee of the EU Horizon 2020 COST Action "Theory of hot matter and relativistic heavy-ion collisions" (2016-2020).

Member and institutional representative of the Electron Ion Collider (EIC) User Group

# Organisation of Conferences:

- "Collectivity and correlations in high-energy hadron and nuclear collisions" Co-Chair, Aug 5th Aug. 18th (2018), Benasque Center for Sciences, Spain.
- "Heavy ion collisions at the LHC" Int. workshop (20 participants), Chair, May 27th June 1st (2015), BGU, Israel.
- "Low x" Int. workshop (95 participants), Co-Chair, May 29th - June 4th (2013), Rehovot-Eilat, Israel
- "LevinFest" Int. workshop (30 participants), Oct. 3-4 (2010), Tel Aviv, Israel
- member of international advisory committee for "Low x" -series of workshops.

## **AWARDS**

Guest Professorship Award, University of Connecticut, USA (2011);

Minerva Postdoctoral Fellowship (2004,2002) - declined;

Minerva Seed Grant (2001) - 3 month visitorship of Hamburg University.

## Conference Talks

- "Nonlinear Evolution for Total and Diffractive Productions in High Energy DIS",
  - invited talk, Israel Physical Society Meeting, 17 December 2001.
- "Non-Linear Evolution and Parton Distributions at Low x",
  - talk at "9th International Workshop on Deep Inelastic Scattering and QCD" (DIS 2001), Bologna, Italy, 27 Apr 1 May 2001.
- "Towards a new global QCD analysis: Low x DIS data from non-linear evolution",
  - talk at "DESY Theory Workshop", Hamburg, Germany, 24 27 September 2002.
  - talk at "Low x" Workshop, Antwerpen, Belgium, 16 19 September 2002.
- "Nuclear shadowing from non-linear evolution in DIS",
  - talk at "Coherent Effects at RHIC and LHC: Initial Conditions and Hard Probes" Workshop, ECT\* Trento, Italy, 14 25 October, 2002.
- "Phenomenology with Non-Linear QCD Evolution",
  - talk at "The first III years of heavy-ion physics at RHIC" Program, Institute for Nuclear Theory, Uni. of Washington, Seattle, USA, 01 - 10 Apr, 2003.
- "Hard-Soft Pomeron Transition from QCD Saturation in the Dipole Picture",
  - talk at "11th International Workshop on Deep Inelastic Scattering and QCD", (DIS 2003), St-Petersburg, Russia, 23 27 Apr, 2003.
- "Quark Antiquark Exchange in Photon Photon Scattering",
  - invited talk at "12th International Workshop on Deep Inelastic Scattering and QCD", (DIS 2004), Strbske Pleso, Slovakia, 14 18 Apr. 2004.
  - $\bullet$  invited talk at "Small x and Diffraction" Workshop, Fermi National Lab, USA, 17 21 September 2003.
- "Low x evolution beyond the Balitsky-Kovchegov equation"
  - plenary talk at "Hadron Structure and QCD" Workshop, St-Petersburg, Russia, 18 - 22 May, 2004.
  - talk at "Lund Small x Workshop", DESY, Hamburg, Germany, 7 8 May 2004.
- "Structure function extrapolation to LHC energies based on combined BK/DGLAP equations"
  - invited talk at "HERA LHC Workshop", DESY, Hamburg, Germany, 1 - 4 June 2004.
- "High energy evolution in QCD: a fresh look at the dipole model",
  - $\bullet$  talk at "Low x" Workshop, Prague, Czech. Rep., 15 18 Sept. 2004.
- "New developments in the dipole model",
  - invited talk at "Classical and quantum aspects of Color Glass Condensate" Workshop, Brookhaven Natianal Lab, USA, 07 11 March 2005.
- "From e p to pp: high energy evolution with Pomeron loops",
  - talk at "HERA LHC Workshop", DESY, Hamburg, Germany, 21 24 March 2005.
- "From dense dilute duality to self-duality of high energy QCD"
  - talk at "Low x" Workshop, Sinaia, Romania, 29 June 02 July 2005.
- "High energy evolution with Pomeron loops",
  - invited talk at the Rencontres de Moriond workshop "QCD and Hadronic interactions", La Thuile, Italy, 18-25 March 2006.
- "Towards Reggeon Field Theory in QCD",
  - invited talk at the Meeting of the International Association of Relativistic Dynamics, Uni. of Connecticut, Storrs, USA, June 10-14 2006.

- talk at Workshop "Continues advances in QCD", Minneapolis, USA, May 10-14, 2006.
- "One Gluon, Two Gluons: Semi-Inclusive Observables at High Energies",
  - talk at INT program "From RHIC to LHC: Achievements and Opportunities", Seattle, USA, Nov. 20th 2007.
- "From Dense-Dilute Duality to Self-Duality of High Energy QCD",
  - talk at INT program "From RHIC to LHC: Achievements and Opportunities", Seattle, USA, Nov. 13th 2007.
- "Semi-inclusive observables at High Energies"
  - invited talk at "6th Small x and Diffraction" workshop: FERMILAB, March 28 31 2007.
- "On Diffraction and JIMWLK evolution",
  - talk at "15th International Workshop on Deep Inelastic Scattering and QCD", (DIS 2007) Munich, Germany, March 15-21, 2007.
- "Multi-gluon production at high energies",
  - talk at "15th International Workshop on Deep Inelastic Scattering and QCD", (DIS 2007) Munich, Germany, March 15-21, 2007.
- "High energy evolution from the wave-functional approach",
  - talk at "Low x" Workshop, Helsinki, Finland, Aug. 27-31, 2007.
- "Towards new relativistic hydrodynamics from AdS/CFT",
  - talk at "Non-Perturbative Methods in Strongly Coupled Gauge Theories" workshop, GGI, Florence, Italy, June 10th, 2008.
  - talk at "From strings to things: String theory methods in QCD and hadronic physics", program INT, Seattle, USA, May 5th, 2008.
- invited talk at "Understanding QGP through Spectral Functions and Euclidean Correlators", RIKEN Workshop, Brookhaven National Lab., USA, Apr. 23-25, 2008.
  - talk at "Nonequilibrium Dynamics in Particle Physics and Cosmology" program, KITP, Santa Barbara, USA, Feb. 12th, 2008.
- "Improved hydrodynamics from AdS/CFT",
  - talk at "Excited QCD 2010" workshop, Stara Lesna, Slovakia, 31 Jan 6 Feb 2010.
  - invited talk at Workshop on the "Fluid-Gravity correspondence", LMU, Munich, Germany, Sept. 2th-7th, 2009.
- "E/M radiation from QGP with chromo-magnetic monopoles",
  - talk at "Hard Probes 2010" workshop, Eilat, Israel, Oct. 10th-15th, 2010.
  - talk at the CERN theory institute program on "The first heavy ion collisions at the LHC", CERN, Aug. 30th, 2010.
  - talk at the INT program "Quantifying the properties of hot QCD matter", INT, Seattle, June 28th, 2010.
- "Two-particle correlations in high energy collisions",
  - invited talk at "Low x 2011" workshop, Santiago de Compostela, Spain, June 5th -10th, 2011.
- "Angular correlations from QCD evolution",
  - invited talk at "Low x 2012" workshop, Paphos, Cyprus, June 27th-July 1st, 2012,
- "Two-particle correlations from high energy QCD",
  - invited talk at "Light Cone 2012", Kracow, Poland, July 7th-13th, 2012.
- "Reggeon Field Theory from JIMWLK/KLWMIJ evolution",
  - invited talk at "Low x 2013" workshop, Rehovot-Eilat, Israel, May 30th-July 4th, 2013,

- "Reggeon Field Theory in QCD",
  - invited talk at ""QCD Landscape of the Nucleon and Atomic Nuclei" program, Lawrence Berkeley Nat. Lab, Aug. 12-16, 2013.
- "Long range two-particle correlations and initial state",
  - invited talk at 6th International Conference on "Hard and Electromagnetic Probes of High-Energy Nuclear Collisions", Cap Town, South Africa, Nov. 4-8, 2013.
- "JIMWLK evolution at NLO",
  - invited talk at XIth International Conference on "Quark Confinement and the Hadron Spectrum", St. Petersburg, Russia, September 8-12th, 2014.
  - invited talk at "Low x 2014" workshop, Kyoto, Japan, June 17-21, 2014.
- "All order linearized hydrodynamics from fluid/gravity correspondence",
  - talk at "Gauge/Gravity Duality 2015" International Conference, Florence, Italy, Apr. 13- 17, 2015.
  - talk at "Intersection Between QCD and Condensed Matter" school, Schladming, Austria, March 1- 6, 2015.
  - invited talk at XIth International Conference on "Quark Confinement and the Hadron Spectrum", St. Petersburg, Russia, September 8-12th, 2014.
- "JIMWLK evolution at NLO",
  - invited talk at XXIIIrd International Workshop on "Deep Inelastic Scattering", Dallas, Apr. 27th- May 1st, 2015.
  - invited talk at International Workshop on "Heavy Ion Collisions at the LHC", Beer Sheva, May 27th - June 1st, 2015.
- "Two-particle correlations and Entanglement Entropy in CGC",
  - invited talk at INT program "Correlations and Fluctuations in p+A and A+A Collisions", Seattle, July 6th- 30th, 2015.
- "All order linearized hydrodynamics from fluid/gravity correspondence",
  - invited talk at "Continuous advances in QCD" International Conference, Minneapolis, USA, May 12- 15, 2016.
- "Entanglement entropy in CGC",
  - talk at "The 3rd International Conference on the Initial Stages in High-Energy Nuclear Collisions", Lisbon, Portugal, May 23rd-27th, 2016.
- "Light Cone approach to High Energy QCD"
  - invited talk at "Quarks" International Conference, Pushkin, Russia, May 29th - June 4th, 2016.
- "High energy QCD at NLO"
  - invited talk at "High energy QCD and Diffraction" , Kracow, Poland, Dec. 05th - 7th, 2016.
- "Anomalous transport from Holography"
  - invited talk at "QCD in Finite Temperature and Heavy-Ion Collisions", Brookhaven Nat. Lab., USA, Feb. 13th -15th, 2017.
- "From light-cone wave function to NLO JIMWLK"
  - invited talk at "Saturation: Recent Developments, New Ideas and Measurements", Brookhaven Nat. Lab., USA, Apr. 26th –28th, 2017.
- "Initial state correlations in the CGC wave function"
  - invited talk at "6th International Conference on New Frontiers in Physics (ICNFP 2017)"

Crete, Greece, Aug 8th -14th, 2017.

"Transport from the Fluid/Gravity Correspondence"

- invited plenary talk at "4th International Conference on the Initial Stages in High-Energy Nuclear Collisions", Kracow, Poland, Sept 12th 16th, 2017.
- "Entanglement Entropy in High Energy Collisions"
  - talk at "8th International Conference on Physics Opportunities at an Electron-Ion-Collider", Regensburg, Germany, March 19th 23rd, 2018

#### Seminar talks

- "Parton Hadron Duality in QCD Sum Rules: Quantum Mechanical Example",
  - seminar talk, Technion, Haifa, Israel, 25 June 1997.
- "Nonlinear Evolution for Total and Diffractive Productions in High Energy DIS",
  - seminar talk, Tel Aviv Uni., Israel, 20 January 2002.
  - seminar talk, University of Florida, Gainesville, USA, 21 November 2001.
  - seminar talk, Brookhaven Natianal Lab., USA, 20 November 2001.
  - seminar talk, Carnegie Mellon Uni., Pittsburgh, USA, 16 November 2001.
  - seminar talk, SUNY, Stony Brook, USA, 13 November 2001.
  - seminar talk, Technion, Haifa, 3 November 2001.
  - seminar talk, DESY, Hamburg, Germany, 2 October 2001.

"Phenomenology with Non-Linear QCD Evolution",

• seminar talk, DESY, Hamburg, Germany, 14 April, 2003.

"Reggeons in QCD",

• seminar talk, Technion, Haifa, Israel, 09 June, 2003.

"Nuclear Shadowing from High Density QCD",

• seminar talk, CERN, 07 July, 2003.

"New Global DIS Analysis and Hard - Soft Pomeron Transition",

- seminar talk, SUNY, Stony Brook, USA, 11 September 2003.
- seminar talk, Brookhaven Natianal Lab, USA, 10 September 2003.

"Quark - Antiquark Exchange in Photon Photon Scattering",

- seminar talk, IPPP Durham, UK, 24 Nov. 2003.
- seminar talk, Heidelberg Uni., Germany, 05 November 2003.
- seminar talk, Argone National Lab, USA, 16 September 2003.
- seminar talk, Uni. of Minnesota, Minneapolis, USA, 15 September 2003.

"Low x evolution beyond the Balitsky-Kovchegov equation"

- seminar talk, Brookhaven Natianal Lab, USA, 16 Oct. 2004.
- seminar talk, Department of Physics, University Paris VI, France, 10 Sept. 2004.
- seminar talk, SPhT, SACALY, Paris, France, 06 Sept. 2004.

"Reggeons in QCD",

- seminar talk, Uni. of Connecticut, USA, 06 December 2004.
- "High energy evolution in QCD: a fresh look at the dipole model",
  - seminar talk, the Ohio State University, Columbus, USA, 27 Jan. 2005.
  - seminar talk, Brookhaven Natianal Lab, USA, 21 Jan. 2005.

- "High energy evolution in QCD: a fresh look at the dipole model",
  - seminar talk, Uni. of Connecticut, USA, 25 April 2005.
  - seminar talk, Technion, Haifa, Israel, 04 April 2005.
  - seminar talk, Tel Aviv Uni., Israel, 30 March 2005.
- "A fresh look at high energy evolution in QCD",
  - seminar talk, Jefferson National Lab., USA, 09 May 2005.
- "From DIS to high energy hadron hadron collisions"
  - seminar talk, Brookhaven National Lab, USA, 26 July 2005.
- "From DIS to high energy hadron hadron collisions: towards a Regeon field thery in QCD"
  - seminar talk, CERN, 16 March 2006.
  - seminar talk, Iowa State Uni., Ames, USA, 09 Feb. 2006.
  - seminar talk, SUNY, Stony Brook, USA, 22 January 2006.
- "From DIS to Hadron-Hadron Collisions: towards Reggeon Field Theory in QCD",
  - seminar talk, Uni. of Maryland, USA, 13 Apr. 2006.
- "High energy scattering in QCD: from DIS to Hadron-Hadron collisions",
  - seminar talk, Los Alamos National Lab., USA, 28 Apr. 2006.
- "Yin and Yang of high energy QCD"
  - seminar talk, Brookhaven National Lab, USA, 28 July 2006.
- "High energy evolution from the Light Cone Hamiltonian",
  - seminar talk, Uni. of Illinois, Chicago, USA, 25 March 2007.
  - seminar talk, Uni. of Connecticut, USA, 3 Nov. 2006.
- "Heavy Ion Collisions: from Navier Stokes equation to AdS black holes and back again"
  - seminar talk, Ben Gurion Uni., Beer Sheva, Israel, 1 May 2007.
  - seminar talk, Technion, Haifa, Israel, 30 April 2007.
  - seminar talk, Tel Aviv Uni., Israel, 27 April 2007.
  - seminar talk, Uni. of Connecticut, USA, 6 April 2007.
- "Multigluon production and CGC"
  - seminar talk, Brookhaven National Lab, USA, 30 June 2007.
- "On Heavy Ion Collisions: from relativistic hydrodynamics to AdS black holes and back again"
  - seminar talk, Cornell Uni., USA, 26 March 2008.
- "sQGP from Holography"
  - seminar talk, Uni. of Connecticut, USA, 10 Nov. 2008.
- "Improved hydrodynamics from AdS/CFT"
  - seminar talk, The Frankfurt Institute for Advanced Studies, Germany, Sept. 13th, 2010.
  - seminar talk, Uni. of Wuppertal, Germany, Sept. 7th, 2010.
  - seminar talk, Ben Gurion Uni., Beer Sheva, Israel, Nov. 12th, 2009.
  - seminar talk, Uni. of Connecticut, USA, 05 Jun. 2009.
- "Angular correlations in high energy collisions",
  - seminar talk, Baruch College, CUNY, New York, USA, 04 Oct. 2011.
  - seminar talk, Uni. of Connecticut, USA, 12 Sept. 2011.
  - seminar talk, SUNY, Stony Brook, USA, Aug. 1st 2011.
  - seminar talk, Brookhaven Nat. Lab, USA, July 27th 2011.
  - seminar talk, joint nuclear seminar, Tel Aviv, Israel, Jan. 14th 2011.

- "Anomalous Hydrodynamics",
  - seminar talk, Uni. of Connecticut, USA, 5 Sept. 2011.
- "Classicalization and Unitarity",
  - seminar talk, Ben Gurion Uni., Beer Sheva, Israel, Oct. 29th 2012.
  - seminar talk, SUNY, Stony Brook, USA, Sept. 26th 2012.
  - seminar talk, Uni. of Connecticut, USA, Sept. 23rd 2012.
- "Towards Reggeon Field Theory in QCD",
  - seminar talk, Brookhaven Nat. Lab, USA, July 26th 2013.
  - Nuclear Physics Colloquium, Frankfurt Institute of Advanced Studies, Germany, July 11th, 2013.
  - seminar talk, Kracow, July 3rd, 2013.
  - seminar talk, Joint High Energy Seminar, Newe Shalom, Israel, Nov. 13th 2012.
- "Angular correlations ("ridge") in high energy QCD",
  - seminar talk, University of Santiago de Compostela, Spain, July 17th 2014.
  - seminar talk, Ohio State University, Columbus, USA, Oct. 3rd 2013.
- "All order linearized hydrodynamics from fluid/gravity correspondence",
  - seminar talk, Uni. of Connecticut, USA, Aug. 20th 2014.
- "High energy QCD evolution at NLO",
  - seminar talk, Federico Santa Maria Technical University, Valparaiso, Chile, Dec 12th, 2014.
- "Initial state correlations, entanglement entropy and all that",
  - seminar talk, SUNY st Stony Brook, USA, Oct. 27th, 2015.
  - seminar talk, Brookhaven National Lab, USA, Aug 14th, 2015.
- "All order linearized hydrodynamics from fluid/gravity correspondence",
  - seminar talk, MIT, USA, Apr. 13th, 2016,
  - seminar talk, Boston University, USA, Apr. 8th, 2016,
  - seminar talk, Brown University, USA, March 9th, 2016,
  - seminar talk, New York University, USA, March 2nd, 2016,
  - seminar talk, Cornell University, USA, Feb 3rd, 2016,
- "Initial state correlations, entanglement entropy and all that",
  - seminar talk, L. Berkley National Lab., Berkley, USA, Apr. 29th, 2016.
- "Transport functions from fluid/gravity correspondence",
  - seminar talk, SUNY st Stony Brook, USA, Jul. 27th, 2016.
  - seminar talk, Brookhaven National Lab, USA, Jul 22th, 2016,
- "High energy QCD at NLO"
  - seminar talk, Brookhaven National Lab, USA, Feb. 17th, 2017.
- "Initial state correlations in the CGC wave function"
  - seminar talk, Saclay, Paris, France, Oct. 8th, 2017.
- "Entanglement Entropy in Heavy Ion Collisions"
  - seminar talk, Tel Aviv University, Jan. 23rd, 2018.