

Curriculum vitæ

Alberto Accardi

PERSONAL DATA

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EDUCATION

Nov '98 - Oct '01 Ph.D. in physics at the University of Trieste
- Dissertation: "*Semihard parton rescatterings in heavy-ion interactions at collider energy*"
- Supervisor: D.Treleani
Sep '91 - Feb '97 Degree in physics with full marks and honors at the University of Milan, Italy
- Dissertation: "*Three-dimensional Yang-Mills theory as a deformation of topological quantum field theories*"
- Supervisor: M.Martellini

ACADEMIC POSITIONS

Jun '09 - now Research Assistant Professor, Hampton U., jointly with Jefferson Lab
Sep '07 - May '09 post-doc researcher at Hampton U. and Jefferson Lab, with W.Melnitchouk and C.Keppel
Sep '04 - Aug '07 post-doc researcher at Iowa State University, with J.W.Qiu
Oct '02 - Aug '04 post-doc researcher at Columbia University, New York, with M.Gyulassy
Oct '01 - Sep '02 post-doc researcher at Heidelberg University (Germany) in the ETR network "Electron Scattering Off Partons" (ESOP), with H.J.Pirner
Mar '97 - Oct '98 Collaboration with M.Martellini at Milan U. (Italy)

AWARDS

1997 "Alberto Frigerio" prize for a dissertation in mathematical physics, awarded by the Italian Physical Society (SIF)

TEACHING EXPERIENCE

- 2011** Invited lectures on “Deep Inelastic Scattering and global QCD fits” at the HUGS2011 summer school, Jefferson Lab, June 2011
- 2007** Invited lecture on “DIS kinematics” for graduate students in the Hampton U. nuclear physics group
- 2005** Guest lecturer for J.P.Vary’s course on “Nuclear Physics” at Iowa State U.
- 2002** Tutoring on Quantum Mechanics, and organizer of students “Seminars in Quantum Mechanics” at Heidelberg U.
- 1999 - 2001** Recitations in Physics and Calculus at Trieste U.
- 1996 - 1997** Private recitations in Mathematics for high school students
- 1989 - 1994** Private recitations in Mathematics and French for high school students

SUPERVISION AND MENTORING

- 2011** Helped supervise L.Brady’s summer research at Jefferson Lab, 1 article published in Phys.Rev.D, 1 in preparation
- 2008 - now** Mentoring R.Dupré, graduate student, in the simulation of energy loss and hadronization in nuclear DIS scatterings
- 2008 - 2009** Helped supervise T.Hobbs’s summer research at Jefferson Lab, 1 article published in JHEP, ongoing collaboration
- 2004 - 2005** Helped supervise D.Grünewald’s undergraduate research project at Heidelberg U, 1 article published in Nucl.Phys.A

GRANTS

- 2011** DOE proposal, “*Large-x partons from JLab to the LHC*”, in preparation
- 2010** DOE proposal, “*Nucleons at large x*”, denied
NSF proposal, “*Nucleons at large x*”, denied
- 2009** DOE proposal, “*Parton structure of the nucleon at large x*”, denied
- 2008** DOE proposal, “*Parton structure of the nucleon at large x*”, denied
- 2003** EURYI (EUROpean Young Investigator) award proposal, “*QCD at high parton density and hard probes in heavy ion collisions*”, denied

LEADERSHIP EXPERIENCE

- 2010** Scientific coordinator, “QCD matter under extreme conditions”, weeks 3-5 at the INT, Seattle, program “Gluons and the quark sea at high energies: distributions, polarization, tomography”
- 2010 - now** Convener, working group on “Parton propagation and fragmentation” at the Electron-Ion Collider
- 2007 - now** Convener, “CTEQ-JLab collaboration” on QCD and global fits of parton distributions

PROFESSIONAL MEMBERSHIPS

2003-2005, 2010- American Physical Society (APS)

SYNERGISTIC ACTIVITIES

- 2011** Theory support, JLab Experiment E11-107 “In-medium nucleon structure functions, SRC, and the EMC effect”
- 2010** Collaborator, JLab Experiments E12-10-002 “Precise measurement of the F_2 structure function in the resonance region and beyond,” E12-06-117 “Quark propagation and hadron formation,” and Letter of Intent LOI-10-009 “Nuclear exclusive processes and semi-inclusive physics with a new CLAS12 recoil detector.”
- 2009 - now** Member, “EIC study group” at Jefferson Lab
- 2008 - now** Member, Electron-Ion Collider collaboration

OUTREACH

- 2011** Represented Jefferson Lab at the 2nd annual DOE Graduate Fellows meeting, Oak Ridge National Lab, USA, July 2011
- 1999** Held 3 seminars on “Particle Physics” at the Galileo High School in Trieste (Italy), as part of a series on Scientific English Language
- 1999** Facilitated a workshop on student’s preparation for the high-school finals, physics and astronomy part, Galileo High School, Trieste (Italy)

COMMUNITY SERVICE

- Referee for:
 - Physical Review D, Nuclear Physics A, European Physical Journal C, Journal of Physics G, Heavy Ion Physics
- Organizer of:
 - *QCD and Hadronic Final States* parallel session at *DIS2011*, Newport News, April 2011
 - *Nuclear Chromo-Dynamics at an Electron-Ion Collider*, workshop, Argonne National Lab, Apr 2010
 - *4th Electron-Ion Collider workshop*, Hampton U., May 2008
 - *Yale-Columbia Fest* series of mini-work sops, Jul and Nov 2003.
 - *Jet and collective correlations at RHIC*, Nuclear Theory Visitor Program at Columbia U., New York, NY (USA), May-June 2003.
 - *DFT journal club*, regular seminar series at the Department of Theoretical Physics (DFT) at Trieste U., (ITA) Sep 2000 - Oct 2001.

INVITED TALKS AND COLLOQUIA

- “Jets and hadronization in cold QCD matter”
 - Lawrence Berkeley National Lab, Berkeley, CA (USA), May 2011
- “High-energy QCD and hadronization at the EIC”
 - GHP meeting, Anaheim, CA (USA), Apr 2011
- “QCD and Hadronic Final States”
 - summary talk at DIS2011, Newport News, VA (USA), Apr 2011
- “QCD Matter under Extreme Conditions: a summary of weeks 3-5”
 - summary talk at “Gluons and the Quark Sea at High Energies”, INT, Seattle, Sep-Nov 2011
- “Subleading effects in QCD global fits”
 - HiX2010 international workshop, Jefferson Lab, Oct 2010
- “Nuclear physics at the EIC”
 - lectures at the summer school “Quark Matter Italia 2010”, Rome (ITA), Jul 2010
- “Report From the Argonne Workshop”
 - “EIC Detector” Workshop, Jefferson Lab (USA), June 2010
- “CTEQ6X: a global analysis of large- x PDFs”
 - ELBA XI international workshop, Marciana Marina (ITA), Jun 2010
 - MENU 2010 international conference, William & Mary U., Jun 2010
- “Parton Flavor Separation at Large Fractional Momentum”
 - Pavia U. (ITA), July 2010
 - American Physical Society spring meeting, Feb 2010
- “Parton propagation and fragmentation at the EIC”
 - Jefferson Lab (USA) “pizza seminar” series, May 2010
- “Parton Propagation and Fragmentation: Summary and Outlook”
 - Summary talk at the workshop on *Nuclear QCD studies with a future EIC*, Argonne National Lab (USA), Apr 2010
- “Measuring $F_2(n)$ at the EIC”
 - Workshop on *Nuclear QCD studies with a future EIC*, Argonne National Lab (USA), Apr 2010
- “Between the brick and the QGP”
 - CATHIE/TECHQM workshop, BNL, 14-18 Dec 2009
- “Flavor separation at large x ”
 - Workshop on *The Jefferson Laboratory Upgrade to 12 GeV*, INT, Seattle (USA), Oct 2009

- “PDF at large x : issues and recent results”
- *BONUS collaboration meeting*, Jefferson Lab (USA), Jun 2009
- “Parton propagation and hadronization at the EIC”
- *ENC/EIC workshop*, GSI, Darmstadt (GER), May 2009
- “Hadron structure at large x ”
- ECT*, Trento, Italy, May 2009
- “Hadronization in cold and hot QCD matter”
- *NUINT09*, Sitges (Spain) May 2009
- “Parton Propagation and Hadronization in QCD matter”
- *GHP2009*, Denver, CO, USA, Apr 2009
- “Hadronization in cold QCD matter: Data vs. phenomenology”
- Workshop on *New ideas in hadronization: Intersections between QCD, AdS/CFT and the QGP*, Durham (UK), Apr 2009
- “What can break the Wandzura-Wilczek relation?”
- *Workshop on “Spin Structure at Long Distance”*, Jefferson Lab, Mar 2009
- “Recent results on PDFs at large x ”
- *Hall C collaboration Meeting*, Jefferson Lab, Jan 2009
- “Parton propagation and hadronization in nuclear matter”
- *4th Electron-Ion Collider Workshop*, Hampton U., May 2008
- “A new formalism for target mass corrections”
- *Hall C collaboration meeting*, Jefferson lab, Jan 2008
- “Collinear factorization for DIS at large x_B and low Q^2 ”
- *CTEQ collaboration meeting*, Michigan State U., Nov 2007
- “Multi-nucleon correlations in deep inelastic scattering at large Bjorken x ”
- *Light Cone 2007*, Columbus, OH (USA), May 2007
- “Hadronization and energy loss in e+A collisions”
- Workshop on *“Future prospects in QCD at high energy”*, BNL, Jul 2006
- “The perfectly fluid Quark-Gluon Plasma”
- LLNL, Livermore, CA (USA), Jun 2006
- LNF, Frascati (ITA), May 2006
- “Space-time evolution of hadronization”
- *“XLIV International Meeting on nuclear physics”* Bormio (ITA), Jan-Feb 2006

TALKS

- “Report From the Argonne Workshop”
 - Theory Center “cake seminar”, Jefferson Lab (USA), Aug 2010
- “Neutron structure functions at JLab and the EIC”
 - Hampton U. (USA), May 2010 - Theory Center “cake seminar”, Jefferson Lab (USA), Apr 2010
- “Parton Flavor Separation at Large Fractional Momentum”
 - Temple U. (USA), Apr 2010
- “Gluons, moments and F_L ”
 - Hampton U. (USA), Nov 2009
- “CTEQ6X: large- x PDFs”
 - CTEQ collaboration meeting, Northwestern U. (USA), Nov 2009
- “Parton propagation and fragmentation at the EIC”
 - Workshop on *Physics at a high energy ElectronIon Collider*, INT, Seattle (USA), Oct 2009
- “Large- x PDFs”
 - Hampton U. (USA), Apr 2009
- “Target mass corrections and beyond”
 - Torino U., Jan 2009
- “Parton propagation and hadronization in QCD matter”
 - LNF, Frascati (ITA), Jan 2009 - Pavia U., Jan 2009
- “Target mass corrections in collinear factorization”
 - *SPIN2008*, U. of Virginia (USA), Oct 2008
- “Why should a heavy-ion physicist care about nuclear DIS?”
 - Brookhaven National Lab, Oct 2008
 - Columbia U., Sep 2008
- “Target mass corrections and beyond”
 - Brookhaven National Lab, Sep 2008
- “Collinear factorization for DIS at large x_B ”
 - *Theory group cake seminar*, Jefferson Lab, Mar 2008
 - Iowa Sate U., Feb 2008
- “From strings to things?”
 - Jefferson Lab, Nov 2007

- “Multi-nucleon correlations in deep inelastic scattering at large Bjorken x ”
 - Winter retreat on “Cold dense nuclear matter”, Florida International U., Feb 2007
 - Jefferson Lab, Jan 2007
- “Space-time evolution of hadronization probed in e+A collisions”
 - Kent State U., Feb 2007
 - Jefferson Lab, Jan 2007
 - INT workshop “From RHIC to LHC”, Seattle (WA), Oct 2006
 - Iowa State U., Oct 2006
- “Formation time scaling and hadronization in cold nuclear matter”
 - *Hard Probes 2006*, Asilomar, CA (USA), Jun 2006
 - *Hot Quarks 2006*, Villasimius, Sardinia (ITA), May 2006
- “The perfectly fluid Quark-Gluon Plasma”
 - Milan U., May 2006
- “Space-time evolution of hadronization”
 - Padova U., May 2006
 - Milan U., Jan 2006
- “Can we distinguish energy loss from hadron absorption?”
 - LNF, Frascati (ITA), Jan 2006
- “Target mass corrections to F²”
 - *Midwest nuclear theory get-together*, Argonne Labs (USA), Oct 2005
- “News (and thoughts) from QM2005”
 - Iowa State U., Sep 2005
- “Can we distinguish energy loss from hadron absorption?”
 - Workshop “*Parton Propagation through Strongly Interacting Systems*,” ECT*, Trento (ITA), Sep-Oct 2005
 - Poster at Quark Matter 2005, Budapest (HUN), Aug 2005
- “Color confinement and the origin of mass in pure Yang-Mills theory”
 - Iowa State U. (USA), Mar 2005
- “Naked Cronin effect in A+A collisions from SPS to RHIC”
 - *Hard Probes 2004*, Ericeira (Portugal), Nov 2004
 - *American Physical Society, DNP Meeting*, Chicago (IL), Oct 2004
- “Cronin effect in d+Au collisions: where does pQCD meet CGC?”
 - International workshop on “*Hot and dense matter in relativistic heavy-ion collisions*” (BP2004), Budapest (Hungary), Mar 2004
- “Cronin effect in d+Au collisions from mid- to forward rapidity”
 - Iowa State U. Feb 2004
 - Lawrence Berkeley Lab, Jan 2004

- “Cronin effect vs. geometrical shadowing in d+Au collisions: pQCD vs. CGC”
 - *Quark Matter 2004 (QM2004)*, Oakland, CA (USA), Jan 2004
- “Cronin effect and dipoles in dA collisions: pQCD vs. CGC”
 - BNL-RIKEN workshop on “*High-pT physics at RHIC*”, December 2003
 - *American Physical Society, DNP Meeting*, Tucson, AZ (USA), Nov 2003
 - Stony Brook U., Oct 2003
 - *CERN Heavy Ion Forum*, Sep 2003
- “Nuclear suppression of hadron yields: formation time and energy loss at HERMES”
 - *Workshop on “Electromagnetic interactions on nucleons and nuclei”*, Santorini (Greece), Oct 2003
 - LNF, Frascati (Italy), Sep 2003
- “Cronin effect and hadron formation time in pA and eA collisions at RHIC and HERMES”
 - Giessen U., Sep 2003
- “Cronin effect, dipoles and unitarity in dA collisions”
 - “*The first three years of heavy-ion physics at RHIC*” INT, Seattle, WA (USA), Jun 2003
 - Heidelberg U., Jun 2003
 - Frankfurt U., Jun 2003
 - Columbia U., May 2003
- “Are away-side jets disappearing at RHIC?”
 - Stony Brook U., Feb 2003
- “An interpretation of saturation phenomena as Glauber-Gribov multiparton scatterings”
 - BNL, Upton, NY (USA), Feb 2003
 - “*19th Winter Workshop on Nuclear Dynamics*”, Breckenridge, CO (USA), Feb 2003
- “Initial conditions at RHIC and LHC from semihard parton rescatterings”
 - “*Initial conditions and hard probes*”, ECT*, Trento (Italy), Oct 2002
- “Where should we look for hard parton scatterings in flow measurements?”
 - *RNM meeting*, Darmstadt U., Oct 2002
 - poster at *Quark Matter 2002*, Nantes (France), Jul 2002
- “Nuclear modifications of fragmentation functions and rescaling models”
 - Vrije Universitat, Amsterdam (Holland), Jun 2002
 - *Spring School “B.Touschek”*, Frascati (Italy), May 2002
 - “*QCD-N’02*” - Ferrara (Italy), Apr 2002
- “Minijet production and semihard parton rescatterings”
 - Heidelberg U., Feb 2002

- “Semi-hard rescatterings at RHIC and LHC”
 - *VI LNF Spring School “Bruno Touschek”*, Frascati (Italy), Jun 2001
 - Heidelberg U., May 2001
- “Semi-hard scatterings at RHIC and LHC: Initial conditions and charged multiplicities”
 - *XXXVI Rencontres de Moriond: QCD and Hadronic Interactions*, Les Arcs (France), 17-24 March 2001
 - *40th International School in Theoretical Physics - Dense Matter*, Schladming (Austria), March 2001
 - poster at *Quark Matter 2001*, Long Island, NY (USA), Jan 2001
- “Parton rescatterings and minijet production at LHC energies”
 - *XII Summer School in Nuclear Physics*, Santa Cruz, CA (USA), Jul 2000
- “Minijet production in heavy-ion collisions at LHC energies”
 - NATO advanced study institute *Particle Production Spanning the MeV and the TeV*, Nijmegen (Holland), Aug 1999
 - *Convegno informale di fisica teorica*, Cortona (Italy), Jun 1999
- “(Mini)jet production in heavy-ion collisions at LHC”
 - *34th Rencontres de Moriond on QCD and Hadronic Interactions*, Les Arcs (France), Mar 1999
- “Topological sectors in pure Yang-Mills theory”
 - NATO advanced study institute *Quantum field theory, perspective and prospective*, Les Houches (France), Jun 1998

SCHOOLS ATTENDED

- “*CTEQ summer school 2007*”, Madison, WI (USA), May-June 2007.
- *VII LNF Spring School “Bruno Touschek”*, Frascati (Italy), May 2002.
- *II Scuola Interateneo di “Dinamica della produzione multipla nelle interazioni forti”* (Dynamics of multiple production in strong interactions), Trieste (Italy), Jun 2001.
- *VI LNF Spring School “Bruno Touschek”*, Frascati (Italy), May-Jun 2001.
- *40th International school in theoretical physics - Dense Matter*, Schladming (Austria), Mar 2001.
- *XII INT summer school in nuclear physics*, Santa Cruz, CA (USA), Jul 2000.
- NATO advanced study institute *Particle production spanning the MeV and the TeV*, Nijmegen (Holland), Aug 1999.
- NATO advanced study institute *Quantum field theory, perspective and prospective*, Les Houches (France), Jun 1998.

- Summer school *VI seminario nazionale di fisica teorica* (VI national seminar on theoretical physics), Parma (Italy), Sep 1997.

REFERENCES

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