

Claudio Corianò

CV

✉ claudio.coriano@le.infn.it

- 1983–1987 **Undergraduate Studies in Italy**, *Laurea in physics 110/110 cum Laude from Physics Department, University of Turin. Thesis : On partial susy breaking in N=4 supergravity with gauge group E_8 . Advisor Prof. Pietro Frè.*
- 1987 **Graduate Admissions**, *Admitted at the graduate schools of SUNY at Stony Brook, NY and of Massachusetts Institute of Technology, Boston, for a Ph.D. in Physics.*

International Studies

- 1987–1992 **Graduate Studies**, *Ph.D student at Stony Brook, working at the Institute for Nuclear Theory (director Prof. Gerald E. Brown) and at the Institute for Theoretical Physics (director Prof. C.N. Yang) (supervisor Prof. George Sterman).*
- 1987–1992 **Scholarships**, *Fullbright commission, United Nations Sections and SUNY at Stony Brook.*
- 1988 **Master**, *Department of Physics, S.U.N.Y. at Stony Brook.*
- 1992 **Graduate degree**, *Doctor of Philosophy (Ph.D.), Department of Physics and C.N. Yang Institute for Theoretical Physics, SUNY at Stony Brook (Luglio 1992) (Tesi: Studies on Strong Interactions. Advisor Prof. George Sterman.*
- 1998-2000 **Postgraduate studies**, *postgraduate studies in computer science, in the Computer Science Department, College of William and Mary, Williamsburg, Virginia, US, on compiler constructions, performance evaluation, analysis of algorithms and data structures.*

Postdoctoral activity 1992-1999

- 1992–1993 **Postdoctoral research**, *Postdoctoral fellow at the University of Stockholm, Sweden, Physics Department.*
- 1992–1993 **Fellowships**, *Boncompagni-Ludovisi Trust fellowship, Stockholm, Sweden.*
- 1993–1995 **Postdoctoral research**, *Argonne Natl. Lab, University of Chicago, (High energy physics division). US Department of Energy fellowshp.*
- 1995–1997 **Postdoctoral research**, *Institute for Fundamental Theory, University of Florida at Gainesville (Director Prof. Pierre Ramond).*
- 1997–1999 **Postdoctoral research**, *Theory Division (Director Prof. Nathan Isgur), Thomas Jefferson Laboratory, Virginia, US Department of Energy fellowship.*

Academic activity and qualifications in the Italian national university system

- 1999-2002 **Position**, *Tenure track researcher, Univ. of Salento.*
- 2002-2010 **Position**, *Tenured researcher, Univ. of Salento.*
- 2011-2019 **Position**, *Associate professor, Univ. of Salento.*
- 20012 **Qualifications**, *National habilitation to full professor in the area FIS-02-A2, Elementary particle theory and mathematical methods for physics (2012-2021).*

- 20019 **Qualifications**, *National habilitation to full professor in the area FIS-02-A2, Elementary particle theory and mathematical methods for physics (2021-2029).*
- 2000-2019 **Activity**, *Chief organizer and Director of 4 international graduate schools in high energy theory and phenomenology. Chairman for the final meeting of the European network on cosmology (Universenet) (2010). Chairman of an international school on holographic cosmology (2019).*
- 2000-2019 **Teaching**, *Teaches regular courses in quantum field theory, physics of the fundamental interactions, computational methods in physics, for students specialising both in theoretical and experimental physics (20 credit hrs per year).*
- 2000-2019 **Teaching**, *Teaches undergraduate courses in thermodynamics, statistical mechanics for mathematicians, statistical mechanics for physicists, for 6 credit hrs (200-2008) and 12 credit hrs (2008-2019).*

Publications

1990-, *110 peer reviewed articles, 10 articles in proceedings on journals, 25 proceedings of regular workshops, 1 monography, 3 contributions to international study groups. 4 editorial publications. Downloadable from inspirehep.net.*

Visiting positions

- 2015 **Visiting**, *Leverhulme Professor at the Mathematics department of the University of Southampton, developing methods for the analysis of the Cosmic microwave background and holographic cosmology. .*

Partecipation to national grants

- 2000- **PRIN**, *Participates to 4 national grants (PRIN), 24 months each, in the area of particle theory, coordinated by Giancarlo Rossi, Roberto Petronzio, Luciano Maiani and Riccardo Barbieri.*
- 2005 **Membership**, *Member of the Pax collaboration (2005) on polarized collisions. .*

Membership

- 2014-2019 **Graduate committees**, *Supervisors for graduate admissions at the University of Salento, physics department.*

Organization of scientific events and Coordination of Research Activity

- International Schools **2004**, *Chairman, Italo Hellenic School of Physics : The physics of LHC , Martignano (Lecce) May 20-24, 2004, 50 participants, 10 speakers. budget: 15.000 euro. In collaboration with Profs. Vincenzo Barone (Alessandria) and Phil Ratcliffe (Como) .*
- International Schools **2005**, *Chairman: Italo-Hellenic School of Physics 2005: The Physics of LHC: Theoretical Tools and Experimental Challenges 9-14 Jun 2005. Martignano, Lecce, Italy, 10 speakers, 40 participants; budget 15.000 euro. In collaboration with Profs. Vincenzo Barone (Alessandria) and Phil Ratcliffe (Como) .*
- International Schools **2006**, *Chairman : Italo-Hellenic School of Physics 2006: The Physics of LHC: Theoretical Tools and Experimental Challenges 12-18 giugno 2006. 40 participants. Martignano, Lecce, Italy, budget 12.000 euro. In collaboration with Profs. Vincenzo Barone (Alessandria) and Phil Ratcliffe (Como) .*

- International Schools **2010**, *Chairman: 4th Summer School on the Physics of LHC 2010: Theoretical and Experimental Aspects 14-19 Jun 2010. Lecce, Italy, 10 speakers, 40 students. budget 14.000 euro.* In collaboration with Profs. Vincenzo Barone (Alessandria) and Phil Ratcliffe (Como).
- Organization of European meetings **2010**, *Chairman: 4th Universenet School : frontiers of Particle Cosmology (Final meeting of the European network Universenet) 110 participants. Coordinator: Prof. Subir Sarkar (Oxford), funded by the network .*
- Workshps Organization **2012**, *Co-Chair of the Organizing Committee (Profs. P. Colangelo e Fulvia De Fazio) Workshop QCD@work 6th International Workshop on Quantum Chromodynamics - Theory and Experiment (QCD@WORK2012) : Lecce, Italy, June 18-21. 80 participants.*
- 2014**, *Member of the organizing committee 7th International Workshop on QCD - Theory and Experiment (QCD@Work 2014) 16-19 june 2014. Giovinazzo, Bari, Italy .*
- 2016**, *Member of the organizing committee 7th International Workshop on QCD - Theory and Experiment (QCD@Work 2014) 27-30 June 2016. Martina Franca, Italy .*
- 2018**, *Member of the organizing committee 7th International Workshop on QCD - Theory and Experiment (QCD@Work 2014) 25-28 June 2018. Matera Italy .*
- International Schools **2019**, *Co-Chair : International School on Amplitudes and Cosmology, Holography and Positive Geometries Lecce, 27 May 2019 to 1 June 2019 Ex-convitto Palmieri. 50 international students, 5 speakers. In collaboration with Dr. Paolo Benincasa (Niels Bohr Intl. Academy, Copenhagen (<https://agenda.infn.it/event/18103/>)).*
- 2020**, *Co-Chair : International School on Amplitudes and Cosmology, Holography and Positive Geometries Lecce, 25 May 2019 to 2 June 2019 Ex-convitto Palmieri. In collaboration with Dr. Paolo Benincasa (Niels Bohr Intl. Academy, Copenhagen (<https://agenda.infn.it/event/21268/>)).*
- Workshop Organization **2020**, *with Professors Pietro Colangelo and Fulvia De Fazio (INFN Bari) organizes the workshop QCD@work 2020 at Museo Sigismondo Castromediano, Lecce, 15-18 giugno 2020.*
- Coordination of research activities **2000-2019**, *Coordinator for Lecce of the INFN clusters BARI-21 and QFT-HEP.*

Referee service

- Referee large grants **2016-2019**, *Referee for the Swiss National Science Foundation for grants larger than 600.000 swiss francs .*
- Referee large grants **2019**, *Referee per la Estonian Science Foundation for grants larger than 200.000 euros.*
- Referee scientific journals **2000-2019**, *Referee for Physical Review D and European Physics Journal in the area of high energy physics and Classical and Quantum Gravity for field theory and gravity.*
- Editor **2019-**, *Review Editor per Frontiers in Physics, High energy theory and astroparticle physics.*

International visits (longer than 10 days) Short List

2002, *11 July 2002.*

Physics Department Oxford UK, April 2002

2003, *Physics Department Oxford UK, April 2003, 1 month, funding: Royal Society .*

2003, *National University of Singapore April 2003, funding: University Scholars Program, Singapore.*

2004, *National University of Singapore May 2004, 1 month, funding: University Scholars Program, Singapore.*

2004, *Physics Department Oxford UK, March 2004, funding: Royal Society.*

2010, *Physics Department Oxford UK, March 2010, funding: Royal Society.*

2011, *Physics Department Liverpool Univ., March 2010, funding: Royal Society .*

2011, *Physics Department Univ. of Granada. Exchange program Lecce-Granada INFN-MEC October 2011.*

2012, *Physics Department Liverpool Univ., October 2012, funding: Royal Society .*

2014, *Intitute for Theoretical Physics Univ. of Madrid, Cantoblanco, October 2014. Ref. Prof. K. Landsteiner.*

2000-2013, Physics Department, University of Ioannina. Invitation: Profs. K. Tamvakis and G. Leondaris. Regular annual exchange activity for research and student supervision (Dr. Antonio Mariano).

2015, *University of Southampton, Physics and Mathematics Departments.*

2008-2011, *visitor, Univ. of Zurich, Switzerland.*

2015-2019, *visitor, ETH-Zurich, Switzerland.*

2018, *Visitor, CNRS Tours, collaboration with Prof. M. Chernodub.*

Recent seminars, (short list)

Corfu European School and Workshop. Physics beyond the Standard Model September 2018)

Corfu European School and Workshop. Physics beyond the Standard Model (September 2019)

QVAC at Mainz Institute for Particle Physics (2019)

Univ. of Bologna, Theory group, (2016), (2017), (2018)

Theory, Univ. of Oxford (2015)

Physics Dept. U. of Sussex (2015)

Rutherford Lab (2015)

Univ. of Jena (2014)

Appointments in external committees

External committee member: Universita' della Calabria, Cosenza, invitation: Prof. A. Papa (2017).

External committee member, University of Tor Vergata (2009) (candidate A. Racioppi) e (2012) (candidate A. Mammarella) invitation: Prof. F. Fucito.

Supervision of postdocs

1) Marco Guzzi 2006-2008

2) Luigi Delle Rose, 2013-2014 (now postdoc at Univ. di Firenze)

3) Antonio Costantini 2016-2017 (now postdoc at Univ. di Bologna)

4) Supervisor of a 2-years INFN fellowships for foreigners on "Phenomenology of gauge theory" (2014-2016), INFN cluster QFT-HEP, Lecce. Researcher: Priyotosh Bandyopadhyay, now faculty at IIT Hyderabad, India.

Ph.D. thesis supervised

- 1) Marco Guzzi (2006) *QCD Studies at hadron Collider and in Deeply Virtual Neutrino Scattering*
hep-ph/0612355
- 2) Alessandro Cafarella (2006) *QCD at hadron colliders and in Ultra High Energy Cosmic Rays*
hep-ph/0605241
- 3) Simone Morelli (2009) *Stuckelberg axions and anomalous abelian extensions of the Standard Model*
arXiv:0907.3877
- 4) Roberta Armillis (2011) *Effective actions in theories with gauge and conformal anomalies*
<http://www.dmf.unisalento.it//coriano/tesi/>
- 5) Antonio Mariano (2012) *Dark Matter relic densities in Stuckelberg axion models*,
<http://inspirehep.net/record/1267730>
- 6) Luigi Delle Rose (2013) *Perturbation Theory in a Weak Gravitational Background: Dilatons, conformal Anomalies and Holographic Non Gaussianities*
arXiv:1308.0124
- 7) Antonio Quintavalle (2013) *Dilaton Interactions and the Anomalous Breaking of Scale Invariance of the Standard Model*
- 8) Mirko Serino (2014) *Conformal Anomaly Actions for Dilaton Interactions*
arXiv:1407.7113
- 9) Carlo Marzo (2016) *A Beyond the Standard Model Journey with the Renormalization Group*
<http://inspirehep.net/record/1607180/files/11557-dottorato.pdf>
- 10) Antonio Costantini (2016) *Studies on conformal and Superconformal Extensions of the Standard Model with an Application to Gravity*
arXiv:1704.02977

Current Ph.D. students

- 1) Matteo Maria Maglio (2nd year)
- 2) Dimosthenis Theofilopoulos (1st year)
- 3) Alessandro Tatullo (2nd year)

Supervision of master and doctoral students

- 1) Giovanni Chirilli. Laurea degree at Unisalento. Doctoral studies at Jefferson Lab, Virginia (advisor Jan Balitsky). Currently research fellow at Univ. of Regensburg.
- 2) Emanuela Dimastrogiovanni, laurea degree, graduate studies at U. Texas at Austin. Now at the University of New South Wales (Sidney), Australia.
- 3) Elisa Manno, Laurea degree at Unisalento. Graduate studies at the Univ. of Liverpool, UK.

- 4) Leonardo Carcagnì. Laurea degree at Unisalento (co-advisor Prof. Massimo Inguscio, LENS, Florence). Doctoral studies at Cambridge University.
- 5) Federica Cataldini. Laurea degree at Unisalento (co-advisor Prof. Giovanni Modugno, LENS, Firenze). Doctoral student at the University of Wien.
- 6) Luigi Delle Rose, laurea degree and former Ph.D. student, (moves to the Physics dept., Univ. of Southampton and to Rutherford Laboratory, Oxford, UK. Now postdoc at the Univ. of Florence), formerly "A. Della Riccia" fellow
- 7) Mirko Serino, laurea and doctoral degrees at Unisalento, (postdoc at the Nuclear Institute in Krakow, Poland; postdoc at Ben Gurion University, Israel)
- 8) Carlo Marzo, laurea and doctoral degrees at Unisalento, (currently postdoc at National Institute of Chemical Physics and Biophysics, Tallin Estonia), formerly "A. Della Riccia" fellow.
- 9) Roberta Armillis, laurea and doctoral degrees at Unisalento. Marie Curie fellow, predoc at the Univ. di Thessalonikki. Former postdoc at EPFL Politechnique, Lausanne, Switzerland.
- 10) Marco Guzzi, laurea degree and former doctoral student, postdoc at Southern Methodist Univ. at Dallas, then moving to the Univ. di Hamburg, and then Univ. di Manchester. Now assistant professor at Kennesaw STATE Univ., Marietta, Atlanta, Georgia, USA.
- 11) Alessandro Cafarella, laurea degree and former doctoral student, postdoc at the Univ. of Crete (1 year) and Univ. of Athens (3 years).
- 12) Antonio Mariano, laurea degree and former doctoral student. Marie Curie fellow at the Univ. di Thessaloniki, then postdoc at Annecy, France.
- 13) Antonio Costantini, laurea degree and former doctoral student. Now postdoc at the Univ. of Bologna.

Master Thesis (Laurea thesis)

(link to the electronic versions: <http://www.le.infn.it/coriano/students.html>)

Marco Guzzi, master, *Perturbative QCD and susy QCD*

Andrea Spirito, master, *Anomalies and abelian estensions of the Standard Model*

Giovanni Chirilli, master, *Non forward parton distributions*

Emanuela Dimastrogiovanni, master, *Cosmological models*

Leonardo Carcagnì, master, (co-advisor Prof. Massimo Inguscio, LENS, Florence) *A new BEC with tunable interaction*

Roberta Armillis, master, *Neutral Currents and extensions of the Standard Model*

Mariagiovanna Gianfreda, master, *Higgs-Axion mixing in extensions of the Standard Model*

Simone Morelli, Quadriennale, *Supersymmetric extensions of the Standard Model and the Stueckelberg mechanism*

Antonio Mariano, master, *Extensions of the NMSSM (USSM-A)*

Elisa Manno, master, *The next to minimal supersymmetric Standard Model*

Luigi Delle Rose, master, *Studies on conformal and chiral anomalies*

Luigi Manni, master, *Anomaly actions and gravity*

Mirko Serino, master, *Scale breaking and anomaly mediation in the Standard Model*

Federica Cataldini, master, (co-advisor Prof. Giovanni Modugno, LENS, Florence) *One dimensional ultracold superfluids in optical lattices*

Antonio Quintavalle, master, *Trilinear gauge interactions*

Carlo Marzo, master, *Ward identities and dilaton interactions*

Publication List

Holographic Cosmology

1) From Planck data to Planck era: Observational tests of Holographic Cosmology with Niayesh Afshordi, Luigi Delle Rose, Elizabeth Gould, Kostas Skenderis. arXiv:1607.04878 [astro-ph.CO]. Phys.Rev.Lett. 118 (2017) no.4, 041301.

2) Three and Four Point Functions of Stress Energy Tensors in D=3 for the Analysis of Cosmological Non-Gaussianities with Luigi Delle Rose, Mirko Serino. arXiv:1210.0136 [hep-th]. JHEP 1212 (2012) 090.

3) Quantum Field Theory of Generalised Conformal Structure with Luigi Delle Rose, Kostas Skenderis in preparation (2019)

Weyl semimetals

1) Anomalous Gravitational TTT Vertex, Temperature Inhomogeneity, and Pressure Anisotropy with Maxim Chernodub and Matteo Maria Maglio arXiv:1910.13727, Phys. Lett. B. 802, (2020) 135236.

2) The Gravitational $TTJJ$ Vertex in a Weyl Semimetal with Maxim Chernodub e Matteo Maria Maglio, in preparation

Conformal field theory

- 1) Exact Correlators from conformal Ward Identities in Momentum Space and Perturbative Realizations with Matteo Maria Maglio, Alessandro Tatullo, Dimosthenis Theofilopoulos. arXiv:1904.13174 [hep-ph]. PoS CORFU2018 (2019) 072.
- 2) On Some Hypergeometric Solutions of the conformal Ward Identities of Scalar 4-point Functions in Momentum Space with Matteo Maria Maglio. arXiv:1903.05047 [hep-th]. JHEP 1909 (2019) 107.
- 3) The general 3-graviton vertex (TTT) of conformal field theories in momentum space in $d = 4$ with Matteo Maria Maglio. arXiv:1808.10221 [hep-th]. Nucl.Phys. B937 (2018) 56-134.
- 4) Exact Correlators from conformal Ward Identities in Momentum Space and the Perturbative TJJ Vertex with Matteo Maria Maglio. arXiv:1802.07675 [hep-th]. Nucl.Phys. B938 (2019) 440-522.
- 5) TTT in CFT: Trace Identities and the conformal Anomaly Effective Action with Matteo Maria Maglio, Emil Mottola. arXiv:1703.08860 [hep-th]. Nucl.Phys. B942 (2019) 303-328.
- 6) Superconformal sum rules and the spectral density flow of the composite dilaton (ADD) multiplet in $\mathcal{N} = 1$ theories with Antonio Costantini, Luigi Delle Rose, Mirko Serino. arXiv:1402.6369 [hep-th]. JHEP 1406 (2014) 136.
- 7) The dilaton Wess-Zumino action in six dimensions from Weyl gauging: local anomalies and trace relations with Luigi Delle Rose, Carlo Marzo, Mirko Serino. arXiv:1311.1804 [hep-th]. Class.Quant.Grav. 31 (2014) 105009.
- 8) Conformal Trace Relations from the Dilaton Wess-Zumino Action with Luigi Delle Rose, Carlo Marzo, Mirko Serino. arXiv:1306.4248 [hep-th]. Phys.Lett. B726 (2013) no.4-5, 896-905.
- 9) Solving the conformal constraints for Scalar Operators in Momentum Space and the Evaluation of Feynman's Master Integrals with Luigi Delle Rose, Emil Mottola, Mirko Serino. arXiv:1304.6944 [hep-th]. JHEP 1307 (2013) 011.
- 10) Graviton Vertices and the Mapping of Anomalous Correlators to Momentum Space for a General Conformal Field Theory with Luigi Delle Rose, Emil Mottola, Mirko Serino. arXiv:1203.1339 [hep-th]. JHEP 1208 (2012) 147.
- 11) Anomaly Poles as Common Signatures of Chiral and Conformal Anomalies with Roberta Armillis, Luigi Delle Rose. arXiv:0909.4522 [hep-ph]. Phys.Lett. B682 (2009) 322-327.
- 12) Renormalization, formal Ward Identities and the Origin of a conformal Anomaly Pole with Matteo Maria Maglio. arXiv:1802.01501 [hep-th]. Phys.Lett. B781 (2018) 283-289.

13) conformal Anomalies and the Gravitational Effective Action: The TJJ Correlator for a Dirac Fermion with Roberta Armillis, Luigi Delle Rose.
arXiv:0910.3381 [hep-ph]. Phys.Rev. D81 (2010) 085001.

14) Trace Anomaly, Massless Scalars and the Gravitational Coupling of QCD with Roberta Armillis, Luigi Delle Rose.
arXiv:1005.4173 [hep-ph]. Phys.Rev. D82 (2010) 064023.

15) Comments on Anomaly Cancellations by Pole Subtractions and Ghost Instabilities with Gravity with Roberta Armillis, Luigi Delle Rose, A.R. Fazio.
arXiv:1103.1590 [hep-ph]. Class.Quant.Grav. 28 (2011) 145004.

16) Anomalous U(1) Models in Four and Five Dimensions and their Anomaly Poles with Roberta Armillis, Luigi Delle Rose, Marco Guzzi.
arXiv:0905.0865 [hep-ph]. JHEP 0912 (2009) 029.

Physics beyond the Standard Model

1) Possible Bilepton Resonances in Like-Sign Pairs with Paul H. Frampton.
arXiv:1812.02723 [hep-ph]. Mod.Phys.Lett. A34 (2019) no.10, 1950076.

2) Bilepton Signatures at the LHC with Gennaro Corcella, Antonio Costantini, Paul H. Frampton.
arXiv:1707.01381 [hep-ph].
Phys.Lett. B773 (2017) 544-552.

3) Exploring Scalar and Vector Bileptons at the LHC in a 331 Model with Gennaro Corcella, Antonio Costantini, Paul H. Frampton.
arXiv:1806.04536 [hep-ph]. Phys.Lett. B785 (2018) 73-83.

4) Extra Quarks and Bileptons in BSM Physics in a 331 Model with Antonio Costantini.
arXiv:1809.05051 [hep-ph]. EPJ Web conf. 192 (2018) 00034.

5) Search for Z prime, vacuum (in)stability and hints of high-energy structures with Elena Accomando, Luigi Delle Rose, Juri Fiaschi, Carlo Marzo, Stefano Moretti.
arXiv:1609.05652 [hep-ph]. EPJ Web conf. 129 (2016) 00007.

6) Bounds on the conformal Scale of a Minimally Coupled Dilaton and Multi-Leptonic Signatures at the LHC with Priyotosh Bandyopadhyay, Antonio Costantini, Luigi Delle Rose.
arXiv:1607.01933 [hep-ph]. JHEP 1609 (2016) 084.

7) Z prime, Higgses and heavy neutrinos in U(1) models: from the LHC to the GUT scale with Elena Accomando, Luigi Delle Rose, Juri Fiaschi, Carlo Marzo, Stefano Moretti.
arXiv:1605.02910 [hep-ph]. JHEP 1607 (2016) 086.

8) An Anomalous Extra Z Prime from Intersecting Branes with Drell-Yan and Direct Photons at the LHC

with Roberta Armillis, Marco Guzzi, Simone Morelli.
arXiv:0809.3772 [hep-ph]. Nucl.Phys. B814 (2009) 156-179.

9) Axions from Intersecting Branes and Decoupled Chiral Fermions at the Large Hadron Collider
with Marco Guzzi.
arXiv:0905.4462 [hep-ph]. Nucl.Phys. B826 (2010) 87-147.

10) Higgs bosons: discovered and hidden, in extended Supersymmetric Standard Models at the LHC
with Priyotosh Bandyopadhyay, Antonio Costantini.
arXiv:1604.00228 [hep-ph]. PoS CORFU2015 (2016) 069.

11) General analysis of the charged Higgs sector of the $Y = 0$ triplet-singlet extension of the MSSM at the LHC
with Priyotosh Bandyopadhyay, Antonio Costantini.
arXiv:1512.08651 [hep-ph]. Phys.Rev. D94 (2016) no.5, 055030.

12) Probing the hidden Higgs bosons of the $Y = 0$ triplet- and singlet-extended Supersymmetric Standard Model at the LHC
with Priyotosh Bandyopadhyay, Antonio Costantini.
arXiv:1510.06309 [hep-ph]. JHEP 1512 (2015) 127.

13) Constraints on abelian extensions of the Standard Model from two-loop vacuum stability and $U(1)_{B-L}$
with Luigi Delle Rose, Carlo Marzo.
arXiv:1510.02379 [hep-ph].
JHEP 1602 (2016) 135.

14) Perspectives on a supersymmetric extension of the standard model with a $Y = 0$ Higgs triplet and a singlet at the LHC
with Priyotosh Bandyopadhyay, Antonio Costantini.
arXiv:1506.03634 [hep-ph]. JHEP 1509 (2015) 045.

15) Stability constraints of the scalar potential in extensions of the Standard Model with TeV scale right handed neutrinos
with Luigi Delle Rose, Carlo Marzo.
arXiv:1411.7168 [hep-ph]. Nucl.Part.Phys.Proc. 265-266 (2015) 311-313.

16) Vacuum Stability in $U(1)$ -Prime Extensions of the Standard Model with TeV Scale Right Handed Neutrinos
Luigi Delle Rose, Carlo Marzo.
arXiv:1407.8539 [hep-ph]. Phys.Lett. B738 (2014) 13-19.

17) Dilaton interactions and the anomalous breaking of scale invariance of the Standard Model
with Luigi Delle Rose, Antonio Quintavalle, Mirko Serino.
arXiv:1206.0590 [hep-ph]. JHEP 1306 (2013) 077.

18) X-Events and Their Interpretation
with Paul H. Frampton.
arXiv:1606.08713 [hep-ph]. Mod.Phys.Lett. A31 (2016) no.32, 1650180.

- 19) Higher Order Dilaton Interactions in the Nearly conformal Limit of the Standard Model with Luigi Delle Rose, Carlo Marzo, Mirko Serino. arXiv:1207.2930 [hep-ph]. Phys.Lett. B717 (2012) 182-187.
- 20) The conformal Anomaly and the Neutral Currents Sector of the Standard Model with Luigi Delle Rose, Antonio Quintavalle, Mirko Serino. arXiv:1101.1624 [hep-ph]. Phys.Lett. B700 (2011) 29-38.
- 21) Searching for Extra Z-prime from Strings and Other Models at the LHC with Leptoproduction with Alon E. Faraggi, Marco Guzzi. arXiv:0802.1792 [hep-ph]. Phys.Rev. D78 (2008) 015012.
- 22) Cosmic ray signals from mini black holes in models with extra dimensions: An Analytical / Monte Carlo study with Alessandro Cafarella, T.N. Tomaras. hep-ph/0410358. JHEP 0506 (2005) 065.

Axions

- 1) An Axion-Like Particle from an $SO(10)$ Seesaw with $U(1)_X$ with Paul H. Frampton, Alessandro Tatullo, Dimosthenis Theofilopoulos, arXiv:1910.13727, accepted for publication on Phys. Lett. B.
- 2) Dark Matter with Stückelberg Axions with Paul H. Frampton, Nikos Irges, Alessandro Tatullo. arXiv:1811.05792 [hep-ph]. Front.in Phys. 7 (2019) 36.
- 3) Dark Matter as Ultralight Axion-Like particle in $E_6 \times U(1)_X$ GUT with QCD Axion with Paul H. Frampton. arXiv:1712.03865 [hep-ph]. Phys.Lett. B782 (2018) 380-386.
- 4) Cosmological Properties of a Gauged Axion with Marco Guzzi, George Lazarides, Antonio Mariano. arXiv:1005.5441 [hep-ph]. Phys.Rev. D82 (2010) 065013.
- 5) Relic Densities of Dark Matter in the $U(1)$ -Extended NMSSM and the Gauged Axion Supermultiplet with Marco Guzzi, Antonio Mariano. arXiv:1010.2010 [hep-ph]. Phys.Rev. D85 (2012) 095008.
- 6) A Light Supersymmetric Axion in an Anomalous Abelian Extension of the Standard Model with Marco Guzzi, Antonio Mariano, Simone Morelli. arXiv:0811.3675 [hep-ph]. Phys.Rev. D80 (2009) 035006.
- 7) Stuckelberg Axions and the Effective Action of Anomalous Abelian Models 2. A $SU(3)_C \times SU(2)_W \times U(1)_Y \times U(1)_B$ model and its signature at the LHC with Nikos Irges, Simone Morelli. hep-ph/0703127 [HEP-PH]. Nucl.Phys. B789 (2008) 133-174.
- 8) Stuckelberg axions and the effective action of anomalous Abelian models. 1. A Unitarity analysis of the Higgs-axion mixing

with Nikos Irges, Simone Morelli.
hep-ph/0701010. JHEP 0707 (2007) 008.

9) On the effective theory of low scale orientifold string vacua
with Nikos Irges, Elias Kiritsis.
hep-ph/0510332. Nucl.Phys. B746 (2006) 77-135.

10) Windows over a New Low Energy Axion
with Nikos Irges.
hep-ph/0612140. Phys.Lett. B651 (2007) 298-305.

11) Axion and Neutralinos from Supersymmetric Extensions of the Standard Model with anomalous $U(1)$'s
with Marco Guzzi, Nikos Irges, Antonio Mariano.
arXiv:0811.0117 [hep-ph]. Phys.Lett. B671 (2009) 87-90.

12) Axions and Anomaly-Mediated Interactions: The Green-Schwarz and Wess-Zumino Vertices at Higher Orders and $g-2$ of the muon
with Roberta Armillis, Marco Guzzi, Simone Morelli.
arXiv:0808.1882 [hep-ph]. JHEP 0810 (2008) 034.

Dark Matter

1) New dark matter candidates motivated from superstring derived unification
with Sanghyeon Chang, Alon E. Faraggi.
hep-ph/9603272. Phys.Lett. B397 (1997) 76-80.

2) Stable superstring relics
with Sanghyeon Chang, Alon E. Faraggi.
hep-ph/9605325. Nucl.Phys. B477 (1996) 65-104.

3) Stable superstring relics and ultrahigh-energy cosmic rays
with Alon E. Faraggi, Michael Plumacher.
hep-ph/0107053. Nucl.Phys. B614 (2001) 233-253.

4) Remarks on Dark Matter constituents with Many Solar Masses
with Paul H. Frampton.
arXiv:1806.11176 [astro-ph.GA]. Mod.Phys.Lett. A33 (2018) no.28, 1850165.

Gauge-gravity interactions. Quantum effects in lensing

1) Gravity and the Neutral Currents: Effective Interactions from the Trace Anomaly
with Luigi Delle Rose, Mirko Serino.
arXiv:1102.4558 [hep-ph]. Phys.Rev. D83 (2011) 125028.

2) The conformal Anomaly and the Neutral Currents Sector of the Standard Model
with Luigi Delle Rose, Antonio Quintavalle, Mirko Serino.
arXiv:1101.1624 [hep-ph]. Phys.Lett. B700 (2011) 29-38.

3) Mass Corrections to Flavor-Changing Fermion-Graviton Vertices in the Standard Model

with Luigi Delle Rose, Emidio Gabrielli, Luca Trentadue.
arXiv:1303.1305 [hep-th]. Phys.Rev. D88 (2013) 085008.

4) One loop Standard Model corrections to flavor diagonal fermion-graviton vertices
with Luigi Delle Rose, Emidio Gabrielli, Luca Trentadue.
arXiv:1212.5029 [hep-ph]. Phys.Rev. D87 (2013) no.5, 054020.

5) The Trace Anomaly and the Gravitational Coupling of an Anomalous U(1)
with Roberta Armillis, Luigi Delle Rose, Luigi Manni.
arXiv:1003.3930 [hep-ph]. Int.J.Mod.Phys. A26 (2011) 2405-2435.

6) Neutrino and Photon Lensing by Black Holes: Radiative Lens Equations and Post-Newtonian contributions
with Antonio Costantini, Marta Dell'Atti, Luigi Delle Rose.
arXiv:1504.01322 [hep-ph]. JHEP 1507 (2015) 160.

7) Electroweak Corrections to Photon Scattering, Polarization and Lensing in a Gravitational Background and the Near Horizon Limit
with Luigi Delle Rose, Matteo Maria Maglio, Mirko Serino.
arXiv:1411.2804 [hep-ph]. JHEP 1501 (2015) 091.

8) Fermion Scattering in a Gravitational Background: Electroweak Corrections and Flavour Transitions
with Luigi Delle Rose, Emidio Gabrielli, Luca Trentadue.
arXiv:1312.7657 [hep-ph]. JHEP 1403 (2014) 136.

String Phenomenology

1) Unitarity Bounds for Gauged Axionic Interactions and the Green-Schwarz Mechanism
with Marco Guzzi, Simone Morelli.
arXiv:0801.2949 [hep-ph]. Eur.Phys.J. C55 (2008) 629-652.

2) Trilinear Anomalous Gauge Interactions from Intersecting Branes and the Neutral Currents Sector
with Roberta Armillis, Marco Guzzi.
arXiv:0711.3424 [hep-ph]. JHEP 0805 (2008) 015.

3) A Novel string derived Z-prime with stable proton, light-neutrinos and R-parity violation
with Alon E. Faraggi, Marco Guzzi.
arXiv:0704.1256 [hep-ph]. Eur.Phys.J. C53 (2008) 421-428.

4) Searching for Extra Z-prime from Strings and Other Models at the LHC with Leptoproduction
with Alon E. Faraggi, Marco Guzzi.
arXiv:0802.1792 [hep-ph]. Phys.Rev. D78 (2008) 015012.

5) String inspired neutrino mass textures in light of KamLAND and WMAP
with Alon E. Faraggi.
hep-ph/0306186. Phys.Lett. B581 (2004) 99-110.

6) Stable superstring relics and ultrahigh-energy cosmic rays
with Alon E. Faraggi, Michael Plumacher.

hep-ph/0107053. Nucl.Phys. B614 (2001) 233-253.

7) Large scale air shower simulations and the search for new physics at AUGER
with Alessandro Cafarella, Alon E. Faraggi.
hep-ph/0308169. Int.J.Mod.Phys. A19 (2004) 3729-3760.

8) $SU(3)^p$ Quiver Theories with $N = 0$ for $p = 8$ and 9
with Paul H. Frampton.
arXiv:1612.01790 [hep-ph]. Phys.Lett. B769 (2017) 322-327.

QCD

1) NNLO Logarithmic Expansions and Precise Determinations of the Neutral Currents near the Z Resonance
at the LHC: The Drell-Yan case
with Alessandro Cafarella, Marco Guzzi.
hep-ph/0702244 [HEP-PH]. JHEP 0708 (2007) 030.

2) Nnlo logarithmic expansions and exact solutions of the DGLAP equations from x-space: New algorithms
for precision studies at the Lhc
with Alessandro Cafarella, Marco Guzzi.
hep-ph/0512358. Nucl.Phys. B748 (2006) 253-308.

3) Precision Studies of the NNLO DGLAP Evolution at the LHC with CANDIA
with Alessandro Cafarella, Marco Guzzi.
arXiv:0803.0462 [hep-ph]. Comput.Phys.Commun. 179 (2008) 665-684.

4) Direct solution of renormalization group equations of QCD in x space: NLO implementations at leading
twist
with Alessandro Cafarella.
hep-ph/0311313. Comput.Phys.Commun. 160 (2004) 213-242.

5) An x-space analysis of evolution equations: Soffer's inequality and the nonforward evolution
with Alessandro Cafarella, Marco Guzzi.
hep-ph/0303050. JHEP 0311 (2003) 059.

6) The kinetic interpretation of the DGLAP equation, its Kramers-Moyal expansion and positivity of helicity
distributions
with Alessandro Cafarella
hep-ph/0301103. Int.J.Mod.Phys. A20 (2005) 4863-4898.

7) Double transverse-spin asymmetries in Drell-Yan processes with antiprotons
with Vincenzo Barone, Alessandro Cafarella, Marco Guzzi, Philip Ratcliffe.
hep-ph/0512121. Phys.Lett. B639 (2006) 483-487.

8) On the scale variation of the total cross section for Higgs production at the LHC and at the Tevatron
with Alessandro Cafarella, Marco Guzzi, J. Smith.
hep-ph/0510179. Eur.Phys.J. C47 (2006) 703-721.

9) SUSY QCD and high-energy cosmic rays. 1. Fragmentation functions of SUSY QCD

with Alon E. Faraggi.

hep-ph/0106326. Phys.Rev. D65 (2002) 075001.

10) Supersymmetric scaling violations. 1. an algorithm to solve the supersymmetric DGLAP Equation
Claudio Corianò.

hep-ph/0009227. Nucl.Phys. B627 (2002) 66-94.

11) QCD evolution equations: Numerical algorithms from the Laguerre expansion
with Cetin Savkli.

hep-ph/9803336. Comput.Phys.Commun. 118 (1999) 236-258.

12) Drell-Yan nonsinglet spin cross-sections and spin asymmetry to $O(\alpha_s^2)$ By Sanghyeon Chang,
Claudio Coriano, R.D. Field. hep-ph/9803280. 10.1016/S0550-3213(98)00324-1. Nucl.Phys. B528 (1998)
285-302.

13) Spin dependent Drell-Yan in QCD to $O(\alpha_s^2)$. 1. The Nonsinglet sector
with Sanghyeon Chang, R.D. Field, L.E. Gordon.

hep-ph/9705249. Nucl.Phys. B512 (1998) 393-428.

14) Spin dependent Drell-Yan beyond leading order: Nonsinglet virtual corrections to $O(\alpha_s^2)$
with Sanghyeon Chang, R.D. Field.

hep-ph/9702252. Phys.Lett. B403 (1997) 344-352.

15) Rapidity correlations and Delta G from prompt photon plus jet production in polarized p p collisions
with Sanghyeon Chang, L.E. Gordon.

hep-ph/9709496. Phys.Rev. D58 (1998) 074002.

16) Polarized and unpolarized double prompt photon production in next-to-leading order QCD
with L.E. Gordon.

hep-ph/9601350. Nucl.Phys. B469 (1996) 202-234.

17) Polarized double photon production in QCD to order α_s
with L.E. Gordon.

hep-ph/9602297. Phys.Rev. D54 (1996) 781-788.

18) Spin dependent Drell-Yan beyond leading order: Nonsinglet virtual corrections to $O(\alpha_s^2)$
with Sanghyeon Chang, R.D. Field.

hep-ph/9702252. Phys.Lett. B403 (1997) 344-352.

19) NLO conformal symmetry in the Regge limit of QCD
with Alan R. White, Mark Wusthoff.

hep-ph/9609405. Nucl.Phys. B493 (1997) 397-412.

20) Gauge theory high-energy behavior from j plane unitarity with Alan R. White.

hep-ph/9510329. Nucl.Phys. B468 (1996) 175-218.

21) Scale invariant $O(g^4)$ Lipatov kernels at nonzero momentum transfer
with Rajesh R. Parwani, Alan R. White.

hep-ph/9510330. Nucl.Phys. B468 (1996) 219-240.

- 22) Properties of the scale invariant $O(g^4)$ Lipatov kernel
with Alan R. White.
hep-ph/9503294. Nucl.Phys. B451 (1995) 231-264.
- 23) The Spectrum of the $O(g^4)$ scale invariant Lipatov kernel
with Alan R. White.
hep-ph/9411379. Phys.Rev.Lett. 74 (1995) 4980-4983.
- 23) t channel unitarity withstruction of small x kernels
with Alan.R. White.
hep-ph/9511229. Acta Phys.Polon. B26 (1995) 2005-2038.
- 24) Deeply virtual neutrino scattering (DVNS)
with Paolo Amore, Marco Guzzi.
hep-ph/0404121. JHEP 0502 (2005) 038.
- 25) Leading twist amplitudes for exclusive neutrino interactions in the deeply virtual limit
with Marco Guzzi.
hep-ph/0411253. Phys.Rev. D71 (2005) 053002.
- 26) QCD sum rules and Compton scattering
with Anatoly Radyushkin, George Sterman.
hep-ph/9301274. Nucl.Phys. B405 (1993) 481-506.
- 27) QCD sum rule and perturbative QCD approaches to pion Compton scattering
with Hsiang-nan Li.
hep-ph/9302231. Phys.Lett. B309 (1993) 409-415.
- 28) Power corrections to QCD sum rules for Compton scattering
Claudio Corianò.
hep-ph/9304210. Nucl.Phys. B410 (1993) 90-116.
- 29) Stability analysis of sum rules for pion Compton scattering
with Hsiang-nan Li.
hep-ph/9310231. Phys.Lett. B324 (1994) 98-104.
- 30) The Transition to perturbative QCD in Compton scattering
with Hsiang-Nan Li.
hep-ph/9405295. Nucl.Phys. B434 (1995) 535-564.
- 31) Dispersive methods and QCD sum rules for gamma gamma collisions
Claudio Corianò.
hep-ph/9405403. Nucl.Phys. B434 (1995) 565-605.
- 32) Exclusive processes at intermediate-energy, quark - hadron duality and the transition to perturbative QCD
with Hsiang-nan Li, Cetin Savkli.
hep-ph/9805406. JHEP 9807 (1998) 008.

Thermal field theory, low energy physics

1) Dispersive methods and QCD sum rules for gamma gamma collisions

Claudio Corianò.

hep-ph/9405403. Nucl.Phys. B434 (1995) 565-605.

2) Higher order corrections to the equation of state of QED at high temperature

with Rajesh R. Parwani

hep-ph/9409269. Nucl.Phys. B434 (1995) 56-84.

3) The Three loop equation of state of QED at high temperature

with Rajesh R. Parwani.

hep-ph/9405343. Phys.Rev.Lett. 73 (1994) 2398-2401.

(primo calcolo dell'equazione di stato di QED termica al quinto ordine perturbativo. Reviewed in: Joseph I. Kapusta, Charles Gale *Finite Temperature Field theory*, Cambridge Univ. Press, 2006, Capitolo 5)

4) The Electric charge of a Dirac monopole at nonzero temperature

By Claudio Coriano, Rajesh R. Parwani.

hep-th/9506211. Phys.Lett. B363 (1995) 71-75.

5) Electrodynamics in the presence of an axion

C. Corianò.

hep-th/9204021. Mod.Phys.Lett. A7 (1992) 1253-1262.

6) Scattering in soliton models and boson exchange descriptions

with R. Parwani, H. Yamagishi, I. Zahed.

hep-th/9204080. Phys.Rev. D45 (1992) 2542-2547.

7) On the Use of the Time Dependent Rayleigh-Ritz Equations for Heavy Ion Collisions

with Rajesh Parwani, Hidenaga Yamagishi.

Nucl.Phys. A522 (1991) 591-609.

8) Singularity Of Green's Function And Effective Action In Massive Yang-mills Theories
with Hidenaga Yamagishi.

Phys.Rev. D41 (1990) 3226.

Proceedings

1) Conformal Ward Identities and the Coupling of QED and QCD to Gravity

with Matteo Maria Maglio.

arXiv:1809.05940 [hep-ph]. EPJ Web withf. 192 (2018) 00047.

2) The Trace Anomaly and the Couplings of QED and QCD to Gravity

with Roberta Armillis, Luigi Delle Rose.

arXiv:1007.2141 [hep-ph]. AIP withf.Proc. 1317 (2010) no.1, 185-190.

3) Gauged Axions and their QCD Interactions

with Marco Guzzi, Antonio Mariano.

arXiv:1009.5450 [hep-ph]. AIP withf.Proc. 1317 (2010) no.1, 177-184.

4) Relic Densities of Gauged Axions and Supersymmetry

with Marco Guzzi, Antonio Mariano.

arXiv:1012.2420 [hep-ph]. Nucl.Phys.Proc.Suppl. 217 (2011) 75-77.

5) Z-prime searches at the LHC: Some QCD precision studies in Drell-Yan

with Alon E. Faraggi, Marco Guzzi.

arXiv:0807.1068 [hep-ph]. Nuovo Cim. B123 (2008) 781-783.

6) The Search for extra neutral currents at the LHC: QCD and anomalous gauge interactions

with Roberta Armillis, Marco Guzzi.

arXiv:0709.2111 [hep-ph]. AIP withf.Proc. 964 (2007) no.1, 212-217.

7) The Effective Actions of Pseudoscalar and Scalar Particles in Theories with Gauge and Conformal Anomalies

with Roberta Armillis, Luigi Delle Rose, Marco Guzzi, Antonio Mariano.

arXiv:1001.5240 [hep-ph]. Fortsch.Phys. 58 (2010) 708-711.

8) Searching for an Axion-like Particle at the Large Hadron Collider

with Marco Guzzi, Antonio Mariano.

arXiv:0905.4416 [hep-ph]. Nuovo Cim. 32 (2009) 265-26

9) NNLO logarithmic expansions and high precision determinations of the QCD background at the LHC: The Case of the Z resonance

with Alessandro Cafarella, Claudio Coriano, Marco Guzzi.

arXiv:0709.2115 [hep-ph]. AIP withf.Proc. 964 (2007) no.1, 206-211.

10) NNLO evolution of the PDF's and their errors: Benchmarks and predictions for Drell-Yan

with Alessandro Cafarella, Marco Guzzi.

Frascati Phys.Ser. 49 (2009) 388-398.

11) Proceedings, Workshop on Monte Carlo's, Physics and Simulations at the LHC. Part I : Frascati, Italy, 2006

By F. Ambroglini et al.. arXiv:0902.0293 [hep-ph]. Frascati Phys.Ser. 49 (2009) pp.1-305.

12) Proceedings, Workshop on Monte Carlo's, Physics and Simulations at the LHC. Part II : Frascati. Italy, 2006

By F. Ambroglini et al.. arXiv:0902.0180 [hep-ph]. Frascati Phys.Ser. 49 (2009) pp.306-529.

13) Antiproton-proton scattering experiments with polarization

By PAX Collaboration (Vincenzo Barone et al.). hep-ex/0505054.

14) Using and withstraining nonforward parton distributions: Deeply virtual neutrino scattering in cosmic rays and light dark matter searches

with Giovanni Chirilli, Marco Guzzi.

hep-ph/0309069. ewithf C030614 (2003) 023.

15) SUSY scaling violations and UHECR

with Alon E. Faraggi.

hep-ph/0107304. AIP withf.Proc. 602 (2001) no.1, 145-149.

16) Spin dependent Drell-Yan and double prompt photon production to NLO QCD
with Sanghyeon Chang, R.D. Field, L.E. Gordon.
hep-ph/9705247. AIP withf.Proc. 407 (1997) no.1, 844.

17) QCD supersymmetry and low energy gravity
with Alessandro Cafarella, T.N. Tomaras.
hep-ph/0412037. AIP withf.Proc. 756 (2005) no.1, 457-459.

18) Scale invariant Lipatov kernels from t channel unitarity
with Alan R. White.
hep-ph/9411362.
In *Salerno/Vietri sul Mare 1994, Proceedings, Multiparticle dynamics* 309-318, and Argonne Nat. Lab. - ANL-HEP-CP-94-079 (94/11,rec.Dec.) 14 p.

19) The Free energy of hot QED at three and a half loops
with Rajesh R. Parwani
hep-ph/9409339. In *Paris 1994, Proceedings, Quantum infrared physics* 443-445, and Saclay CEN - S.PH.T-94-098 (94,rec.Sep.) 4 p. Argonne Nat. Lab. - ANL-HEP-CP-94-052 (94,rec.Sep.) 4 p.

20) Deeply Virtual Neutrino Scattering at Leading Twist
with Marco Guzzi.
hep-ph/0612025. Nucl.Phys.Proc.Suppl. 168 (2007) 179-182.

Editorial activity

1) Proceedings, 9th International Workshop on QCD - Theory and Experiment (QCD@Work 2018) :
Matera, Italia, June 25-28, 2018
G.E. Bruno, G. Chiodini, D.M. Creanza, P. Colangelo, C. Corianò, F. De Fazio, E. Nappi.
EPJ Web withf. 192 (2018).

2) Proceedings, 8th International Workshop on Quantum Chromodynamics - Theory and Experiment
(QCD@Work 2016) : Martina Franca, Italy, June 27-30, 2016
By G.E. Bruno, G. Chiodini, P. Colangelo, C. Corianò, D.M. Creanza, F. De Fazio, E. Nappi, S. Spagnolo.
EPJ Web withf. 129 (2016).

3) Proceedings, 7th International Workshop on Quantum Chromodynamics Theory and Experiment
(QCD@Work 2014) : Giovinazzo, Bari, Italy, June 16-19, 2014
G.E. Bruno, G. Chiodini, P. Colangelo, C. Corianò, D. Creanza, F. De Fazio, E. Nappi.
EPJ Web withf. 80 (2014).

4) Proceedings, 6th International Workshop on Quantum Chromodynamics - Theory and Experiment
(QCD@WORK2012) : Lecce, Italy, June 18-21, 2012
Leonardo Angelini, Giuseppe Eugenio Bruno, Gabriele Chiodini, Pietro Colangelo, Claudio Corianò, Donato
Creanza, Fulvia De Fazio, Eugenio Nappi.
AIP withf.Proc. 1492 (2012) pp.1-339.

Other

1) Parton distributions, logarithmic expansions and kinetic evolution
with Alessandro Cafarella, Marco Guzzi.

hep-ph/0602173. Lecture Notes of Seminario Interdisciplinare di Matematica 5 (2006) 73-102. Università della Basilicata (Ed. E. Barletta)

Mathematical Methods for Finance (within the University Scholars Program, National University of Singapore))

1) Hamiltonian and potentials in derivative pricing models: Exact results and lattice simulations with Belal E. Baaquie, Marakani Srikant. withd-mat/0211489. Physica A334 (2004) 531-557.

2) Solving renormalization group equations by recursion relations with Alessandro Cafarella, M. Guzzi. hep-ph/0209149. 10.1142/97898127044670022. 2nd International Workshop on Nonlinear Physics: Theory and Experiment, 27 Jun - 6 Jul 2002. Gallipoli, Lecce, Italy

3) Quantum mechanics, path integrals and option pricing: Reducing the complexity of finance with Belal E. Baaquie, Marakani Srikant. withd-mat/0208191 [withd-mat.soft]. 10.1142/97898127044670046. 2nd International Workshop on Nonlinear Physics: Theory and Experiment, 27 Jun - 6 Jul 2002. Gallipoli, Lecce, Italy