
Curriculum vitæ

Marco Serone

Name : Marco Serone
Nationality : Italian
Date and Place of Birth : September 28 1970, Avezzano (AQ)
Present Position : Professor at the
International School for Advanced
Studies (SISSA), Trieste
E-mail address : serone@sissa.it

Education and Qualifications

- 07/1994: Master's Degree in Theoretical Physics at the University of Rome "La Sapienza" with full marks and honours, advisor Prof. Guido Martinelli.
- 10/1997: Ph.D. Degree in High Energy Physics at SISSA, advisors Profs. E. Gava and K.S. Narain.
- 09/1997 – 08/1999: post-doc position of the "Nederlandse Organisatie voor Wetenschappelijk Onderzoek" (NWO), Dutch Organization for Scientific Research, at the Dept. of Mathematics of the University of Amsterdam (UvA).
- 09/1999 – 08/2000: post-doc position of the "Fundamenteel Onderzoek der Materie" (FOM), Fundamental Research on Matter, at the Dept. of Mathematics and Physics of the University of Amsterdam (UvA) and at the Spinoza Institute, University of Utrecht.
- 09/2000–01/2004: advanced fellow ("assegnista di ricerca") at the International School for Advanced Studies (SISSA).

- 01/2004 – 07/2006: permanent position as researcher in Theoretical Physics at SISSA.
- since 07/2006: Associate Professor in Theoretical Physics at SISSA.
- since 12/2016: Professor in Theoretical Physics at SISSA.

List of Scientific Publications

1. As. Abada, Ph. Boucad, N. Cabibbo, M. Crisafulli, J.P. Leroy, V. Lubicz, G. Martinelli, F. Rapuano, M. Serone, N. Stella and The APE Collaboration, *A lattice study of the exclusive $B \rightarrow K^* \gamma$ decay amplitude, using the Clover action at $\beta = 6.0$* , Phys. Lett. **B365** (1996) 275-284, hep-lat/9503020.
2. J.F. Morales and M. Serone, *Higher Derivative F-terms in $N=2$ Strings*, Nucl. Phys. **B481** (1996) 389-402, hep-th/9607193.
3. M. Serone, *Type I-Heterotic Duality and Higher Derivative F-terms*, Phys.Lett. **B395** (1997) 42-47, Erratum ibid. **B401** (1997) 363, hep-th/9611017.
4. J.F. Morales and M. Serone, *BPS states and supersymmetric index in $N=2$ type I string vacua*, Nucl. Phys. **B501** (1997) 427-444, hep-th/9703049.
5. J.F. Morales, C.A. Scrucca and M. Serone, *A note on supersymmetric D-brane dynamics*, Phys. Lett. **B417** (1998) 233-239. hep-th/9709063.
6. M. Serone, *A comment on the R^4 -coupling in (M)atrix Theory*, Phys. Lett. **B422** (1998) 88-92, hep-th/9711031.
7. J.F. Morales, C.A. Scrucca and M. Serone, *Scale-independent spin effects in D-brane dynamics*, Nucl. Phys. **B534** (1998) 223-249, hep-th/9801183.
8. J.C. Plefka, M. Serone and A. Waldron, *The Matrix Theory S-Matrix*, Phys. Rev. Lett. **81** (1998) 2866-2869, hep-th/9806081.
9. J.C. Plefka, M. Serone and A. Waldron, *$D=11$ SUGRA as the Low Energy Effective Action of Matrix Theory: Three Form Scattering*, J. High Energy Phys. **11** (1998) 010, hep-th/9809070.

10. J.F. Morales, C.A. Scrucca and M. Serone, *Anomalous couplings for D-branes and O-planes*, Nucl. Phys. **B552** (1999) 291-315, hep-th/9812071.
11. C.A. Scrucca and M. Serone, *Anomalies and inflow on D-branes and O-planes*, Nucl. Phys. **B556** (1999) 197-221, hep-th/9903145.
12. R. Helling, J.C. Plefka, M. Serone and A. Waldron, *Three Graviton Scattering in M-Theory*, Nucl. Phys. **B559** (1999) 184-204, hep-th/9905183.
13. C.A. Scrucca and M. Serone, *Anomaly cancellation in K3 orientifolds*, Nucl. Phys. **B564** (2000) 555-590, hep-th/9907112.
14. C.A. Scrucca and M. Serone, *Gauge and gravitational anomalies in $D = 4$ $N = 1$ orientifolds* J. High Energy Phys. **12** (1999) 024, hep-th/9912108.
15. C.A. Scrucca and M. Serone, *Sigma-model symmetry in orientifold models*, J. High Energy Phys. **0007** (2000) 025, hep-th/0006201.
16. C.A. Scrucca and M. Serone, *A note on the torsion dependence of D-brane RR couplings*, Phys. Lett. **B504** (2001) 47-54, hep-th/0010022.
17. C.A. Scrucca and M. Serone, *Target-space anomalies and elliptic indices in heterotic orbifolds*, J. High Energy Phys. **0102** (2001) 019, hep-th/0012124.
18. A. Masiero, C.A. Scrucca, M. Serone and L. Silvestrini, *“Non-local symmetry breaking in Kaluza-Klein theories”*, Phys. Rev. Lett. **87** (2001) 251601, hep-ph/0107201.
19. C.A. Scrucca and M. Serone, *“On string models with Scherk-Schwarz supersymmetry breaking”*, J. High Energy Phys. **10** (2001) 017, hep-th/0107159.
20. C.A. Scrucca, M. Serone, L. Silvestrini and F. Zwirner, *“Anomalies in orbifold field theories”*, Phys. Lett. **B525** (2002) 169-174, hep-th/0110073.
21. C.A. Scrucca, M. Serone and M. Trapletti, *Open string models with Scherk-Schwarz SUSY breaking and localized anomalies*, Nucl. Phys. **B635** (2002) 33, hep-th/0203190.

22. M. Fabbrichesi, R. Percacci, M. Piai and M. Serone, *Cancellation of Global Anomalies in Spontaneously Broken Gauge Theories*, Phys. Rev. D **66** (2002) 105028, hep-th/0207013.
23. M. Borunda, M. Serone and M. Trapletti, *On the quantum stability of Type IIB orbifolds and orientifolds with Scherk-Schwarz SUSY breaking*, Nucl. Phys. B **653** (2003) 85-108, hep-th/0210075.
24. B.A. Bassett, M. Borunda, M. Serone and S. Tsujikawa, *Aspects of String-Gas Cosmology at Finite Temperature*, Phys. Rev. D **67** (2003) 123506, hep-th/0301180.
25. C.A. Scrucca, M. Serone and L. Silvestrini, *Electroweak symmetry breaking and fermion masses from extra dimensions*, Nucl. Phys. B **669** (2003) 128-158, hep-ph/0304220.
26. M. Serone and M. Trapletti, *String vacua with flux from freely-acting orbifolds*, J. High Energy Phys. **0401** (2004) 012, hep-th/0310245.
27. C.A. Scrucca, M. Serone, L. Silvestrini and A. Wulzer, *Gauge-Higgs unification in orbifold models*, J. High Energy Phys. **0402** (2004) 049, hep-th/0312267.
28. M. Serone and A. Wulzer, *Orbifold resolutions and fermion localization*, Class. Quant. Grav. **22** (2005) 4621, hep-th/0409229.
29. G. Panico and M. Serone, *The Electroweak phase transition on orbifolds with gauge-Higgs unification*, JHEP **0505** (2005) 024, hep-ph/0502255.
30. G. Panico, M. Serone and A. Wulzer, *A Model of electroweak symmetry breaking from a fifth dimension*, Nucl. Phys. B **739** (2006) 186, hep-ph/0510373.
31. M. Serone and M. Trapletti, *A Note on T-duality in heterotic string theory*, Phys. Lett. B **637** (2006) 331, hep-th/0512272.
32. G. Panico, M. Serone and A. Wulzer, *Electroweak Symmetry Breaking and Precision Tests with a Fifth Dimension*, Nucl. Phys. B **762** (2007) 189, hep-ph/0605292.
33. M. Regis, M. Serone and P. Ullio, *A Dark Matter Candidate from an Extra (Non-Universal) Dimension*, JHEP **0703** (2007) 084, hep-ph/0612286.

34. M. Serone and A. Westphal, *Moduli Stabilization in Meta-Stable Heterotic Supergravity Vacua*, JHEP **0708** (2007) 080, arXiv:0707.0497 [hep-th].
35. G. Panico, E. Ponton, J. Santiago and M. Serone, *Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions*, Phys. Rev. D **77** (2008) 115012, arXiv:0801.1645 [hep-ph].
36. D. Gallego and M. Serone, *Moduli Stabilization in non-Supersymmetric Minkowski Vacua with Anomalous $U(1)$ Symmetry*, JHEP **0808** (2008) 025, arXiv:0807.0190 [hep-th].
37. D. Gallego and M. Serone, *An Effective Description of the Landscape. I.*, JHEP **0901** (2009) 056, arXiv:0812.0369 [hep-th].
38. D. Gallego and M. Serone, *An Effective Description of the Landscape - II*, JHEP **0906** (2009) 057, arXiv:0904.2537 [hep-th].
39. R. Iengo, J. G. Russo and M. Serone, *Renormalization group in Lifshitz-type theories*, JHEP **0911** (2009) 020, arXiv:0906.3477 [hep-th].
40. R. Iengo and M. Serone, *A Simple UV-Completion of QED in 5D*, Phys. Rev. D **81** (2010) 125005, arXiv:1003.4430 [hep-th].
41. G. Panico, M. Safari and M. Serone, *Simple and Realistic Composite Higgs Models in Flat Extra Dimensions*, JHEP **1102** (2011) 103, arXiv:1012.2875 [hep-ph].
42. C. Hagedorn and M. Serone, *Leptons in Holographic Composite Higgs Models with Non-Abelian Discrete Symmetries*, JHEP **1110** (2011) 083, arXiv:1106.4021 [hep-ph].
43. C. Hagedorn and M. Serone, *General Lepton Mixing in Holographic Composite Higgs Models*, JHEP **1202** (2012) 077, arXiv:1110.4612 [hep-ph].
44. D. Marzocca, M. Serone and J. Shu, *General Composite Higgs Models*, JHEP **1208** (2012) 013, arXiv:1205.0770 [hep-ph].
45. M. Serone, *On the Cut-off Estimate in Lifshitz Five Dimensional Field Theories*, Phys. Rev. D **86** (2012) 046002, arXiv:1205.6207 [hep-ph].
46. F. Caracciolo, A. Parolini and M. Serone, *UV Completions of Composite Higgs Models with Partial Compositeness*, JHEP **1302** (2013) 066, arXiv:1211.7290 [hep-ph].

47. P. Creminelli, M. Serone and E. Trincherini, *Non-linear Representations of the Conformal Group and Mapping of Galileons*, JHEP **1310** (2013) 040, arXiv:1306.2946 [hep-th].
48. D. Marzocca, A. Parolini and M. Serone, *Supersymmetry with a pNGB Higgs and Partial Compositeness*, JHEP **1403** (2014) 099, arXiv:1312.5664 [hep-ph].
49. P. Creminelli, M. Serone, G. Trevisan and E. Trincherini, *Inequivalence of Coset Constructions for Spacetime Symmetries*, JHEP **1502** (2015) 037, arXiv:1403.3095 [hep-th].
50. F. Caracciolo, A. C. Echeverri, B. von Harling and M. Serone, *Bounds on OPE Coefficients in 4D Conformal Field Theories*, JHEP **1410** (2014) 20, [arXiv:1406.7845 [hep-th]].
51. E. Elkhidir, D. Karateev and M. Serone, *General Three-Point Functions in 4D CFT*, JHEP **1501** (2015) 133, arXiv:1412.1796 [hep-th].
52. A. C. Echeverri, E. Elkhidir, D. Karateev and M. Serone, *Deconstructing Conformal Blocks in 4D CFT*, JHEP **1508** (2015) 101, arXiv:1505.03750 [hep-th].
53. P. Baratella, P. Creminelli, M. Serone and G. Trevisan, *Inequivalence of Coset Constructions for Spacetime Symmetries: Coupling with Gravity*, Phys. Rev. D **93** (2016) no.4, 045029 [arXiv:1510.01969 [hep-th]].
54. A. C. Echeverri, E. Elkhidir, D. Karateev and M. Serone, *Seed Conformal Blocks in 4D CFT*, JHEP **1602** (2016) 183 arXiv:1601.05325 [hep-th].
55. A. Castedo Echeverri, B. von Harling and M. Serone, *The Effective Bootstrap*, JHEP **1609** (2016) 097, arXiv:1606.02771 [hep-th].
56. M. Serone, G. Spada and G. Villadoro, *Instantons from Perturbation Theory*, arXiv:1612.04376 [hep-th].

Review Papers

57. C. A. Scrucca and M. Serone, *Anomalies in field theories with extra dimensions*, Int. J. Mod. Phys. A **19** (2004) 2579, hep-th/0403163.

58. M. Serone, *Holographic Methods and Gauge-Higgs Unification in Flat Extra Dimensions*, New J. Phys. **12** (2010) 075013, arXiv:0909.5619 [hep-ph].

Proceedings

59. As. Abada, Ph. Boucad, M. Crisafulli, J.P. Leroy, V. Lubicz, G. Martinelli, F. Rapuano, M. Serone, N. Stella and The APE Collaboration, *$B \rightarrow K^* \gamma$ decay on APE*, presented at “Lattice 94: 12th International Symposium on Lattice Field Theory, Bielefeld, Germany, September 1994, Nucl. Phys **B42** (Proc. Suppl.) (1995) 379-381, hep-lat/9501015.
60. J.F. Morales, J.P. Plefka, C.A. Scrucca, M. Serone and A.K. Waldron, *Spin dependent D-brane interactions and scattering amplitudes in matrix theory*, presented at the TMR conference on “Quantum Aspects of Gauge Theories, Supersymmetry and Unification”, Corfú, Greece, September 1998, Eds.A. Ceresole, C. Kounnas, D. Lüst and S. Theisen, Lecture notes in physics vol. 525, Springer, hep-th/9812039.
61. J.C. Plefka, M. Serone and A. Waldron, *Matrix Theory and Feynman Diagrams*, presented at the “32nd International Symposium Ahrenshoop on the Theory of Elementary Particles”, Buckow, Germany, September 1998, Fortschr. Phys. **48** (2000) 1-3, 191-194, hep-th/9903099.
62. C.A. Scrucca and M. Serone, *Anomaly inflow and RR anomalous couplings*, presented at the TMR conference on “Quantum Aspects of Gauge Theories, Supersymmetry and Unification”, ENS, Paris, France, September 1999, PRHEP **tmr99** 047, hep-th/9911223.
63. M. Serone, *The Higgs boson as a gauge field in extra dimensions*, presented at the conference (in italian) *Incontri di Fisica delle Alte Energie* (IFAE 2005), Catania, March 2005, AIP Conf. Proc. **794** (2005) 139, hep-ph/0508019.
64. G. Panico and M. Serone, *The electroweak phase transition in models with gauge-Higgs unification*, presented at the International Europhysics Conf. on High Energy Physics (HEP2005), Lisbon, July 2005, PoS(HEP2005)354, hep-ph/0511348.

Teaching Experience

- Academic years 2000-2005: Ph.D. course at SISSA on “String Theory II”, about 45 hours per year on average.
- Academic year 2005-2006: Ph.D. course at SISSA on “Introduction to Quantum Field Theory”, about 40 hours.
- Academic years 2006-2011: in collaboration with R. Iengo, Ph.D. course at SISSA on “Quantum Field Theory”, about 75 hours per year on average.
- Academic years 2009-2012: in collaboration with K. Narain, course on “Quantum Field Theory” at the ICTP High Energy Physics ”Diploma Programme”, about 40 hours per year on average.
- Academic year 2009-2010: in collaboration with M. Torabian, course on “Relativistic Quantum Mechanics” at the ICTP ”Basic Physics Diploma Programme”, about 30 hours in total.
- Academic years 2011-2015: in collaboration with A. Gambassi, Ph.D. course at SISSA on “Quantum Field Theory”, about 80 hours per year on average.
- Academic year 2015-2016: Ph.D. course at SISSA on “Quantum Field Theory”, about 80 hours.
- 2014: coadvisor, with G. Thompson (ICTP), of Carlos Suarez, student of the ICTP High Energy Physics ”Diploma Programme”.
- 2015: Article “Accordi Fondamentali”, written for the general public INFN magazine “Asimmetrie”, n.18, april 2015.
- Opponent to the Ph.D. Defence of D. Dolce (Ph.D. 2007), Univ. of Florence, M. Prisco (Ph.D. 2007), Univ. of Rome “Tor Vergata”, E. Salvioni (Ph.D.2013), Univ. of Padua, M. Hogervorst (Ph.D. 2015), ENS, Paris.
- Opponent to the Master Defence of F.K. Seibold (Master 2016), EPFL, Lausanne.

Ph.D. Students

- Michele Trapletti, Ph.D. 2003.
- Monica Borunda, Ph.D. 2004, coadvisor with M. O’Loughlin.
- Andrea Wulzer, Ph.D. 2005.
- Giuliano Panico, Ph.D. 2007.
- Diego Gallego, Ph.D. 2009.
- Mahmoud Safari, Ph.D. 2012.
- Alberto Parolini, Ph.D. 2014.
- David Marzocca, Ph.D. 2014, coadvisor with A. Romanino.
- Alejandro Castedo Echeverri Ph.D. 2016.
- Current students: Emtinan Elkhidir (fourth year), Denis Karateev (fourth year), Gabriele Spada (coadvisor with G. Villadoro, ICTP) (third year).

Master Students

- Gabriel Francisco Cuomo, Master 2016.

Organizational Activity and Other Titles

- Scientific co-organizer, with A. Lerda, A. Sagnotti and A. Zaffaroni, of the first italian P.R.I.N. meeting, “Fisica delle interazioni fondamentali: teorie di gauge, gravità e stringhe”, held at Anacapri (September 28-30, 2002).
- Scientific co-organizer, with M. Bianchi, A. Lerda and S. Penati, of the third italian P.R.I.N. meeting, “Fisica delle interazioni fondamentali: teorie di gauge, gravità e stringhe”, held at Anacapri (September 24-26, 2004).

- Scientific and local co-organizer, with M. Bertolini, L. Bonora, R. Iengo, D. Luest, S. Randjbar-Daemi, A. Van Proeyen and D. Zanon, of the Winter School on “Strings, Supergravity and Gauge Theories” of the European RTN network “Constituents, Fundamental Forces and Symmetries of the Universe”, at Trieste (January 31- February 4, 2005).
- Scientific and local co-organizer, with B. Acharya, P. Creminelli, J. Polchinski, F. Quevedo, U. Seljak and M. Zaldarriaga, of the “Workshop on Cosmology and Strings”, held at ICTP, Trieste, July 9 - 13, 2007).
- Scientific and local co-organizer, with M. Bertolini, G. Bonelli and A. Tanzini of the “IV Avogadro meeting on Strings, Supergravity and Gauge Theories”, held at SISSA, Trieste (December 17 - 19, 2008).
- Scientific and local co-organizer, with M. Bertolini, G. Bonelli, E. Gava and A. Tanzini of the INFN meeting “Theory of the Fundamental Interactions” (TFI 2012), held at SISSA, Trieste (January 9 – 11, 2012).
- Scientific and local co-organizer, with K. Agashe, C. Grojean and R. Rattazzi of the “School and Workshop on Strongly Coupled Physics Beyond the Standard Model Theory”, held at ICTP, Trieste (January 16 – 27, 2012).
- Scientific and local co-organizer, with B. Acharya, M. Bertolini, P. Creminelli, E. Gava, K. Narain, F. Quevedo, A. Romanino and G. Villadoro of the “School on Supersymmetry and Unification of Fundamental Interactions (Pre-SUSY 2013)”, held at the ICTP, Trieste (August 20 – 23 2013).
- Scientific and local co-organizer, with B. Acharya, M. Bertolini, P. Creminelli, E. Gava, K. Narain, F. Quevedo, A. Romanino and G. Villadoro of the conference “SUSY 2013”, held at the ICTP, Trieste (August 26 – 31 2013).
- Scientific and local co-organizer, with B. Acharya, M. Bertolini, P. Creminelli, F. Quevedo, A. Romanino and G. Villadoro of the conference “PASCOS 2015”, held at the ICTP, Trieste (June 29 – July 3 2015).

- Referee for JHEP, Nucl. Phys. B, Phys. Lett. B, Phys. Rev. D, Eur. Phys. Jou. C, Jou. of Phys. G.
- Grant Reviewer for the Swiss National Science Foundation (SNSF)
- April 2007 - October 2007, local coordinator for Trieste of the FP6 European Program MRTN-CT-2004-005104 “Constituents, Fundamental Forces and Symmetries of the Universe” (ForcesUniverse)
- Referee for the Evaluation of the Italian Quality of Research (VQR) 2004-2010, for the University and Research Evaluation Agency (ANVUR).
- June 2006 - December 2013, local coordinator for Trieste of the INFN project (“iniziativa specifica”) “Milano 12” (IS MI12).
- Since 2009, INFN Research Assignment (“Incarico di Ricerca”).
- Since May 2010: Scientific Consultant at “The Abdus Salam International Centre for Theoretical Physics” (ICTP), Trieste.
- Since July 2011: Editorial Board Member of ISRN High Energy Physics Journal.
- Referee for the Evaluation of the Scientific Independence of young Researchers (SIR) 2014, grants given by the MIUR, Italian Ministry of University and scientific Research.
- Grant Reviewer for the French National Agency for Research (ANR), 2016 work programme.
- since June 2016 - Coordinator of the Theoretical Particle Physics (TPP) group at SISSA.

Invited Plenary Talks at International Conferences and Workshops

1. October 2003 - “*Electroweak symmetry breaking and fermion masses from extra dimensions*”, at the ICTP Conference on “*Hierarchy Problems in Four and More Dimensions*”, Trieste.

2. June 2005 - *“Gauge-Higgs Unification”*, at the workshop “New Approaches to Electroweak Symmetry Breaking”, Aspen Center for Physics, Aspen.
3. May 2006 - *“Is the Higgs a Wilson Line ?”*, at the “*Planck 06, 6th European Meeting From The Planck Scale To The Electroweak Scale*”, Paris.
4. June 2006 - *“Is the Higgs a Wilson Line ?”*, at the workshop “New Directions Beyond the Standard Model in Field and String Theory”, Galileo Galilei Institute for Theoretical Physics, Florence.
5. June 2007 - *“Moduli Stabilization in Meta-Stable Heterotic Supergravity Vacua”*, at “*String Phenomenology 2007*”, Frascati.
6. June 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the “*Planck 07, 7th European Meeting From The Planck Scale To The Electroweak Scale*”, Warsaw.
7. June 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the “*Eötvös-Cornell 2007 Summer Workshop on Particle Theory, Beyond the Standard Model at the Dawn of the LHC Era*”, Budapest.
8. February 2008 - *“Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions”*, at the workshop “*Early Universe Thermometers*”, Padua.
9. February 2008 - *“Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions”*, at the workshop “*Particle Physics and Cosmology: the Interface*”, Warsaw.
10. May 2008 - *“Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions”*, at the “*Quarks – 2008*” conference, Sergiev Posad, Russia.
11. May 2009 - *“An Effective Description of the Landscape”*, at the “*Planck 09, 12th European Meeting From The Planck Scale To The Electroweak Scale*”, Padua.
12. July 2009 - *“Calculable Composite Higgs Models from a Warped Extra Dimensions”*, at the workshop “*large N at Swansea*”, Swansea.

13. November 2009 - “*Renormalization Group in Lifshitz-Type Theories*”, at the Workshop “*Gravity at a Lifshitz Point*”, Perimeter Institute, Waterloo, Canada.
14. August 2011 - “*General Lepton Mixing in Holographic Composite Higgs Models*”, at “*Scalars 2011, 14th European Meeting From The Planck Scale To The Electroweak Scale*”, Warsaw.
15. December 2011 - “*General Lepton Mixing in Holographic Composite Higgs Models*”, at the “*International Workshop: Extra Dimensions in the Era of the LHC*”, held at the University of Osaka.
16. June 2012 - “*On the Cut-Off Estimate in 5D Field Theories*”, at the “*Quarks 2012*” conference, Yaroslavl, Russia.
17. June 2012 - “*General Composite Higgs Models*”, at the workshop “*HATCH, Holography, Applications to Technicolor, Condensed matter and Hadrons*”, Moscow.
18. January 2013 - “*A Light Composite Higgs*”, at the workshop “*Zurich Phenomenology Workshop Particle Physics in the LHC Era*”, Zurich.
19. March 2013 - “*UV Completions of Composite Higgs Models with Partial Compositeness*” at the workshop “*Electroweak breaking after first 3 years of the LHC*”, Warsaw.
20. April 2013 - “*General Composite Higgs Models*”, at the workshop “*Probing the Standard Model and New Physics at Low and High Energies*”, Portoroz, Slovenia.
21. April 2013 - “*The Composite Higgs Paradigm*”, at the Balkan Workshop 2013 “*Beyond the Standard Models*”, Vrnjčka Banja, Serbia.
22. June 2013 - “*UV Completions of Composite Higgs Models with Partial Compositeness*”, at the Workshop “*Beyond the Standard Model after the first run of the LHC*”, GGI, Florence.
23. November 2013 - “*A 125 GeV Higgs from a supersymmetric composite model*”, at the workshop “*Exploring Higher Energy Physics*”, ULB, Bruxelles.
24. December 2013 - “*SUSY with a pNGB Higgs*”, at the Mid-term meeting of the ERC Grant “*Electroweak Symmetry Breaking, Flavour and Dark Matter: One Solution for Three Mysteries*” (DaMeSyFla), GGI, Florence.

25. November 2014 - *“Towards Constraining Composite Higgs Models via the Bootstrap”*, at the Workshop on “Composite dynamics and dark matter”, Lyon.
26. August 2015 - *“Deconstructing Conformal Blocks in 4D CFT”*, at the workshop “Conformal Field Theories in Higher Dimensions”, Simons Center for Geometry and Physics, Stonybrook.
27. September 2015 - *“Classifying and Deconstructing Conformal Blocks in 4D CFT”*, at the workshop “Physics on the Riviera 2015: an isthmus between high energy and condensed matter theoretical physics”, Sestri Levante.
28. May 2016 - *“The Multi-point Bootstrap”*, at the workshop “Conformal Field Theories and Renormalization Group Flows in Dimensions $d > 2$ ”, GGI, Florence.
29. June 2016 - *“The Effective Bootstrap”*, at the workshop “Emergent Properties of Space-Time”, CERN.
30. July 2016 - *“What is the conformal bootstrap? A pedagogical introduction”*, at the second “Latin-American Conference on High Energy Physics: Particles and Strings”, Havana.

Lectures at International Schools

31. September 2001 - Lectures on “Introduction on Superstring Theory”, held at the “School on String Theory”, Istanbul.
32. June 2002 - Lectures on “Introduction on D-branes”, held at the “Introductory School on String Theory”, ICTP, Trieste.
33. August/September 2006 - Lectures on “Introduction on Extra Dimensions”, held at the “School on Particle Physics, Gravity and Cosmology”, Dubrovnik.
34. March 2015 - Lectures on “Composite Higgs Models”, held at the “IPM String School and Workshop”, IPM, Tehran.
35. October 2016 - Lectures on “Anomalies in Quantum Field Theory”, at the “37th Heidelberg Physics Graduate Days”, University of Heidelberg, Heidelberg.

Invited Individual Talks at Universities and Research Institutes

36. October 1998 - “*Super-graviton scattering in matrix theory*”, at the University of Rome “Tor Vergata”.
37. November 1999 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the University of Groningen.
38. November 1999 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the University of Rome “Tor Vergata”.
39. May 2000 - “*String Theory: is it the right theory to describe Nature ?*”, General Colloquium given at the University of Amsterdam.
40. June 2000 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the Autonoma University of Madrid (UAM).
41. January 2002 - “*Non-local symmetry breaking in Kaluza-Klein theories*”, at the University of Padua.
42. February 2002 - “*On string models with Scherk-Schwarz supersymmetry breaking*”, at the University of Rome “Tor Vergata”.
43. May 2002 - “*Localized anomalies in string and field theory orbifold models*”, at the University of Milan “Bicocca”.
44. May 2002 - “*Localized anomalies in string and field theory orbifold models*”, at the University of Parma.
45. June 2002 - “*Open and closed string models with Scherk-Schwarz supersymmetry breaking*”, at the Nordita Institute, Copenhagen.
46. November 2002 - “*Local and global gauge anomalies in higher dimensional theories*” at DESY, Hamburg.
47. November 2003 - “*Gauge Higgs unification in extra dimensions*”, at the Autonoma University of Barcellona (UAB).
48. November 2004 - “*Orbifold resolutions and fermion localization*”, at Saclay.
49. February 2005 - “*Orbifold resolutions and fermion localization*”, at the University of Rome “La Sapienza”.

50. May 2005 - *“The Higgs boson as a gauge field in extra dimensions”*, at the University of Bari.
51. May 2005 - *“The Electroweak Phase Transition on Orbifolds with Gauge-Higgs Unification”*, at the University of Neuchatel.
52. December 2005 - *“A Model of Electroweak Symmetry Breaking from a Fifth Dimension”*, at the University of Padua.
53. February 2006 - *“A Model of Electroweak Symmetry Breaking from a Fifth Dimension”*, at CERN.
54. October 2006 - *“Electroweak Symmetry Breaking from a Fifth Dimension”*, at the University of Florence.
55. January 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the University of Harvard, Cambridge.
56. February 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the SNS, Pisa.
57. March 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the University of Rome “Tor Vergata”.
58. July 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at the University of Heidelberg.
59. April 2008 - *“Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions”*, CERN Phenomenological Journal Club.
60. March 2009 - *“An Effective Description of the Landscape”*, at the EPFL, Lousanne.
61. October 2009 - *“Renormalization Group in Lifshitz-Type Theories”*, at the “Katholieke Universiteit” of Leuven (held at ULB, Bruxelles).
62. June 2010 - *“A Simple UV Completion of QED in 5 Dimensions”*, at the University of Rome “Tor Vergata”.
63. October 2011 - *“General Lepton Mixing in Holographic Composite Higgs Models”*, at the University of Ljubljana.
64. December 2011 - *“General Lepton Mixing in Holographic Composite Higgs Models”*, at the SNS, Pisa.

65. December 2011 - “*General Lepton Mixing in Holographic Composite Higgs Models*”, at the KMI, University of Nagoya.
66. May 2012 - “*General Composite Higgs Models*”, at the University of Padua.
67. May 2012 - “*General Composite Higgs Models*”, at the University of Heidelberg.
68. November 2012 - “*UV Completions of Composite Higgs Models with Partial Compositeness*” at DESY, Hamburg.
69. January 2013 - “*UV Completions of Composite Higgs Models with Partial Compositeness*” at IFAE, Autonomia University of Barcellona (UAB).
70. July 2013 - “*Composite Higgs Models and Possible UV Completions*”, at Mainz University.
71. September 2013 - “*A 125 GeV Higgs from a supersymmetric composite model*”, at Padua University.
72. March 2014 - “*SUSY with a pNGB Higgs*”, at the University of Granada.
73. May 2015 – Webinar on “*Classifying and Deconstructing Tensor Correlators in 4D CFTs*”; contact person: Soon-Jong Rey, Korea.
74. September 2016 – “*Spinning Correlators in Four Dimensional Conformal Field Theories*”, at the University of Harvard, Cambridge.

Other Talks at International and National Conferences and Workshops

75. September 1996 - “*Higher Derivative F-terms in $N=2$ Strings*” at the “*Network Meeting on Field Theory of Particles and Strings*”, Heraklion.
76. January 1997 - “*Type I-Heterotic Duality and Higher derivative F-terms*”, at the Autonomia University of Madrid (UAM).
77. June 1997 - “*Stati BPS e indice supersimmetrico in stringhe di Tipo I con $N=2$* ” at the “*Convegno Informale di Fisica Teorica delle Particelle Elementari*”, Como.

78. September 1997 - “*Supersymmetric D-brane interactions*”, at the University of Amsterdam (UvA).
79. September 1998 - “*Spin dependent D-brane interactions and scattering amplitudes in Matrix Theory*”, at the “*Network Meeting on Quantum Aspects of Gauge Theories, Supersymmetry and Unification*”, Corfú.
80. November 1998 - “*Scattering amplitudes in matrix theory*”, at the “*Spinoza*” Institute, Utrecht.
81. October 1999 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the University of Princeton.
82. October 1999 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the University of Brandeis, Boston.
83. October 1999 - “*Anomalies and RR couplings for D-branes and O-planes*”, at the University of New York (NYU).
84. June 2000 - “*D-branes and anomalies*”, at the “*Scientific meeting of the Dutch Collaboration for Mathematical Physics*”, Amersfoort.
85. November 2001 - “*Closed string models with Scherk-Schwarz supersymmetry breaking*”, at SISSA, Trieste.
86. September 2002 - “*Classical and quantum instabilities in non-supersymmetric string models*, first P.R.I.N. meeting, “*Fisica delle interazioni fondamentali: teorie di gauge, gravità e stringhe*”, at Anacapri.
87. May 2003 - “*Electroweak symmetry breaking and fermion masses from extra dimensions*”, at “*Planck 03, 6th European Meeting From The Planck Scale To The Electroweak Scale*”, Madrid.
88. September 2004 - “*Gauge Higgs Unification and Fermion Masses in Extra Dimensions*”, at the “*9th Summer Institute at Gran Sasso National Laboratories*”, Assergi.
89. March 2005 - “*The Higgs boson as a gauge field in extra dimensions*”, at the meeting “*Incontri di Fisica delle Alte Energie*” (IFAE 2005), Catania (in Italian).
90. July 2005 - “*The Electroweak Phase Transition on Orbifolds with Gauge-Higgs Unification*”, at the “*HEP 2005, International Europhysics Conference on High Energy Physics*”, Lisbon.

91. January 2007 - *“Electroweak Symmetry Breaking and Dark Matter from a Fifth Dimension”*, at Fermilab, Batavia.
92. April 2007 - *“Rottura di simmetria elettrodebole e materia oscura da una quinta dimensione”*, at the meeting “Incontri di Fisica delle Alte Energie” (IFAE 2007), Naples (in Italian).
93. June 2007 - *“L’evoluzione dell’Universo”*, at the “Giornate di Studio sul Piano Triennale 2008–2010 INFN”, Milan “Bicocca” (in Italian).
94. April 2008 - *“Dark Matter and Electroweak Symmetry Breaking in Models with Warped Extra Dimensions”*, ICTP Phenomenological Journal Club, Trieste.
95. June - 2008 - *“Moduli Stabilization in non-SUSY Minkowski vacua with Anomalous $U(1)$ Symmetry”* at INFN Meeting of IS MI12, PI14, TS11 e TV12, *“Theories of the Fundamental Interactions”*, Villa Mondragone, Frascati.
96. November 2009 - *“Extra Dimensions”*, general colloquium at SISSA.
97. December 2009 - *“Renormalization Group in Lifshitz-Type Theories”*, at SISSA, Trieste.
98. June 2010 - *“A Simple UV Completion of QED in 5 Dimensions”*, at *“Planck 2010, 13th European Meeting From The Planck Scale To The Electroweak Scale”*, CERN.
99. June 2011 - *“Leptons in Holographic Composite Higgs Models with Non-Abelian Discrete Symmetries”*, at *“Planck 2011, 14th European Meeting From The Planck Scale To The Electroweak Scale”*, IST, Lisbon.
100. July 2011 - *“Naturalness as a Guide to New Physics Beyond the Standard Model”*, at the “Giornata di seminari INFN”, sezione di Trieste (in Italian).
101. May 2015 – *“Deconstructing Conformal Blocks in 4D CFT”*, at the “Bootstrap 2015” workshop, Weizmann Institute.

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