

CURRICULUM VITAE

Alon E. Faraggi

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BIRTHDATE: Aug. 31, 1961

CITIZENSHIP: Israel & UK

MILITARY SERVICE: 1979–1983, IDF. Rank: Lieutenant

EDUCATION:

1986 B.Sc. in Physics, Ben-Gurion University, Israel.
1991 Ph.D. in Theoretical Particle Physics, Texas A&M University.

POSITIONS:

1991–1993 Postdoctoral position, Weizmann Institute.
1993–1995 Member Institute for Advanced Study, Princeton.
1995–1998 Postdoctoral position, University of Florida.
1998–2000 Visiting assistant professor, University of Minnesota.
2000–2005 PPARC advanced fellow, University of Oxford.
2003–2004 Stipendiary Lecturer, Merton College, Oxford.
May 2005– Professor, University of Liverpool.

AWARDS:

- 1985 Israeli Parliament Honor for excellence in academic studies.
- 1993 SSC fellowship.
- 1999 PPARC Advanced Fellowship (University of Oxford).
- 2022 Weston Visiting Professorship, Weizmann Institute
- 2023 Scientific Associate, CERN

TEACHING EXPERIENCE:

Over 30 years of teaching experience of a variety of undergraduate and postgraduate courses. These include standard service modules to large groups, as well as specialised undergraduate and postgraduate courses. I also taught tutorials, laboratories and recitations to small groups students. My teaching philosophy is that all topics can be taught to students at variety of levels and with different backgrounds, provided that the appropriate effort is made to make the material accessible. Accordingly, I designed several modules for undergraduate students at Liverpool. These include introductory modules on modern particle physics and string theory, which are aimed at the 3rd and 4th year undergraduate students. The aim is to introduce the students to areas of contemporary active research and to wet their appetites for further studies in these areas.

POSTDOCS:

- Jose Isidro – 2001-2002
- Cristina Timirgaziu – 2005–2008
- Stephen Morris – 2005–2007
- Mirian Tsulaia – 2008–2011
- Steve Kom – 2011–2013
- Viraf Mehta – 2013–2015
- Susha Parameswaran – 2015–2017
- Benjamin Percival – 2022–2023

GRADUATE STUDENTS:

- Richard Garavuso – 2004 – $SO(10)$ heterotic M–theory vacua
- David Clements – 2004 – Phenomenological aspects of type I string theory
- Sander Nooij – 2004 – Geometrical origin of realistic free fermionic string models
- Elisa Manno – 2009 – Semi–realistic heterotic $Z_2 \times Z_2$ orbifolds
- Kyriakos Christodoulides – 2012 – Exploration of heterotic Pati–Salam string vacua
- Viraf Mehta – 2013 – Light $U(1)$ s in heterotic string models
- Hasan Sonmez – 2015 – Classifications of the Free Fermionic Heterotic String Vacua
- Panos Athanasopoulos – 2016 – Relations in the space of (2,0) heterotic string models
- Johar Ashfaque – 2017 – String Phenomenology in the Era of the LHC
- Glyn Harries – 2018 – Classifications of left–right symmetric Heterotic String Vacua
- Ben Percival – 2022 – Classification of Non-Supersymmetric Heterotic String Vacua
- Martin Hortado – 2023 – Spinor–vector duality in smooth heterotic compactifications
- Viktor Matyas – 2023 – Non-sparsymmetric heterotic orbifolds
- Alonzo Dias – 2025
- Farid Ibrahimov – 2026
- Eman Basaad – 2026
- Luke Detraux – 2027

UNDERGRADUATE SENIOR THESIS:

- John Evans – 2010 – Quantum mechanics from an equivalence postulate
- Sean Turner – 2016 – Standard–like heterotic–string model
- Qingjia Liu – 2016 – Quantum mechanics from an equivalence postulate

- Yasin Ali – 2019 – String phenomenology in free fermion based models
- Tom Brereton – 2020 – Compactification on the $Z_2 \times Z_2$ orbifold
- Tia Yuhang – 2022 – Quantum mechanics from an equivalence postulate

MASTER THESIS:

- Chris Savage – 2000 – Left–right symmetric heterotic–string models
- Richard Hallam – 2002 – Quantum mechanics from an equivalence principle
- Simon Wicks – 2002 – Quantum mechanics from an equivalence principle
- Chun-hay Kom – 2004 – String phenomenology
- Joshua Nunn – 2004 – Quantum mechanics from an equivalence principle
- Guillaume Drieu La Rochelle– 2008 – The mu problem in string models
- Benjamin Assel – 2009 – Classification of Pati-Salam free fermionic models (recipient of the ‘Grand Prix du Stage de Recherche’ Ecole Polytechnique, Paris)
- Laura Bernard – 2012 – Construction of $SU(6) \times SU(2)$ string GUTs
- Ivan Glasser – 2012 – Classification of flipped $SU(5)$ string models
- Marc Olivier Renou – 2013 – Classification of free fermionic models
- Luke Tait – 2015 – Standard heterotic–string model
- Thomas Radburn – 2018 – Classification of free fermionic models
- Toby Underwood–Hughes – 2018 – Linear potential in the EPOQM approach
- Aaron Walsh – 2018 – Quantum mechanics from an equivalence postulate
- Jack Amos – 2020 – Non-Supersymmetric Free Fermionic Pati-Salam Models
- Yasin Ali – 2020 – Non-supersymmetric string model in the free fermionic formulation
- Maximillian Shaughnessy – 2021 – Quantum tunnelling from an equivalence principle

ADMINISTRATION EXPERIENCE:

- 2005- Founding leader of Liverpool’s string phenomenology group
- 2005–2008 Member of DMS research committee
- 2006- 2014 Theoretical physics divisional director of graduate studies.
- 2006–2011 Founding organiser of the distinguished Barkla lecture series.
- 2012–2016 Leader of the Liverpool Institute for Particle Physics Initiative.
- 2016–2019 Chair of DMS estate working group
- 2016–2020 Member of DMS executive committee

COMMUNITY SERVICE:

Referee for Nuclear Physics, Physics Letters, Physical review, Physical Review Letters, Modern Physics Letters, JHEP, Annals of Physics .

OTHER ACTIVITIES:

- Founder and main international coordinator of the annual String Phenomenology conference series Oxford 2002 – Oxford 2027.
- Creator and co-organizer of the “First International Conference on String Phenomenology”, Keble College Oxford UK, 6–11 July 2002
- Co-organizing the “Second International Conference on String Phenomenology”, Castle College Durham UK, 29 July – 4 August 2003

- International advisory committee of the “International Conferences on String Phenomenology”, Ann–Arbor Michigan, 1–6 August 2004; Munich Germany, 13–18 June 2005; Rome Italy, 4–8 June 2007; Philadelphia Pennsylvania, 28 May - 1 June 2008; Warsaw Poland, 15–19 June 2009; Paris France, 5–9 June 2010; Madison Wisconsin, 22–26 August 2011; Cambridge UK, 25–29 June 2012; Hamburg Germany, 15–19 July 2013; Trieste Italy, 7–11 July 2014; Madrid Spain, 8–12 June 2015; Ioannina Greece, 20–24 June 2016; Blacksburg Virginia, 3–7 July 2017; Warsaw Poland, 2–6 July 2018.
- Co-organizing the UK Beyond the Standard Model workshop, Liverpool UK, 29–30 March 2007.
- Co-organizing the workshop on string phenomenology and dynamical vacuum selection, Liverpool UK, 27–29 March 2008.
- Local organising committee of the workshop on “Gamma Ray Bursts in the Era of Rapid Follow-up”, Liverpool UK, 18–22 June 2012.
- Local organising committee of SUSY 2014, Manchester UK, 2014.
- Local organising committee of PASCOS 2019, Manchester UK, 2019.
- Co-organizing the “21st International Conference on String Phenomenology”, Liverpool UK, 4–8 July 2022.

GRANTS:

- 1993 – 1994 SSC fellowship – \$20,000. research grant + 1 year salary
- 2000 – 2005 PPARC Advanced fellowship – £203,389.
- 2000 PPARC travel grant – £700.
- 2001 – 2004 Oxford–Orsay Royal Society joint project grant – £12000.
- 2004 Royal Society travel grant – £1040.
- 2005 Royal Society travel grant – £666.
- 2005 – 2008 University of Liverpool startup fund – £28000.
- 2005 – 2008 Co–investigator: Liverpool rolling grant – £403,390.
- 2006 Royal Society short visit: Claudio Coriano – £3250.
- 2007 Royal Society short visit: Marco Guzzi – £1820.
- 2008 – 2011 Co–investigator: Liverpool rolling grant – £596,446.
- 2009 Royal Society short visit: Costas Kounnas – £1530.
- 2011 – 2014 Co–investigator: Liverpool TP rolling grant – £2,283,311.
- 2014 – 2017 Co–investigator: Liverpool TP consolidated grant – £2,315,028
- 2015 – 2017 Coordinator: EU–MC fellowship for Dr Parameswaran – 309,235.*EUR*
- 2022 – 2024 Liverpool–Jussieu Royal Society joint project grant – £12000.

RESEARCH HIGHLIGHTS:

- **Summer 1988:** Collaboration with V. Barger and T. Han. Investigation of using the Hagiwara, Hikasa, Peccei, Zeppenfeld three gauge boson vertex generalization on processes with three gauge bosons in the final state.
- **1988–1991:** Research assistant under Prof. D.V Nanopoulos. Construction of the first known model with solely the states of the Minimal Supersymmetric Standard Model states in the effective low energy field theory below the string scale Investigation of the phenomenological properties of the string models, including Z' at LEP and neutrino masses.

- **1991–1993:** Postdoctoral position–Weizmann institute. Construction of semi-realistic heterotic–string models and analysis of their phenomenological properties, including: Top–bottom mass hierarchy in the superstring standard–like models, and a prediction of the top–quark mass of order $175 - 180 GeV$. Analysis of fermion and Higgs mass matrices in semi–realistic heterotic string vacua.
- **1993–1995:** Member institute for advanced study. Generalisation of the Seiberg–Witten solution for the non–perturbative vacuum structure of $N = 2$ supersymmetric $SU(2)$ to $SU(N)$. Heavy threshold corrections, and Gauge coupling unification, in realistic heterotic–string models.
- **1995–1998:** Postdoctoral position–University of Florida. Dark matter candidates in heterotic–string models, including light and superheavy candidates. Formulation of quantum mechanics from an equivalence postulate in one dimension. Discovery of the Möbius symmetry that underlies quantum mechanics. Our approach to quantum mechanics is reviewed in several books on foundations of quantum mechanics, including in R.E Whyatt book on quantum dynamics with trajectories published by Springer.
- **1998–2000:** Visiting assistant professor. University of Minnesota. Analysis of flat directions in the Minimal Standard Heterotic String Model, and of the phenomenological properties. Generalisation of the equivalence postulate formalism to any number of dimensions with Euclidean or Minkowski metrics. Hidden glueballs in heterotic–string models as self–interacting dark matter candidates.
- **2000–2005:** PPARC Advanced fellow. University of Oxford. Stable string relics as candidates to explain ultra high energy cosmic ray events. Classification of heterotic–string vacua in the free fermionic formulation with $SO(10)$ GUT symmetry.
- **2005–present:** Professor. University of Liverpool. Classification of heterotic–string models with broken and unbroken $SO(10)$ GUT group, leading to the discoveries of: 1) Spinor–vector duality; 2) exophobic string vacua. Construction of heterotic–string vacua with light extra Z' vector boson that may be observed via di–photon production at the LHC. The equivalence postulate of quantum mechanics in curved space and application in cosmology. Realistic models from tachyonic 10D string vacua. Spinor–vector duality in the effective field theory limit of string compactifications. de Sitter string vacua.

SOME KEY PAPERS:

- 1989 *A Standard-like Model in the four dimensional free fermionic string formulation*, A.E. Faraggi, D.V. Nanopoulos, and K. Yuan, **NPB335** (1990) 347. The construction of the first string model that leads to the Minimal Supersymmetric Standard Model in the effective field theory limit of the string model.
- 1991 *Hierarchical Top–Bottom Mass Relation in a Superstring Derived Standard–like Model*, A.E. Faraggi, **PLB274** (1992) 47. Prediction in string derived model of the top–quark mass at $O(175 - 180)\text{GeV}$ three years prior to the experimental observation.
- 1994 *The vacuum structure and spectrum of $N = 2$ supersymmetric $SU(N)$ gauge theory*, P.C. Argyres and A.E. Faraggi, **PRL74** (1995) 3931. The first extension of Seiberg–Witten theory from $SU(2)$ to $SU(n)$.
- 1996 *Stable superstring relics*, S.H. Chang, C. Coriano and A.E. Faraggi, **NPB477** (1996) 65. Dark matter candidates in realistic string models, including light and superheavy candidates with mass of the order of $10^{13} - 10^{14}$ GeV.
- 1999 *Quantum mechanics from an equivalence principle*, A.E. Faraggi and M. Matone, **PLB450** (1999) 34. The first paper proposing a formulation of quantum mechanics from an equivalence postulate. Relating manifest phase–space duality and the equivalence postulate. Identification of a Schwarzian identity, and its relation to the Quantum Hamilton–Jacobi Equation, underlying the formalism.
- 2000 *The equivalence postulate of quantum mechanics*, A.E. Faraggi and M. Matone, **IJMPA15** (2000) 1869. Extensive analysis of quantum mechanics from the equivalence postulate. Demonstration that tunneling and the quantisation of energy level for bound states and the square integrability of the physical solutions arise without assuming the probability interpretation of the wave function.
- 2000 *Equivalence principle, higher dimensional Möbius group, and the hidden antisymmetric tensor of quantum mechanics*, G. Bertoldi, A.E. Faraggi and M. Matone, **CQG17** (2000) 3965. Extension of the equivalence postulate of quantum mechanics to any number of dimensions with Euclidean or Minkowski metrics. Proof that the cocycle condition that underlies the formalism and extends the one–dimensional Schwarzian identity, is invariant under D dimensional Möbius transformations.
- 2002 *Self–interacting dark matter from the hidden heterotic string sector*, A.E. Faraggi and M. Pospelov, **AP16** (2002) 451. Hidden sector glueballs as dark matter candidates.
- 2007 *Spinor–vector duality in heterotic string models*, A.E. Faraggi, C. Kounnas and J. Rizos, **NPB774** (2007) 208. Observation of spinor–vector duality in the space of $(2,0)$ heterotic–string vacua.
- 2010 *Exophobic quasi–realistic heterotic string vacua*, B. Assel, K. Christodoulides, A.E. Faraggi, C. Kounnas and J. Rizos, **PLB683** (2010) 306. Existence of quasi–realistic string vacua without massless exotic fractionally charged states.
- 2020 *The geometrical origin of dark energy*, A.E. Faraggi and M. Matone, **EPJC80** (2020) 1094. Extension of the EPOQM to the Wheeler–Dewitt equation.
- 2021 *Uncovering a spinor–vector duality on a resolved orbifold*, A.E. Faraggi, S. Groot–Nibbelink and M. Hurtado, **NPB969** (2021) 115473. Spinor–vector duality in the effective field theory limit of heterotic–string compactifications.

PUBLICATIONS (refereed journals):

1. *Flavor violation in no-scale flipped $SU(5) \times U(1)$* , A. E. Faraggi, J. L. Lopez, D. V. Nanopoulos, and K. Yuan, Phys. Lett. **B221** (1989) 337.
2. *A Standard-like Model in the four dimensional free fermionic string formulation*, A. E. Faraggi, D. V. Nanopoulos, and K. Yuan, Nucl. Phys. B **335** (1990) 347.
3. *A superstring Z' at $O(1TeV)$* , A. E. Faraggi and D. V. Nanopoulos Mod. Phys. Lett A6 (1991) 61.
4. *Tau neutrino mass as possible evidence for a superstring inspired standard-like model*, A. E. Faraggi, Phys. Lett. **B245** (1990) 435.
5. *Fractional charges in a superstring derived Standard-like Model*, A. E. Faraggi, Phys. Rev. **D46** (1992) 3204.
6. *Naturalness of three generations in $Z_2^n * Z_4$ free fermionic string models*, A. E. Faraggi and D. V. Nanopoulos, Phys. Rev. **D48** (1993) 3288.
7. *Sparticle Spectroscopy*, A. E. Faraggi, J. Hagelin, S. Kelley and D. V. Nanopoulos, Phys. Rev. **D45** (1992) 3272.
8. *A New Standard-like Model in the Free Fermionic String Formulation*, A. E. Faraggi, Phys. Lett. **B278** (1992) 131.
9. *Hierarchical Top-Bottom Mass Relation in a Superstring Derived Standard-like Model*, A. E. Faraggi, Phys. Lett. **B274** (1992) 47.
10. *Yukawa Couplings in Superstring Derived Standard-like Models*, Alon E. Faraggi, Phys. Rev. **D47** (1993) 5021.
11. *Construction of Realistic Superstring Standard-like Models in the Free Fermionic Formulation*, A. E. Faraggi, Nucl. Phys. **B387** (1992) 239.
12. *Gauge Coupling Unification in Superstring Derived Standard-like Models*, A. E. Faraggi, Phys. Lett. **B302** (1993) 202.
13. *Aspects of Nonrenormalizable Terms in a Superstring Derived Standard-like Model*, A. E. Faraggi, Nucl. Phys. **B403** (1993) 101.
14. *Comment on "Grand Unification and The Supersymmetric Threshold"*, B. Grinstein, A. E. Faraggi, S. Meshkov, Phys. Rev. **D47** (1993) 5018.
15. *Generation Mass Hierarchy in Superstring Derived Models*, A. E. Faraggi, Nucl. Phys. **B407** (1993) 57.
16. *Cabibbo Mixing in Superstring Derived Standard-like Models*, A. E. Faraggi and E. Halyo, Phys. Lett. **B307** (1993) 305.
17. *Neutrino Masses in Superstring Derived Standard-like Models*, A. E. Faraggi and E. Halyo, Phys. Lett. **B307** (1993) 311.
18. *Cabibbo-Kobayashi-Maskawa Mixing in Superstring Derived Standard-like Models*, A. E. Faraggi and E. Halyo, Nucl. Phys. **B416** (1994) 63.
19. *Light Threshold Effects and Supersymmetric Grand Unified Theories*, A. E. Faraggi and B. Grinstein, Nucl. Phys. **B422** (1994) 3.
20. *$Z_2 \times Z_2$ orbifold compactification as the origin of realistic free fermionic models*, A. E. Faraggi, Phys. Lett. **B326**, (1994) 62.
21. *Light Fermion Masses in Superstring Derived Standard-like Models*, A. E. Faraggi, Phys. Lett. **B329**, (1994) 208.

22. *Hierarchical Supersymmetry breaking in Superstring Derived Standard-like Models*, A. E. Faraggi and E. Halyo, Int. Jour. Mod. Phys. **A11** (1996) 2357.
23. *Proton Stability in Superstring Derived Models*, A. E. Faraggi, Nucl. Phys. **B428** (1994) 111.
24. *Custodial Nonabelian gauge symmetries in realistic superstring derived models*, A. E. Faraggi, Phys. Lett. **B339** (1994) 223.
25. *The vacuum structure and spectrum of $N = 2$ supersymmetric $SU(N)$ gauge theory*, P. C. Argyres and A. E. Faraggi, Phys. Rev. Lett. **74** (1995) 3931.
26. *Making ends meet: string unification and low energy data*, K. R. Dienes and A. E. Faraggi, Phys. Rev. Lett. **75** (1995) 2646.
27. *Gauge coupling unification in realistic free fermionic string models*, K. R. Dienes and A. E. Faraggi, Nucl. Phys. **B457** (1995) 409.
28. *Top quark mass prediction in superstring derived standard-like models*, A. E. Faraggi, Phys. Lett. **B377** (1996) 43.
29. *string unification, higher-level gauge symmetries and exotic hypercharge normalizations*, K. R. Dienes, A. E. Faraggi and J. March–Russell, Nucl. Phys. **B467** (1996) 44.
30. *Calculating fermion masses in superstring derived standard-like models*, A. E. Faraggi, Nucl. Phys **B487** (1997) 55.
31. *New dark matter candidates motivated from superstring derived unification*, S.H. Chang, C. Coriano and A.E. Faraggi, Phys. Lett. **B397** (1997) 76.
32. *Leptophobic Z' from superstring derived models*, A.E. Faraggi and M. Masip, Phys. Lett. **B388** (1996) 524.
33. *Stable superstring relics*, S.H. Chang, C. Coriano and A.E. Faraggi, Nucl. Phys. **B477** (1996) 65.
34. *A statistical interpretation of space and classical–quantum duality*, A.E. Faraggi and M. Matone, Phys. Rev. Lett. **78** (1997) 163.
35. *A low energy dynamical SUSY breaking scenario motivated from superstring derived unification*, A. E. Faraggi, Phys. Lett. **B387** (1996) 775.
36. *Local discrete symmetries from superstring derived models*, A. E. Faraggi, Phys. Lett. **B398** (1997) 88.
37. *R -parity violation in superstring derived models*, A.E. Faraggi, Phys. Lett. **B398** (1997) 95.
38. *Meeting the constraint of neutrino–Higgsino mixing in gravity unified theories*, A.E. Faraggi and J.C. Pati, Phys. Lett. **B400** (1997) 314.
39. *Exotic leptoquarks from superstring derived models*, J. Elwood and A. E. Faraggi, Nucl. Phys. **B512** (1998) 42.
40. *Quantum mechanics from an equivalence principle*, A.E. Faraggi and M. Matone, Phys. Lett. **B450** (1999) 34.
41. *Toward the classification of the realistic free fermionic superstring models*, A.E. Faraggi, Int. Jour. Mod. Phys. **A14** (1999) 1663.
42. *M -Theory model–building and proton stability*, J. Ellis, A.E. Faraggi and D.V. Nanopoulos, Phys. Lett. **B419** (1998) 123.

43. *The equivalence principle of quantum mechanics: uniqueness theorem*, A.E. Faraggi and M. Matone, Phys. Lett. **B437** (1998) 369.
44. *On the anomalous $U(1)$ in free fermionic superstring models*, G.B. Cleaver and A.E. Faraggi, Int. Jour. Mod. Phys. **A14** (1999) 2335.
45. *A family universal anomalous $U(1)$ in string derived models as the origin of supersymmetry breaking*, A.E. Faraggi and J.C. Pati, Nucl. Phys. **B526** (1998) 21.
46. *Quantum transformations*, A.E. Faraggi and M. Matone, Phys. Lett. **A249** (1998) 180.
47. *Family universal anomalous $U(1)$ in realistic superstring derived models*, A.E. Faraggi, Phys. Lett. **B426** (1998) 315.
48. *Toward the $M(F)$ -theory embedding of realistic free fermionic models*, P. Berglund, J. Ellis, A.E. Faraggi, D.V. Nanopoulos and Z. Qiu Phys. Lett. **B433** (1998) 269.
49. *Equivalence principle, Planck Length and quantum Hamilton–Jacobi equation*, A.E. Faraggi and M. Matone, Phys. Lett. **B445** (1998) 77.
50. *Equivalence principle: tunnelling, quantized spectra and trajectories from the quantum Hamilton–Jacobi equation*, A.E. Faraggi and M. Matone, Phys. Lett. **B445** (1999) 357.
51. *The equivalence postulate of quantum mechanics*, A.E. Faraggi and M. Matone, Int. Jour. Mod. Phys. **A15** (2000) 1869.
52. *String derived MSSM and M -theory unification* G.B. Cleaver, A.E. Faraggi and D.V. Nanopoulos, Phys. Lett. **B455** (1999) 135.
53. *Elevating the free fermion $Z_2 \times Z_2$ orbifold model to a compactification of F -theory*, P. Berglund, J. Ellis, A.E. Faraggi, D.V. Nanopoulos and Z. Qiu, Int. Jour. of Mod. Phys. **A15** (2000) 1345.
54. *Phenomenological issues in TeV scale gravity with light neutrino masses*, A.E. Faraggi and M. Pospelov, Phys. Lett. **B458** (1999) 237.
55. *A minimal superstring standard model I: flat directions* G.B. Cleaver, A.E. Faraggi and D.V. Nanopoulos, Int. Jour. of Mod. Phys. **A16** (2001) 425.
56. *Probing the desert with ultra-energetic neutrinos from the sun*, A.E. Faraggi K.A. Olive and M. Pospelov, Astropart. Phys. **13** (2000) 31.
57. *D -term Spectroscopy in Realistic Heterotic String Models*, A. Dedes and A.E. Faraggi, Phys. Rev. **D62** (2000) 016010.
58. *Equivalence principle, higher dimensional Möbius group, and the hidden antisymmetric tensor of quantum mechanics*, G. Bertoldi, A.E. Faraggi and M. Matone, Class. Quant. Grav. **17** (2000) 3965.
59. *A minimal superstring standard model II: A phenomenological study*, G.B. Cleaver, A.E. Faraggi, D.V. Nanopoulos and J.W. Walker, Nucl. Phys. **B593** (2001) 471.
60. *Non-Abelian flat directions in a Minimal Superstring Standard Model*, G.B. Cleaver, A.E. Faraggi, D.V. Nanopoulos and J.W. Walker, Mod. Phys. Lett. **A15** (2000) 1191.
61. *Towards string predictions*, G.B. Cleaver, A.E. Faraggi, D.V. Nanopoulos and T. ter Veldhuis, Int. Jour. of Mod. Phys. **A16** (2001) 3563.
62. *Left-right symmetric heterotic-string derived models*, G.B. Cleaver, A.E. Faraggi and C. Savage, Phys. Rev. **D63** (2001) 066001.

63. *Self-interacting dark matter from the hidden heterotic string sector*, A.E. Faraggi and M. Pospelov, *Astropart. Phys.* **16** (2002) 451.
64. *Proton stability and superstring Z'* , A.E. Faraggi, *Phys. Lett.* **B499** (2001) 147.
65. *Phenomenology of Non-Abelian Flat Directions in a Minimal Superstring Standard Model*, G.B. Cleaver, A.E. Faraggi, D.V. Nanopoulos and J.W. Walker, *Nucl. Phys.* **B620** (2002) 259.
66. *Flat directions in left-right symmetric string derived models*, G.B. Cleaver, D. Clements and A.E. Faraggi, *Phys. Rev.* **D65** (2002) 106003.
67. *SUSY QCD and high energy cosmic rays 1. Fragmentation functions of SUSY QCD*, C. Coriano and A.E. Faraggi, *Phys. Rev.* **D65** (2001) 075001.
68. *Stable superstring relics and ultrahigh energy cosmic rays*, C. Coriano, A.E. Faraggi and M. Plümacher, *Nucl. Phys.* **B614** (2001) 233.
69. *Doublet-triplet splitting in realistic heterotic string derived models*, A.E. Faraggi, *Phys. Lett.* **B520** (2001) 337.
70. *A string inspired Z' Model with stable proton and light neutrino masses*, A.E. Faraggi and M. Thormeier, *Nucl. Phys.* **B624** (2002) 163.
71. *CP violation in string models with family universal anomalous $U(1)$ SUSY breaking*, A.E. Faraggi and O. Vives, *Nucl. Phys.* **B641** (2002) 93.
72. *Nonperturbative flipped $SU(5)$ vacua in heterotic M -theory*, A.E. Faraggi, R. Garavuso and J. Isidro, *Nucl. Phys.* **B641** (2002) 111.
73. *Open Descendants of NAHE-based free fermionic models*, D.J. Clements and A.E. Faraggi, *Int. Jour. of Mod. Phys.* **A19** (2004) 2931.
74. *Partition functions of NAHE-based free fermionic models*, A.E. Faraggi, *Phys. Lett.* **B544** (2002) 207.
75. *NAHE-based free fermionic models with $SU(4) \times SU(2) \times U(1)$ $SO(10)$ subgroup*, G.B. Cleaver, A.E. Faraggi and S. Nooij, *Nucl. Phys.* **B672** (2003) 64.
76. *Yukawa couplings in $SO(10)$ heterotic M -theory vacua*, A.E. Faraggi and R. Garavuso, *Nucl. Phys.* **B659** (2003) 224.
77. *String inspired neutrino mass textures in light of KamLAND and WMAP*, C. Coriano and A.E. Faraggi, *Phys. Lett.* **B581** (2004) 99.
78. *Large scale air shower simulations and the search for new physics at AUGER*, A. Cafarella, C. Coriano and A.E. Faraggi, *Int. Jour. of Mod. Phys.* **A19** (2004) 3729.
79. *On the number of chiral generations in $Z_2 \times Z_2$ orbifolds*, R. Donagi and A.E. Faraggi, *Nucl. Phys.* **B694** (2004) 187.
80. *Self-duality and vacuum selection*, A.E. Faraggi, *Int. Jour. of Mod. Phys.* **A19** (2004) 5523.
81. *Classification of the chiral $Z_2 \times Z_2$ fermionic models in the heterotic superstring*, A.E. Faraggi, S. Nooij, C. Kounnas and J. Rizos, *Nucl. Phys.* **B695** (2004) 41.
82. *Moduli fixing in realistic string vacua*, A.E. Faraggi, *Nucl. Phys.* **B728** (2005) 728.
83. *Higgs-matter splitting in quasi-realistic orbifold string GUTs*, A.E. Faraggi, *Eur. Phys. J.* **C49** (2007) 803.
84. *$Z_2 \times Z_2$ heterotic orbifolds of nonfactorizable six Dimensional toroidal manifolds*, A.E. Faraggi, S. Förste and C.M. Timirgaziu, *Jour. High Energy Physics* **0608** (2006) 057.

85. *Chiral family classification of fermionic $Z_2 \times Z_2$ orbifold models*, A.E. Faraggi, C. Kounnas and J. Rizos, Phys. Lett. **B648** (2007) 84.
86. *Minimal Standard Heterotic String Models*, A.E. Faraggi, E. Manno and C.M. Timirgaziu, Eur. Phys. J. **C50** (2007) 701.
87. *Spinor–vector duality in heterotic string models*, A.E. Faraggi, C. Kounnas and J. Rizos, Nucl. Phys. **B774** (2007) 208.
88. *A Novel string derived Z –prime with stable proton, light-neutrinos and R –parity violation*, C. Coriano, A.E. Faraggi and M. Guzzi, Eur. Phys. J. **C53** (2008) 421.
89. *On the low energy spectra of the nonsupersymmetric heterotic string theories*, A.E. Faraggi and M. Tsulaia, Eur. Phys. J. **C54** (2008) 495.
90. *Spinor-vector duality in $N=2$ heterotic string vacua*, A.E. Faraggi, C. Kounnas, J. Rizos, Nucl. Phys. **B799** (2008) 19.
91. *Quasi–realistic heterotic–string models with vanishing one-loop cosmological constant and perturbatively broken supersymmetry?*, G.B. Cleaver, A.E. Faraggi, E. Manno and C. Timirgaziu, Phys. Rev. **D78** (2008) 046009.
92. *Searching for Extra Z –prime from Strings and Other Models at the LHC with Lepto-production*, C. Coriano, A.E. Faraggi and M. Guzzi, Phys. Rev. **D78** (2008) 015002.
93. *Spinor-vector duality in heterotic SUSY vacua*, T. Catelin–Jullien, A.E. Faraggi, C. Kounnas, J. Rizos, Nucl. Phys. **B812** (2009) 103.
94. *Little heterotic strings*, A.E. Faraggi and E. Manno, Eur. Phys. J. **C66** (2010) 465.
95. *Exophobic quasi-realistic heterotic string vacua*, B. Assel, K. Christodoulides, A.E. Faraggi, C. Kounnas and J. Rizos, Phys. Lett. **B683** (2010) 306.
96. *Interpolations among NAHE-based supersymmetric and nonsupersymmetric string vacua.*, A.E. Faraggi and M. Tsulaia, Phys. Lett. **B683** (2010) 314.
97. *Spinor-vector duality in heterotic–string orbifolds*, C. Angelantonj, A.E. Faraggi, and M. Tsulaia Jour. High Energy Physics **1007** (2010) 004.
98. *Classification of heterotic Pati–Salam string models*, B. Assel, K. Christodoulides, A.E. Faraggi, C. Kounnas and J. Rizos, Nucl. Phys. **B844** (2011) 365.
99. *T –branes and Yukawa couplings*, C.C. Chiou, A.E. Faraggi, R. Tatar and W. Williams, Jour. High Energy Physics **1105** (2011) 023.
100. *Conformal aspects of spinor–vector duality*, A.E. Faraggi, I. Florakis, T. Mohaupt and M. Tsulaia, Nucl. Phys. **B848** (2011) 332.
101. *Top quark mass in exophobic Pati–Salam heterotic string model*, K. Christodoulides, A.E. Faraggi and J. Rizos, Phys. Lett. **B702** (2011) 81.
102. *Investigation of quasi–realistic heterotic string models with reduced Higgs spectrum* G. Cleaver, A.E. Faraggi, J. Greenwald, D. Moore, K. Pechan, E. Remkus and T. Renner, Eur. Phys. J. **C71** (2011) 1842.
103. *Proton stability and light Z' inspired in string derived models*, A.E. Faraggi and V. Mehta, Phys. Rev. **D84** (2011) 086006.
104. *Leptophobic Z' in heterotic–string derived models*, A.E. Faraggi and V. Mehta, Phys. Lett. **B703** (2011) 567.
105. *Superluminality and the equivalence postulate of quantum mechanics*, A.E. Faraggi, Eur. Phys. J. **C72** (2012) 1944.

106. *The Equivalence Postulate of Quantum Mechanics, Dark Energy and The Intrinsic Curvature of Elementary Particles*, A.E. Faraggi, Adv.High Energy Phys. **2013** (2013) 957394
107. *String Derived Exophobic $SU(6) \times SU(2)$ GUTs*, L. Bernard, A.E. Faraggi, I. Glasser, J. Rizos and H. Sonmez, Nucl. Phys. **B868** (2013) 1.
108. *Energy quantisation and time parameterisation* , A.E. Faraggi and M. Matone, Eur. Phys. J. **C74** (2014) 2694.
109. *Proton stability and light Z' inspired in string derived models*, A.E. Faraggi and V. Mehta, Phys. Rev. **D88** (2013) 025006.
110. *Light Z' in heterotic string Standard-like Models*, P. Athanasopoulos, A.E. Faraggi and V.M. Mehta, Phys. Rev. **D89** (2014) 103023.
111. *Spectral flow as a map between $N=(2,0)$ -models* , P. Athanasopoulos, A.E. Faraggi and D. Gepner Phys. Lett. **B735** (2014) 357.
112. *Classification of flipped $SU(5)$ heterotic-string models*, A.E. Faraggi, J. Rizos and H. Sonmez, Nucl. Phys. **B886** (2014) 202.
113. *Proton stability in $SU(5) \times U(1)$ and $SU(6) \times SU(2)$ GUTs*, A.E. Faraggi, M. Paraskevas, J. Rizos and K. Tamvakis, Phys. Rev. **D90** (2014) 015036.
114. *Large volume SUSY breaking with a solution to the decompactification problem*, A.E. Faraggi, C. Kounnas and H. Pertouche, Nucl. Phys. **B899** (2015) 328.
115. *A light Z' heterotic-string derived model*, A.E. Faraggi and J. Rizos, Nucl. Phys. **B895** (2015) 233.
116. *Classification of $SU(4) \times SU(2) \times U(1)$ heterotic-string models*, A.E. Faraggi and H. Sonmez, Phys. Rev. **D91** (2014) 066006.
117. *Non-tachyonic semi-realistic non-supersymmetric heterotic string vacua* , J.M. Ashfaque, P. Athanasopoulos, A.E. Faraggi and H. Sonmez, Eur. Phys. J. **C76** (2016) 208.
118. *Extra Z' s and W' s in heterotic-string derived models*, A.E. Faraggi and M. Guzzi, Eur. Phys. J. **C75** (2015) 537.
119. *The 750 GeV di-photon LHC excess and extra Z' s in heterotic-string derived models*, A.E. Faraggi and J. Rizos, Eur. Phys. J. **C76** (2016) 170.
120. *Symmetric and asymmetric orbifolds as free fermionic models*, P. Athanasopoulos, A.E. Faraggi, S. Groot-Nibbelink, and V. Mehta, Jour. High Energy Physics **1604** (2016) 038.
121. *“The LHC di-photon excess and gauge coupling unification in extra Z' heterotic-string derived models”* J.M. Ashfaque, L. Delle Rose, A.E. Faraggi and C. Marzo, Eur. Phys. J. **C76** (2016) 570.
122. *Niemeier Lattices in the Free Fermionic Heterotic-String Formulation*, P. Athanasopoulos and A.E. Faraggi, Adv. Math. Phys. **2017** (2017) 3572469.
123. *“Wilsonian dark matter in string derived Z' model”* L. Delle Rose, A.E. Faraggi, C. Marzo and J. Rizos, Phys. Rev. D **96** (2017) no.5, 055025.
124. *Classification of standard-like heterotic-string vacua*, A.E. Faraggi, J. Rizos and H. Sonmez, Nucl. Phys. **B927** (2018) 1.
125. *Classification of left-right symmetric heterotic-string vacua*, A.E. Faraggi, G. Harries and J. Rizos, Nucl. Phys. **B936** (2018) 472.

126. *Sterile Neutrinos in String Derived Models*, A.E. Faraggi, Eur. Phys. J. **C78** (2018) 867.
127. *String phenomenology from a worldsheet perspective*, A.E. Faraggi, Eur. Phys. J. **C79** (2019) 703.
128. *Doublet–triplet splitting in fertile left–right symmetric heterotic–string vacua*, A.E. Faraggi, G. Harries, B. Percival and J. Rizos, Nucl. Phys. **B953** (2020) 114969.
129. *Stable three generation standard–like model from a tachyonic ten dimensional heterotic–string vacuum*, A.E. Faraggi, V. Matyas and B. Percival, Eur. Phys. J. **C80** (2020) 337.
130. *The geometrical origin of dark energy*, A.E. Faraggi and M. Matone, Eur. Phys. J. **C80** (2020) 1094.
131. *Towards the classification of tachyon-free models from tachyonic ten-dimensional heterotic string vacua*, A.E. Faraggi, V. Matyas and B. Percival, Nucl. Phys. **B961** (2020) 115231.
132. *Type 0 $Z_2 \times Z_2$ heterotic–string orbifolds and misaligned supersymmetry*, A.E. Faraggi, V. Matyas and B. Percival, Int. Jour. Mod. Phys. **A36** (2021) 2150174.
133. *Classification of non–supersymmetric Pati–Salam heterotic–string vacua*, A.E. Faraggi, V. Matyas and B. Percival, Phys. Rev. **D104** (2021) 046002.
134. *Type $\bar{0}$ heterotic–string orbifolds*, A.E. Faraggi, V. Matyas and B. Percival, Phys. Lett. **B814** (2021) 136080.
135. *Satisfiability modulo theories and chiral heterotic–string vacua with positive cosmological constant*, A.E. Faraggi, B. Percival, S. Schewe and D. Wojtczak, Phys. Lett. **B816** (2021) 136187.
136. *Uncovering a spinor–vector duality on a resolved orbifold*, A.E. Faraggi, S. Groot–Nibbelink and M. Hurtado, Nucl. Phys. **B969** (2021) 115473.
137. *Constraints on spinor–vector duality in six dimensions*, A.E. Faraggi, S. Groot–Nibbelink and M. Hurtado, Phys. Rev. **D103** (2021) 126016.
138. *Taming triangulation dependence of $T^6/(Z_2 \times Z_2)$ resolutions*, A.E. Faraggi, S. Groot–Nibbelink and M. Hurtado, Jour. High Energy Physics **01** (2021) 169.
139. *Toward the classification of asymmetric $Z_2 \times Z_2$ heterotic–string orbifolds*, A.E. Faraggi, V. Matyas and B. Percival, Phys. Rev. **D106** (2022) 026011.
140. *Z' s and sterile neutrinos from heterotic string models: new Z' exclusion limits*, A.E. Faraggi and M. Guzzi, Eur. Phys. J. **C82** (2022) 590.
141. *Spinor-vector duality and the swampland*, A.E. Faraggi, Universe **8** (2022) 426.
142. *The fate of discrete torsion on resolved heterotic $Z_2 \times Z_2$ orbifolds using $(0,2)$ GLSMs*, A.E. Faraggi, S. Groot–Nibbelink and M. Hurtado, Nucl. Phys. **B988** (2023) 116111.
143. *Precision studies of string derived Z' dynamics at the LHC*, A. McEntaggart, A.E. Faraggi and M. Guzzi, Eur. Phys. J. **C83** (2023) 54.
144. *Fayet–Iliopoulos D –term in Non–Supersymmetric Heterotic–String Vacua*, Alonzo R. Diaz–Avalos, A.E. Faraggi, V. Matyas and B. Percival, Eur. Phys. J. **C83** (2023) 926.
145. *D –term uplift in non–supersymmetric heterotic–string vacua*, Alonzo R. Diaz–Avalos, A.E. Faraggi, V. Matyas and B. Percival, Phys. Rev. **D108** (2023), 086007.

146. *Free fermionic webs of heterotic T-folds*, A.E. Faraggi, S. Groot-Nibbelink and B. Percival, Phys. Rev. **D109** (2024) 5, L051701.
147. *M_W in string derived Z' model*, A.E. Faraggi and M. Goodsell, Eur. Phys. J. **C84** (2024) 589.
148. *Vacuum energy of nonsupersymmetric \tilde{S} heterotic-string models*, L.A. Detraux, A.R. Diaz Avalos, A.E. Faraggi and B. Percival, Phys.Rev.**D110** (2024) 8, 086006.
149. *Vacuum energy in non-supersymmetric quasi-realistic heterotic-string vacua with fixed moduli*, E. Basaad, L.A. Detraux, A.R. Diaz Avalos, A.E. Faraggi and B. Percival, 2408.03928 [hep-th].
150. *Spinor-vector duality and mirror symmetry*, A.E. Faraggi, Universe **10** (2024) 402.
151. *The Quest for Understanding: The Case of the Upgraded Superconducting Super Collider* A.E. Faraggi, 2411.00595 [hep-ph].
152. *Asymmetric orbifolds and their curiosities*, A.E. Faraggi, S. Groot-Nibbelink and B. Percival, LTH-????.
153. *Cosmic probes of string derived Z' models*, A.E. Faraggi and M. Guzzi, LTH-????.

PUBLICATIONS (thesis):

1. *Standard-like Models in the free fermionic string formulation and phenomenological implications*, A. E. Faraggi, Ph.D. Thesis, Texas A&M University, 1991.

PUBLICATIONS (conference proceedings):

1. *Superstring derived Standard-like Models and the Top Quark Mass Hierarchy*, A. E. Faraggi, Proceedings of the XV International Warsaw Meeting on elementary Particle Physics, Ed. Z. Ajduk, S Pokorski and A.K. Wroblewski., Kazimierz, Poland, 1992.
2. *Construction of Realistic Superstring Standard-like Models*, A. E. Faraggi, Proceedings of the 1992 Texas/PASCOS Conference, Ed. C.W. Akerlof and M.A. Srednicki, Annals of the New York Academy of Sciences volume 688.
3. *Deriving the Standard Model from Superstring Theory*, A. E. Faraggi, proceedings of the first international conference on phenomenology of unification from present to future, Eds. G. Diambri-Palazzi, C. Cosmelli G. Martinelli and L. Zanello, World-Scientific, 1994.
4. *Realistic Superstring Models*, A. E. Faraggi, IASSNS-HEP-94/31, to appear in the proceedings of the international conference on unified symmetry - in the small and in the large, Coral Gables, FL, January 1994.
5. *Realistic Superstring Standard-like Models*, A. E. Faraggi, Proceedings of the SUSY 94 workshop, Ann-Arbor, Michigan, May 1994.
6. *$Z_2 \times Z_2$ orbifold compactification- the origin of realistic free fermionic models*, A. E. Faraggi, IASSNS-HEP-94/114, to appear in the proceedings of the Beyond the Standard Model IV Conference, Lake Tahoe, CA, Dec 13-18, 1994.
7. *Curves of marginal stability in $N = 2$ super-QCD*, P.C. Argyres, A. E. Faraggi and A. Shapere, IASSNS-HEP-94/103, to appear in the proceedings of "strings 95".
8. *Cosmological and phenomenological implications of exotic matter in realistic superstring derived models*, A. E. Faraggi, UFIFT-HEP-96-17, to appear in the proceedings of "String 96".

9. *Superstring phenomenology – present and future perspective*, A. E. Faraggi, UFIFT-HEP-97-21, to appear in the proceedings “Beyond the Desert 97 – Accelerator and non Accelerator approaches”, Castle Ringberg, Tegernsee, Germany 8–14 July 1997.
10. *The $Z_2 \times Z_2$ orbifold and the SUSY flavor problem*, UFIFT-HEP-98-11, to appear in the proceedings of PASCOS 98.
11. *Superstring phenomenology – A personal perspective*, A. E. Faraggi, UMN-TH-1819, to appear in the proceedings “Beyond the Desert 99 – Accelerator and non Accelerator approaches”, Castle Ringberg, Tegernsee, Germany 6–12 July 1999.
12. *Duality, equivalence, mass – and – the quest for the vacuum*, A. E. Faraggi, UMN-HEP-1846, to appear in the proceedings “PASCOS 99” – Lake Tahoe, CA 10–16 December 1999.
13. *UHECR and supersymmetric QCD*, C. Coriano and A.E. Faraggi, to appear in the proceedings of the “International workshop on QCD: Theory and Experiment”, Martina Franca, Italy, 16–20 June 2001.
14. *Seeking experimental probes of string unification*, C. Coriano and A.E. Faraggi, To appear in the proceedings of “the 4th Meeting of the RTN Network and Workshop on Across the Present Energy Frontiers: Probing the Origin of Mass”, Corfu, Greece, 10-13 Sep 2001.
15. *Pheno-M-enological aspects of M-theory*, A.E. Faraggi, to appear in the proceedings “Beyond the Desert 02”, Oulu, Finland 2–7 June 2002.
16. *Nonperturbative flipped $SU(5)$ vacua in Horava-Witten theory*, A.E. Faraggi, R. Garavuso and J. Isidro, UOTP-02-34P, to appear in the proceedings “The first international conference on string phenomenology”, Oxford, United Kingdom, 6–11 July 2002.
17. *Phenomenological survey of M-theory*, A.E. Faraggi, to appear in the proceedings of “SUGRA20”, Boston, USA, 17–21 March 2003.
18. *Ultra high energy cosmic rays and air shower simulations: a top-bottom view*, A. Cafarella, C. Coriano and A.E. Faraggi, To appear in the proceedings of the XV IFAE, Lecce, Italy, 23-26 April 2003.
19. *Superstring phenomenology in light of LEP, KamLAND and WMAP*, A.E. Faraggi, To appear in the proceedings of “Beyond the Desert 03”, Castle Ringberg, Tegernsee, Germany 9–14 June 2003.
20. *Towards the classification of $Z_2 \times Z_2$ fermionic models*, A.E. Faraggi, S.E.M. Nooij, C. Kounnas and J. Rizos, OOTP-03-32P, to appear in the proceedings “The second international conference on string phenomenology”, Durham, United Kingdom, 29 July – 4 August 2003.
21. *Anthropics versus determinism in quantum gravity*, A.E. Faraggi, OOTP-03-34P, to appear in the proceedings of “The second international conference on string phenomenology”, Durham, United Kingdom, 29 July – 4 August 2003.
22. *Fictitious extra dimensions*, A.E. Faraggi, LTH-661, to appear in the proceedings of “The fourth international conference on quantum theory and symmetries”, Varna, Bulgaria, 15–21 August 2005.
23. *Z' searches at the LHC: Some QCD precision studies in Drell-Yan*, R. Armillis, C. Coriano, A.E. Faraggi, M. Guzzi and N. Irges, Proceedings of the IFAE 2008, Bologna,

Italy, 26-28 Mar 2008, Published in Nuovo Cim.B123 (2008) 781.

24. *Phenomenological survey of free fermionic heterotic-string models*, A.E. Faraggi, LTH-798, Electronic proceedings of the 6th Simons workshop on Strings, Geometry and the LHC, Stony Brook NY June 2008.
25. *Searching for Extra Neutral Interactions at the LHC*, R. Armillis, C. Coriano, A.E. Faraggi, M. Guzzi and N. Irges, Proceedings of the Workshop on Monte Carlo's, Physics and Simulations at the LHC PART II.
26. *MSHSM – Minimal Standard Heterotic String Models*, A.E. Faraggi, Proceedings of the Corfu Summer Institute 2009.
27. *On the equivalence of string vacua*, A.E. Faraggi, Proceedings of the Corfu Summer Institute 2010.
28. *The quantum closet*, Proceedings of the 10th International Workshop on Lie Theory and its applications in physics, Varna, Bulgaria 17 – 23 June 2013.
29. *String phenomenology: past, present and future perspectives*, Based on talk presented at the 2012 CERN Summer Institute on String Phenomenology. Published in Galaxies 2014, 2(2), 223-258; doi:10.3390/galaxies2020223.
30. *The Möbius symmetry of quantum mechanics*, A.E. Faraggi and M. Matone, Proceedings of the 7th International Workshop DICE2014 – Spacetime, Matter and Quantum Mechanics, Castiglioncello, Tuscany 15–19 September 2014.
31. *Hamilton-Jacobi meet Möbius*, A.E. Faraggi and M. Matone, Proceedings of the 7th International Workshop DISCRETE2014, King's College, London 6–9 December 2014.
32. *Spinor-vector duality and light Z' in heterotic string vacua*, A.E. Faraggi and J. Rizos, proceedings of PLANCK 2015 international conference, University of Ioannina, Greece, 25-29 May 2015.
33. *Spinor-vector duality and sterile neutrinos in string derived models*, A.E. Faraggi, proceedings of DISCRETE 2018 international conference, Austria Academy of Sciences, Vienna, 26-30 November 2018.
33. *Towards machine learning in the classification of $Z_2 \times Z_2$ orbifold compactifications*, A.E. Faraggi, G. Harries, B. Percival and J. Rizos proceedings of DISCRETE 2018 international conference, Austria Academy of Sciences, Vienna, 26-30 November 2018.
34. *Novel perspectives in string phenomenology*, A.E. Faraggi, Proceedings of the Corfu Summer Institute 2019 Corfu, Greece, 10-16 September 2019.
35. *Spinor–vector duality an BSM phenomenology*, A.E. Faraggi, Proceedings of the BSM–2021 conference Zeweil City, Egypt, 29–31 March 2021.
36. *String derived Z' models at the Upgraded Superconducting Supercollider*, A. McEntaggart, A.E. Faraggi and M. Guzzi, Proceedings of the BSM–2023 conference Hurgada, Egypt, 6–9 November 2023.

PUBLICATIONS (books):

1. *Proceedings of the “First international conference on string phenomenology”*, Oxford UK, 6–11 July 2002, Edited by S.A. Abel, A.E. Faraggi, A. Ibarra and M. Plümacher. To be published by World Scientific Publishing Co.

2. *Proceedings of the “Second international conference on string phenomenology”*, Durham UK, 29 July –4 August 2002, Edited by S.A. Abel, A.E. Faraggi, J. Santiago and V. Sanz. To be published by World Scientific Publishing Co.
3. *The equivalence postulate of quantum mechanics: main theorems*, A.E. Faraggi and M. Matone, Contribution to the book on Quantum Trajectories, Edited by Pratim Chattaraj, Taylor&Francis/CRC press.

INVITED CONFERENCE TALKS:

1. *Deriving the Standard-Model from the superstring*, talk presented at the 1992 meeting of the Israel Physical Society (April, 1992).
2. *Superstring Standard-like Models and the Top Quark Mass Hierarchy*, invited talk presented at the 1992 Warsaw annual meeting (May, 1992).
3. *Construction of Realistic Superstring Standard-like Models*, invited talk presented at the Texas/PASCOS conference, Berkeley California (December, 1992).
4. *Realistic Superstring Models*, invited talk presented at the Coral Gables conference, Miami Florida (January, 1994).
5. *Deriving the Standard-Model from the superstring*, invited talk presented at the First International conference on phenomenology of unification from present to future, Rome, (March 1994).
6. *Realistic Superstring Standard-like Models*, invited talk presented at the SUSY94 workshop, Ann-Arbor Michigan (May, 1994).
7. *Fermion Mass Textures from String Derived Models*, invited talk presented at the Second workshop on fermion masses, Fermilab (October, 1994).
8. *$Z_2 \times Z_2$ orbifold compactification- the origin of realistic free fermionic models*, invited talk presented at the Beyond the Standard Model 1994, lake Tahoe (December, 1994).
9. *On the origin of three generation free fermionic models*, invited talk presented at the Wakulla Springs workshop on Supersymmetry, (November, 1995).
10. *Stable superstring relics*, invited talk presented at the String 96 conference, Santa-Barbara, California (July 1996).
11. *Superstring phenomenology – present and future perspective*, invited talk presented at the “Beyond the Desert 97 – Accelerator and non Accelerator approaches” workshop, Castle Ringberg, Tegernsee, Germany 8–14 June 1997.
12. *Family universal anomalous $U(1)$ and squark degeneracy in string derived models*, invited talk presented at the PASCOS conference, Boston MA (March, 1998).
13. *The magic of the $Z_2 \times Z_2$ orbifold: From squark degeneracy to F -theory*, invited talk presented at the First European Meetings on Planck to Electroweak scale physics, Kazimierz, Poland (May, 1998).
14. *Minimal Superstring Standard Model*, invited talk presented at the Pheno 99 Symposium, Madison WI (April, 1999).
15. *Minimal Superstring Standard Model*, invited talk presented at the “Beyond the Desert 99 – Accelerator and non Accelerator approaches” workshop, Castle Ringberg, Tegernsee, Germany 6–12 June 1999.
16. *Perspectives in superstring phenomenology*, invited talk presented at “PASCOS 99”, Lake Tahoe, CA 10–16 December 1999.
17. *Minimal Standard Heterotic String Model*, invited talk presented at the UK-String Phenomenology Workshop, Royal Holloway, 26 September 2000.
18. *Minimal Superstring Standard Model*, invited talk presented at the “EU-AEFNET Workshop Meeting”, Oxford UK, 7–8 December 2000.
19. *Aspects of Unification*, invited talk presented at the “LPTH ENS XXXIIth Summer Institute”, Paris France, 13–31 August 2001.

20. *Stable superstring relics and Ultra-high energy cosmic rays*, invited talk presented at the “EU-AEFNET Workshop Meeting”, Corfu Greece, 10–12 September 2001.
21. *Pheno-M-enology*, invited talk presented at the “EUROGDR Workshop Meeting”, Durham UK, 18–20 April 2002.
22. *On flavor of matter and smatter*, invited talk presented at the “PatiFest”, College Park MD, 3–4 May 2002.
23. *On flavor of matter and smatter*, invited talk presented at the “Fifth European Meeting from the Planck to Electroweak scale”, Kazimierz, Poland, 24–30 May 2002, College Park MD, 3–4 May 2002.
24. *Pheno-M-enological aspects of M-theory*, invited talk presented at “Beyond the Desert 02”, Oulu, Finland 2–7 June 2002.
25. *The equivalence postulate of quantum gravity*, invited talk presented at ‘Branes, gravity, condensed matter and non-linear quantum mechanics workshop’, King’s College, London, 11–14 September 2002.
26. *Phenomenological aspects of M-theory*, invited talk presented at the “EU-AEFNET midterm Workshop Meeting”, Paris, France 11–14 December 2002.
27. *Phenomenological Survey of M-theory*, invited talk presented at “SUGRA 20 conference”, Northeastern Univeristy, Boston MA, 17–21 March 2003.
28. *Phenomenological Survey of M-theory*, invited talk presented at “PLANCK03”, Madrid, Spain 26–31 May 2003.
29. *Superstring phenomenology*, invited talk presented at “Beyond the Desert 03”, Castle Ringberg, Tegernsee, Germany 9–14 June 2003.
30. *Classification of the chiral $Z_2 \times Z_2$ fermionic orbifold*, invited talk presented at “PLANCK04”, Bonn, Germany 23–28 May 2004.
31. *Self-duality and vacuum selection*, invited talk presented at “String Phenomenology 2004”, Ann-Arbor, Michigan, 1–6 August 2004.
32. *Moduli fixing in realistic string vacua*, invited talk presented at “String Phenomenology 2005”, Munich, Germany, 13–18 July 2005.
33. *Fictitious extra dimensions*, invited talk presented at “Quantum theory and symmetries 2005”, Varna, Bulgaria, 15–21 August 2005.
34. *Free fermionic constructions*, invited talk presented at “String theory in the real world workshop”, Columbus Ohio, 7-9 Novemver 2005.
35. *Minimal Standard Heterotic String Model*, invited talk presented at the String Phenomenology 2006 Conference, Santa-Barbara California, 29 August 2006.
36. *Novel symmetries in heterotic string models*, invited talk presented at the String Phenomenology 2007 Conference, Frascati Italy, 7 June 2007.
37. *Phenomenological survey of quasi-realistic free fermionic heterotic string models*, invited talk presented at the 6th Simons workshop on Strings, Geometry and the LHC, Stony Brook NY, 30 June 2008.
38. *Duality & equivalence and the quest for unification* invited talk presented at the second workshop on quantum trajectories, Los-Alamos New-Mexico, 27–30 July 2008.
39. *Moduli fixing in heterotic string vacua*, invited talk presented at “UK BSM 08 Workshop”, University of Sussex, Brighton, UK, 22–23 September 2008.

40. *Aspects of free fermionic heterotic-string models* invited talk presented at the Workshop on New Perspectives In String Theory, The Galileo Galilei Institute for Theoretical Physics, Arcetri, Florence, 26 May 2009.
41. *Roaming among free fermion models*, invited talk presented at the String Phenomenology 2009 Conference, Warsaw Poland, 19 June 2009.
42. *Minimal standard heterotic string models (MSHSM)*, invited talk presented at the Corfu Summer Institute 2009 on “Cosmology - Strings: Theory - Cosmology - Phenomenology”, Corfu Greece, 6–13 September 2009.
43. *Exophobic quasi realistic heterotic-string vacua*, invited talk presented at the String Phenomenology 2010 Workshop, Santa-Barbara California, 14 April 2010.
44. *Higgs-Matter splitting in heterotic-string vacua* invited talk presented at the String Phenomenology 2010 conference, Paris, France, 5–9 July 2010.
45. *On the equivalence of string vacua*, invited talk presented at the Corfu Summer Institute 2010 on “Fields and Strings: Theory - Cosmology - Phenomenology”, Corfu Greece, 6–12 September 2010.
46. *Exophobia, leptophobia and other manias in heterotic string vacua* invited talk presented at the String Phenomenology 2011 conference, Madison WI, 22–26 August 2011.
47. *Moduli fixing and other manias in heterotic string vacua* invited talk presented at the String Vacuum 2011 conference, Busan Korea, 5–7 September 2011.
48. *The dark OPERA* invited talk presented at the String Phenomenology 2012 conference, Cambridge, UK, 25–29 June 2012.
49. *String Phenomenology: past, present and future* invited talk presented at the CERN String Phenomenology Institute 2012 CERN, Geneva, 2–20 July 2012.
50. *Light Z' in heterotic-string models* invited talk presented at the 4th Bethe Center Workshop on Unification and String Theory Bad Honnef, 1–5 October 2012.
51. *The quantum closet*, invited talk presented at the 10th International Workshop Lie Theory and its applications in physics, Varna, Bulgaria 17 – 23 June 2013.
52. *Free fermion models and asymmetric orbifolds*, invited talk presented at the Bethe Centre Forum on “Non-geometry, asymmetric orbifolds and model building”, Bonn, Germany 10 – 13 June 2014.
53. *The Möbius symmetry of quantum mechanics*, invited talk presented at the 7th International Workshop DICE2014 – Spacetime, Matter and Quantum Mechanics, Castiglioncello, Tuscany 15–19 September 2014.
54. *The Möbius symmetry of quantum mechanics*, invited talk presented at DISCRETE 2014 – 4th Symposium on Prospects in the Physics of Discrete Symmetries, King’s College London, 2–6 December 2014.
55. *Spinor-vector duality and light Z' in heterotic string models*, invited talk presented at the PLANCK 2015 international conference, University of Ioannina, Greece, 25-29 May 2015.
56. *750GeV diphoton LHC excess and extra Z' in heterotic-string models*, invited talk presented at the String Phenomenology 2016 conference, University of Ioannina, Greece, 20-24 June 2016.
57. *Dark Olives (and other dark middleeastern delights)*, invited talk presented at the

- “Olivefest: Astroparticle Physics Looking Forward” University of Minnesota, Minneapolis, 17-19 May 2017.
58. *Exotica*, invited talk presented at the String Phenomenology 2017 conference, Virginia Tech University, Blacksburg, Virginia, 3–7 July 2017.
 59. *Classification of heterotic-string vacua*, invited talk presented at the String Phenomenology 2018 conference, University of Warsaw, Poland, 2–6 July 2018.
 60. *Spinor-vector duality and sterile neutrinos in string derived models*, invited talk presented at the DISCRETE 2018 international conference, Austria Academy of Sciences, Vienna, 26–30 November 2018.
 61. *Machine learning in $Z_2 \times Z_2$ orbifold classification*, invited talk presented at the ICTP workshop on the interface of string theory, machine learning and energy landscapes, ICTP, Trieste, 10-12 December 2018.
 62. *String phenomenology from a worldsheet perspective*, invited talk presented at the String Phenomenology 2019 conference, CERN, Geneva, 24-28 June 2019.
 63. *Novel perspectives in string phenomenology*, invited talk presented at the Corfu Summer Institute 2019, Corfu, Greece, 10-16 September 2019.
 64. *Spinor–vector duality and BSM phenomenology*, invited talk presented at the BSM–2021 conference, Zewail City, Egypt, 29-31 March 2021.
 65. “*Modular maps*” and *BSM phenomenology*, invited talk presented at the SP2021 conference, Northeastern University, Boston, 8-12 July 2021.
 66. *Spinor–vector duality and the swampland*, invited talk presented at the SUSY 2022 conference, University of Ioannina, Ioannina, Greece, 27 June – 1 July 2022.
 67. *Toward realistic de Sitter heterotic–string models with stable moduli*, invited talk presented at the KEK Annual Theory Workshop 2022, 6 December 2022.
 68. *Sterile neutrinos in string derived models* , invited talk presented at the CERN Neutrino Platform Pheno Week 2023, 13 March 2023.
 69. *D-term uplift, Moduli fixing and SVD in HeteroticString Vacua*, invited talk presented at the SP2023 conference, Institute for Basic Sciences, Daejeon, Korea, 3-7 July 2023.
 70. *D-term uplift in non-supersymmetric heteroticstring vacua*, invited talk presented at the SUSY 2023 conference, University of Southampton, Southampton, UK, 17-21 July 2023.
 71. *String Derived Z Model at an Upgraded Superconducting Super Collider* , Special colloquium presented at the Kavli Institute for Theoretical Physics, Santa–Barbara, CA, 11 April 2023.
 72. *String Derived Z Model at an Upgraded Superconducting Super Collider* , invited talk presented at the Corfu Summer Institute 2024 on “the Standard Model and Beyond”.
 73. *Mirror Symmetry and Spinor-Vector Duality*, invited talk presented at the Corfu Summer Institute 2024 on “Quantum Gravity, Strings and the Swampland,”.
 74. *Spinor-Vector Duality and Mirror Symmetry*, invited talk presented at the 12th Bangkok workshop on High-Energy Theory, Chulalongkorn University, Thailand, 20–24 January 2025.

MEETINGS AND CONFERENCES ATTENDED

- Superstring Workshop, Texas A&M University, March 1989.
- APS meeting on High Energy Physics, Rice University, January 1990.
- Superstring Workshop, Texas A&M University, March 1990.
- Neutrino 90, CERN, June 1990.
- Jerusalem Winter School on Two Dimensional Gravity, Jerusalem, December 1990.
- International School of Astroparticle Physics, The Woodlands, Texas, January 1991.
- Warsaw Annual Meeting on High Energy Physics, Kazimierz, Poland, May 1992.
- SSC, visiting member, June, 1992.
- SLAC, visiting member, July, 1992.
- SSC, visiting member, January–February, 1993.
- Texas\PASCOS conference, Berkeley, CA, December 1992.
- Jerusalem Winter School on Neutrino Physics, Jerusalem, December 1992.
- Coral Gables conference on Unified Symmetry, Miami, FL January 1994.
- First International Conference on phenomenology of Unification, Rome, March 1994.
- SUSY 94, Ann–Arbor, MI, May 1994.
- FERMILAB workshop on the origin of fermion masses, Chicago, IL, October 1994.
- Beyond the Standard Model IV, Lake Tahoe, CA, December, 1994.
- Jerusalem Winter School on Supersymmetry and Superstring – a phenomenological orientation, Jerusalem, December 1994.
- Unification from the weak scale to the Planck scale, Institute For Theoretical Physics, Santa–Barbara, CA, ITP visiting member, September–October 1995
- CERN, visiting member, June–July 1996.
- Workshop on Duality, CERN Geneva, June 1996.
- String 96, Santa Barbara, CA, July 1996.
- Workshop on gauge and flavor hierarchy physics, Aspen Center for Physics, Aspen, CO, July 1996.
- Workshop on duality in physics and mathematics, Aspen Center for Physics, Aspen, CO, July 1996.
- CERN, visiting member, December, 1996.
- Workshop on Beyond the Desert, Castle Ringberg, Germany, June, 1997.
- CERN, visiting member, July, 1997.
- PASCOS 98, Boston MA, March 1998.
- First European Meetings on Planck to Electroweak scale physics, Kazimierz, Poland, May 1998.
- Institute for Advanced Study, Visiting member, July 1998.
- Workshop on Beyond the Desert, Castle Ringberg, Germany, June, 1999.
- CERN, visiting member, June–July, 1999.
- Supersymmetric gauge dynamics and String theory, Institute For Theoretical Physics, Santa–Barbara, CA, ITP visiting member, August–September 1999.
- PASCOS 99, Lake–Tahoe CA, December 1999.
- First EU–AEFNET Workshop Meeting, Oxford UK, December 2000.
- CIT–USC Center for Theoretical Physics, visiting member, January–February 2001.
- Early universe and supersymmetry EU workshop meeting, CERN, April 2001.

- CERN, visiting member, July 2001.
- XXXIth Summer Institute, LPTH ENS, Paris France, 13–31 August 2001.
- Second EU–AEFNET Workshop Meeting, Corfu Greece, 10–12 September 2001.
- PatiFest, College Park Maryland, 3–4 May 2002.
- Fifth European Meeting from the Planck to Electroweak scale, Kazimierz, Poland, 24–30 May 2002.
- Workshop on Beyond the Desert 02, Oulu, Finland, June, 2002.
- String Phenomenology 2002, Oxford UK, 6–11 July 2002.
- CERN, visiting member, August 2002.
- Third EU–AEFNET Workshop Meeting, Paris, 11 December 2002.
- SUGRA20, Boston 17–21 March 2003.
- PLANCK03, Madrid 26–31 May 2003.
- Beyond the Desert 03, Oulu, Castle Ringberg, Germany 9–14 June 2003.
- String Phenomenology 2003, Durham UK, 29 July –4 August 2003.
- PLANCK04, Bonn, Germany, 24–28 May 2004.
- String Phenomenology 2004, Michigan Ann–Arbor, 1–6 August 2004.
- CERN, visiting member, August 2004.
- String theory in the real world, Aspen Center for Physics, Aspen, CO, August 2004.
- Workshop on cosmic particles, Cosener’s House, Abingdon UK February 2005.
- UK–HEP Forum, Cosener’s House, Abingdon UK, April 2005.
- String Phenomenology 2005, Munich Germany, 13–18 July 2005.
- Quantum theory and symmetries 2005, Varna Bulgaria, 15–21 August 2005.
- CERN, visiting member, July 2005.
- Strings in the real world workshop, Columbus Ohio, 7–9 November 2005.
- Jerusalem Winter School 2005, Jerusalem, December 2005.
- UK–HEP Forum, Cosener’s House, Abingdon UK, May 2006.
- GGI workshop on New Directions Beyond the Standard Model, Firenze, Italy, 19–30 June 2006.
- CERN, visiting member, July 2006.
- String Phenomenology 2006, Santa–Barbara, California, August 2006.
- GGI workshop on String and M theory approaches to particle physics and cosmology, Firenze, Italy, 14 May – 1 June 2007.
- String Phenomenology 2007, Rome, Italy, 4–8 June 2007.
- 6th Simons workshop on Strings, Geometry and the LHC, Stony Brook NY, 23 June – 7 July 2008.
- Workshop on quantum trajectories, Los–Alamos New Mexico, 27–30 July 2008.
- UK BSM 08 workshop, University of Sussex, Falmer, UK, 23 September 2008.
- GGI workshop on New Perspectives in String theory, Firenze, Italy, 25 May – 12 June 2009.
- String Phenomenology 2009, Warsaw, Poland, 15–19 June 2009.
- Corfu Summer Institute 2009, Corfu Greece, 6–13 September 2009.
- Strings at the LHC and in the Early Universe, Kavli Institute For Theoretical Physics, Santa–Barbara CA, April 2010.
- String Phenomenology 2010, Paris, France, 5–9 July 2010.

- CERN, visiting member, August 2010.
- Corfu Summer Institute 2010, Corfu Greece, 6–12 September 2010.
- UK–HEP Forum, Cosener’s House, Abingdon UK, September 2010.
- CERN, visiting member, June 2011.
- 9th Simons workshop in mathematics and physics, Stony–Brook NY, 7–20 August 2011.
- String Phenomenology 2011, Madison, WI, 22–26 August 2011.
- StringVac 2011, Busan, Korea, 5–7 September 2011.
- String Phenomenology 2012, Cambridge, UK 25–29 June 2012.
- String Phenomenology Institute 2012, CERN, Geneva, 2–20 July 2012.
- 4th Bethe Center Workshop on Unification and String Theory Bad Honnef, 1–5 October 2012.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2012.
- 10th International Workshop Lie Theory and its applications in physics, Varna, Bulgaria, 17 – 23 June 2013.
- CERN, visiting member, July 2013.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2013.
- Bethe Centre Forum on Non-geometry, asymmetric orbifolds and model building, Bonn, Germany 10 – 13 June 2014.
- CERN, visiting member, July 2014.
- MITP workshop on String theory and its applications, Mainz, Germany, 1 – 12 September 2014.
- 7th International Workshop DICE2014 – Spacetime, Matter and Quantum Mechanics, Castiglioncello, Tuscany, 15–19 September 2014.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2014.
- DISCRETE 2014 – 4th Symposium on Prospects in the Physics of Discrete Symmetries, King’s College London, 2–6 December 2014.
- IAS, visiting member, April 2015.
- PLANCK 2015 – University of Ioannina, Ioannina, Greece, May 2015.
- CERN, visiting member, June 2015.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2015.
- String Phenomenology 2016, University of Ioannina, Ioannina, Greece, June 2016.
- 14th Simons workshop in mathematics and physics, Stony–Brook NY, 10–22 July 2016.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2016.
- “Olivefest: Astroparticle Physics Looking Forward” University of Minnesota, Minneapolis, 17–19 May 2017.
- String Phenomenology 2017 conference, Virginia Tech University, Blacksburg, Virginia, 3–7 July 2017.
- CERN, visiting member, July 2017.
- UK–HEP Forum, Cosener’s House, Abingdon UK, November 2017.
- 16th Simons workshop in mathematics and physics, Stony–Brook NY, 14–28 July 2018.
- DISCRETE 2018 conference, Austrian Academy of Sciences, Vienna Austria, 26–30 November 2018.

- GGI workshop on String theory from a worldsheet perspective, Firenze, Italy, 1 – 12 April 2019.
- CERN, visiting member, June 2019.
- String Phenomenology 2019 conference, CERN, Geneva, 24–28 June 2019.
- String Phenomenology 2021 conference, Northeastern, Boston, 4–8 July 2021.
- Corfu Summer Institute 2019, Corfu Greece, 10–16 September 2019.
- BSM 2021, Zewail City, Cairo Egypt, 29 March 2021 – 2 April 2021.
- SUSY 2022 conference, University of Ioannina, Ioannina, Greece, 27 June– 1 July 2022.
- CERN, Scientific Associate, February–May 2023.
- Exotic approaches to naturalness, CERN, 30 January - 3 February 2023.
- CERN Neutrino platform pheno week, CERN, 13–17 March 2023.
- MWDays23 workshop, CERN, 17-20 April 2023.
- String Phenomenology 2023, 3–7 July 2023.
- SUSY 2023, Southampton, 17–21 July 2023.
- BSM 2023, Hurghada, Egypt, 6 – 9 November 2023.
- What is string theory? Kavli Institute For Theoretical Physics, Santa–Barbara, CA, KITP visiting member, 24 March – 12 April 2024.
- CERN, visiting member, July 2024.
- Corfu Summer Institute 2024, Corfu Greece, 1–6 September 2024.
- 12th Bangkok workshop on High-Energy Theory, Chulalongkorn University, Thailand, 20–24 January 2025.

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