# CURRICULUM VITAE


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| NAME: | Goran Senjanović |
| PLACE/DATE OF BIRTH: | Beograd, Jugoslavia, 9/6/1950 |
| NATIONALITY: | Croatian |
| PRESENT ADDRESS: | Ludwig Maximilians University, LMU<br>Theresienstrae 37, 80333 Munich, Germany<br>and<br>International Centre for Theoretical Physics, ICTP<br>Strada Costiera 11, 34014 Trieste, Italy.<br>Electronic mail: goran@ictp.trieste.it<br>Phone: +39-040-2240397 |
| LANGUAGES: | English, Italian, Spanish, French, Croato-serbian (mother tongue |
| MARITAL STATUS: | Divorced, one child. |


## Education

- **BSc** University of Beograd, Beograd, Yugoslavia, 1973.
- **PhD** City College of New York, New York, USA, 1978.

## Positions Held

- (1978 -1980): Postdoctoral Research Associate,
  University of Maryland, Maryland, USA.
- (1980 -1982): Assistant Physicist,
  Brookhaven National Laboratory, Long Island, USA.
- (1982 -1987): Associate Physicist,
  Brookhaven National Laboratory.

- (1987- 1993): Professor of Physics,
  University of Zagreb, Zagreb, Croatia.
- (1991 -1997): Research Scientist (staff associate),
  International Centre for Theoretical Physics, Trieste, Italy.
- (1998 -2013): Research Scientist (staff),
  International Centre for Theoretical Physics, Trieste, Italy.
- (2013 - present) Emeritus Staff Associate,
  ICTP, Trieste, Italy.
- (October 2013 - January 2018) Director of Research,
  Gran Sasso Science Institute, L'Aquila, Italy
- (March 2020 - present) Guest Professor of Physics,
  Ludwig Maximilians University, Munich, Germany

## Long-term on-leave Positions

- (1983 -1984) Institute for Theoretical Physics, Santa Barbara, California, USA.
- (1984-1985) Virginia State University, Blacksburg, Virginia, USA
- (1990 -1991) CERN, Geneva, Switzerland.

## Professional recognition

- ICTP node representative of the EU 5th framework programme "Supersymmetry and the early Universe" (2000-2004).
- ICTP node representative of the UniverseNet, the EU 6th framework programme (2006-2010).
- Member of the organizational committee of the COSMO series of "International Conferences on the Physics of the Early Universe".
- Member of the organizational committee of the "Physics From the Planck Scale to the Electroweak Scale" International Conferences. One of the fathers of the series, from 1995
- Co-ordinator of the International Scientific-Advisory Committee of the SEENET-MTP Southeastern European Network in Mathematical and Theoretical Physics.

- Senior Scientist Award from the Ministry of Science and Technology of Slovenia in 2009
- Conference "Goranfest, the Joy of Making Physics" in honour of his 60th birthday, Split, Croatia, June 2010.

## Publication record from Google scholar database

| | |
|---|---|
| Total number of citations | 30 158 |
| Number of citations of the most cited paper | 7775 |
| h-index | 65 |

## Publication record from INSPIRE, HEP database

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|---|---|
| Total number of publications | 175 |
| Published papers | 131 |
| Total number of citations | 25 715 |
| Total number of citations of published papers | 24 923 |
| Average citations per published paper | 190 |
| Renowned papers (500+) | 6 |
| Famous papers (250-499) | 7 |
| Very well-known papers (100-249) | 31 |
| Well-known papers (50-99) | 25 |
| Known papers (10-49) | 44 |
| Less known papers (1-9) | 17 |
| Unknown papers (0) | 0 |
| $h_{HEP}$ index | 64 |

### Renowned papers

The following paper, listed below: Neutrino Mass and Spontaneous Parity Violation, is No. 25 on the list of most cited papers of all time in high-energy physics, with more than 6700 citations. The list:

- **A facility to Search for Hidden Particles at the CERN SPS: the SHiP physics case**, by many authors
  Rept.Prog.Phys. 79 (2016) 12, 124201

  **Number of citations: 886**

- **Majorana Neutrinos and the Production of the Right-handed Charged Gauge Boson, by W.Y. Keung and G. Senjanović Phys.Rev.Lett. 50 (1983)**

  **Number of citations: 591**

- **Neutrino Masses and Mixings in Gauge Models with Spontaneous Parity Violation, by R.N. Mohapatra and G. Senjanović Phys.Rev. D23 (1981) 165.**

  **Number 44 in the 2018 edition of Top Cited Articles of All Time by hep-ph, number 62 in the Top Cited Articles in 2018**

**by hep-ph.**
**Number of citations: 3112**

- **Neutrino Mass and Spontaneous Parity Violation, by R.N. Mohapatra and G. Senjanović**
  **Phys.Rev.Lett. 44 (1980) 912.**

  **Among the Top Cited Articles of All Time (no. 25)**

  **Number one in the list of Top Cited Articles of All Time by hep-ph, 2013 &14 editions. From 2015-2020 number three.**
  **Number of citations: 6797**

- **Spontaneous Breakdown of Parity in a Class of Gauge Theories, by G. Senjanović.**
  **Nucl.Phys.B 153 (1979)**

  **Number of citations: 656**

- **Exact Left-Right Symmetry and Spontaneous Violation of Parity, by R.N. Mohapatra and G. Senjanović**
  **Phys.Rev.D 12 (1975)**

  **Number 97 in the 2018 edition of Top Cited Articles of All Time by hep-ph.**
  **Number of citations: 2493**

## Teaching Experience

- Graduate School: recitations and teaching remedial courses (1973-78)
- Virginia State University: taught Quantum Field Theory and General Relativity for PhD students
- University of Zagreb: taught particle physics for the last year undergraduate students (1987-91)
- ICTP: taught the courses 'Beyond the standard model' and 'The Standard Model' in the Diploma Course program
- LMU: taught the courses 'Neutrino Physics' and 'Grand Unification of Particle Forces'

## Ph.D. Students supervised

- A. Sokorac, co-advisor with R. Mohapatra, CCNY, New York
- J. Milutinović, co-advisor with W. Caswell, University Of Maryland, College Park, MD
- E. Rusjan, VPI, Blacksburg, VA.
- A. Melfo, SISSA, Trieste.
- L. Boubekeur, SISSA Trieste
- P. Fileviez Perez, MPI Munich
- R. Guevara, Univ. of Trieste.
- V. Tello, SISSA
- L. Rahilli, co-advisor with A. Arhrib (Univ. of Tangiers, Morocco)
- T. Chowdhury, SISSA
- J. C. Vasquez, SISSA

## LMU Masters Students supervised

- Sha Azyzy
- Halvor Melkild
- Mehmet Gumus
- Selina Kettner
- Sai Chandrasekar

## ICTP Diploma Course Students supervised

| Name | Country | Name | Country |
|---|---|---|---|
| M. Ablikim | China | M. Aboulazm | Egypt |
| A. Abdalgabar | Sudan | M. Al Fiky | Egypt |
| A. Anoka | Nigeria | A. I. Arbab | Sudan |
| A. Babo | Sudan | A. Bachri | Morocco |
| M. Cabrera | Guatemala | T. Chowdhury | Bangladesh |
| T. N. Dao | VietNam | H. T. Do | VietNam |
| L. Dulat | China | A. Girma | Ethiopia |
| R. Guevara | Cuba | N. Huang | VietNam |
| P. Ittisamai | Thailand | J. Julio | Indonesia |
| S.A. Khan | Bangladesh | H. Khachatryan | Armenia |
| N. Kiet | VietNam | E. Lopez | Cuba |
| G. Mammadov | Azerbaijan | H. Martinez | Venezuela |
| A. Melfo | Venezuela | B.A.E. Mohammed | Sudan |
| F. Moret | Venezuela | T. Nyawelo | Sudan |
| J. Ocariz | Venezuela | B. Oginni | Nigeria |
| N. Pham | VietNam | Rahman | Bangladesh |
| M. Randrianarivony | Madagascar | M. Rustamova | Azerbajan |
| M . Sanchez | Venezuela | A. Sanoja | Venezuela |
| S. Seunarine | Trinidad | M. Shamim | Bangladesh |
| R. Soualah | Algeria | V. Tello | Venezuela |
| L. Tran | VietNam | R. Undraa | Mongolia |
| J.C. Vasquez | Venezuela | E. Zaakouk | Egypt |
| E. Elkhidir | Sudan | | |
| E. Estrada | F. Ghrab | | |
| E. Mogollon | H. Elsiekh | | |

## Organization of schools and meetings

- Workshop "From Majorana to LHC: origin of neutrino mass", ICTP, Trieste, October 2013.
- Summer School in Particle Physics, ICTP Trieste 2011.
  Organizers: S. Bertolini, B. Marciano, G. Senjanovic.
- Co-organized ICTP Summer School on Particle Physics in the LHC Era Trieste, June 2009
- Co-editor of 'Modern Trends in Strings, Cosmology and Particles', Publ. Astron. Obs. Belgrade No. 87 (2010), 9 - 10
- Co-organized (with Y. Okada) Sessions on P and CP violation at the two CERN Workshops on the Interplay of Collider of Flavor Physics, March and December 2009.
- Workshop on Grand Unification and Proton Decay ICTP, July 22-26, 2007
- Planck 05, the eigth European Meeting "From the Planck scale to the Electroweak scale", ICTP, May 2005
- Hierarchy Problems in Four and more Dimensions, ICTP Trieste Sep. 2003. Organizers: B. Bajc, R. Barbieri, G. Dvali, G. Senjanovic and F. Vissani.
- Summer School in Particle Physics, ICTP Trieste 2002.
  Organizers: G. Dvali, G. Senjanovic, G. Thompson and F. Vissani.
- Summer School in Particle Physics, ICTP Trieste 2001.
  Organizers: G. Senjanovic, A. Yu. Smirnov, G. Thompson.
- Summer School on Astroparticle Physics and Cosmology, ICTP Trieste 2000.
  Proceedings: Astroparticle Physics and Cosmology.
  Editors G. Senjanovic, A. Yu. Smirnov, G. Thompson.
- COSMO-99, International workshop on Particle Physics and the Early Universe, ICTP Trieste 1999.
  Proceedings: COSMO-99.
  editors U. Cotti, R. Jeannerot, G. Senjanovic, A. Yu. Smirnov.
- Summer school in particle physics. ICTP Trieste 1999.
  Proceedings: Particle Physics 1999.
  Editors G. Senjanovic, A. Yu. Smirnov.

- Summer school in high energy physics and cosmology. ICTP Trieste 1998.
  Proceedings: High energy physics and cosmology, 1998.
  Editors Masiero, A., Senjanovic, G., Smirnov, A.

- PAST-97, Workshop on phenomenological aspects of superstring theories, ICTP Trieste 1997.
  Proceedings: Phenomenological aspects of superstring theories PAST-97. Editors G. Senjanovic, A. Yu. Smirnov.

- Summer school in high energy physics and cosmology, ICTP Trieste 1997.
  Proceedings: High energy physics and cosmology 1997.
  Editors E. Gava, K.S. Narain, S. Randjbar-Daemi, A. Masiero, G.Senjanovic, A. Yu. Smirnov. Q. Shafi.

- International Workshop on the fermion mass problem, ICTP Trieste 1996.
  Organisers: G. Senjanović, A. Yu. Smirnov.

## Publications


1. A. Preda, G. Senjanović and M. Zantedeschi, "Minimal SO(10) ante portas: the importance of being effective," [arXiv:2410.19408 [hep-ph]].

2. G. Senjanović and M. Zantedeschi, "Minimal SU(5) theory on the edge: The importance of being effective," Phys. Rev. D **109** (2024) no.9, 095009 doi:10.1103/PhysRevD.109.095009 [arXiv:2402.19224 [hep-ph]].

3. G. Senjanović and V. Tello, "Spontaneous parity violation," PoS **DISCRETE2022** (2024), 053 doi:10.22323/1.431.0053 [arXiv:2306.09512 [hep-ph]].

4. G. Senjanović and M. Zantedeschi, "Grand unification, small vs large representations, hadron colliders and all that," PoS **CORFU2022** (2023), 127 doi:10.22323/1.436.0127 [arXiv:2304.07932 [hep-ph]].

5. G. Dvali, A. Maiezza, G. Senjanović and V. Tello, "Neutrinoless double beta decay: Neutrino mass versus new physics," Phys. Rev. D **108** (2023) no.7, 075012 doi:10.1103/PhysRevD.108.075012 [arXiv:2303.17261 [hep-ph]].

6. G. Senjanović and M. Zantedeschi, "SU(5) grand unification and W-boson mass," Phys. Lett. B **837** (2023), 137653 doi:10.1016/j.physletb.2022.137653 [arXiv:2205.05022 [hep-ph]].

7. A. Preda, G. Senjanović and M. Zantedeschi, "SO(10): A case for hadron colliders," Phys. Lett. B **838** (2023), 137746 doi:10.1016/j.physletb.2023.137746 [arXiv:2201.02785 [hep-ph]].

8. A. Melfo and G. Senjanović, "Neutrino: Chronicles of an aloof protagonist" [arXiv:2201.02785 [hep-ph]] Mod.Phys.Lett.A 37 (2022)

9. G. Senjanović, "Neutrino 2020: Theory Outlook" [arXiv:2011.01264 [hep-ph]] Int.J.Mod.Phys.A 36 (2021

10. Many authors, "New high-sensitivity searches for neutrons converting into antineutrons and/or sterile neutrons at the HIBEAM/NNBAR experiment at the European Spallation Source" [arXiv:2011.01264 [hep-ph]] J.Phys.G 48 (2021) 7

11. G. Senjanović and V. Tello, Int. J. Mod. Phys. A **38** (2023) no.15n16, 2350067 doi:10.1142/S0217751X23500677 [arXiv:2004.04036 [hep-ph]].

12. G. Senjanović, "Natural Philosophy versus Philosophy of Naturalness," Mod. Phys. Lett. A **35** (2020) no.18, 2030006 doi:10.1142/S0217732320300062 [arXiv:2001.10988 [hep-ph]].

13. G. Senjanović and V. Tello, "Parity and the origin of neutrino mass" [arXiv: 1912.13060 [hep-ph]] Int.J.Mod.Phys.A 35 (2020) 09

14. G. Senjanović and V. Tello, "Disentangling Seesaw in the Minimal Left-Right Symmetric Model," [arXiv:1812.03790 [hep-ph Phys.Rev.D 100 (2019) 11

15. A. Maiezza, G. Senjanović and J. C. Vasquez, "Higgs sector of the minimal left-right symmetric theory," Phys. Rev. D **95**, no. 9, 095004 (2017) doi:10.1103/PhysRevD.95.095004 [arXiv:1612.09146 [hep-ph]]

16. G. Senjanović and V. Tello, "Probing Seesaw with Parity Restoration," Phys. Rev. Lett. **119**, no. 20, 201803 (2017) doi:10.1103/PhysRevLett.119.201803 [arXiv:1612.05503 [hep-ph]]

17. G. Senjanović, "Is left-right symmetry the key?," Mod. Phys. Lett. A **32**, no. 04, 1730004 (2017) doi:10.1142/S021773231730004X [arXiv:1610.04209 [hep-ph]]

18. G. Senjanović and V. Tello, "Origin of Neutrino Mass," PoS PLANCK **2015**, 141 (2016)

19. S. Alekhin, W. Altmannshofer, T. Asaka, B. Batell, F. Bezrukov, K. Bondarenko, A. Boyarsky and N. Craig *et al.*, "A facility to Search for Hidden Particles at the CERN SPS: the SHiP physics case," arXiv:1504.04855 [hep-ph].

20. G. Senjanović and V. Tello, "Restoration of Parity and the Right-Handed Analog of the CKM Matrix," Phys. Rev. D **94**, no. 9, 095023 (2016) doi:10.1103/PhysRevD.94.095023 [arXiv:1502.05704 [hep-ph]]

21. G. Senjanović and V. Tello, "Right Handed Quark Mixing in Left-Right Symmetric Theory," Phys. Rev. Lett. **114** (2015) 7, 071801 [arXiv:1408.3835 [hep-ph]].

22. M. Nemevsek, G. Senjanovic and V. Tello, "Connecting Dirac and Majorana Neutrino Mass Matrices in the Minimal Left-Right Symmetric Model," Phys. Rev. Lett. **110** (2013) 15, 151802 [arXiv:1211.2837 [hep-ph]].

23. M. Mitra, G. Senjanović and F. Vissani, "Heavy Sterile Neutrinos and Neutrinoless Double Beta Decay," arXiv:1205.3867 [hep-ph].

24. M. Nemevsek, G. Senjanović and Y. Zhang, "Warm Dark Matter in Low Scale Left-Right Theory," JCAP **1207** (2012) 006 [arXiv:1205.0844 [hep-ph]].

25. M. Nemevsek, F. Nesti, G. Senjanović and V. Tello, "Neutrinoless Double Beta Decay: Low Left-Right Symmetry Scale?," arXiv:1112.3061 [hep-ph].

26. T. A. Chowdhury, M. Nemevsek, G. Senjanović and Y. Zhang, "Dark Matter as the Trigger of Strong Electroweak Phase Transition," arXiv:1110.5334 [hep-ph].

27. B. Bajc, G. Dvali and G. Senjanović, "Problems with False Vacua in Supersymmetric Theories," arXiv:1108.5195 [hep-th].

28. A. Melfo, M. Nemevsek, F. Nesti, G. Senjanović and Y. Zhang, "Type II Seesaw at LHC: the Roadmap," arXiv:1108.4416 [hep-ph].

29. M. Mitra, G. Senjanović and F. Vissani, "Neutrinoless Double Beta Decay and Heavy Sterile Neutrinos," Nucl. Phys. B **856** (2012) 26 [arXiv:1108.0004 [hep-ph]].

30. G. Senjanović, "Probing the Origin of Neutrino Mass: from GUT to LHC," arXiv:1107.5322 [hep-ph].

31. A. Melfo, M. Nemevsek, F. Nesti, G. Senjanović and Y. Zhang, "Inert Doublet Dark Matter and Mirror/Extra Families after Xenon100," Phys. Rev. D **84** (2011) 034009 [arXiv:1105.4611 [hep-ph]].

32. G. Senjanović, "Neutrino mass: From LHC to grand unification," Riv. Nuovo Cim. **034** (2011) 1.

33. M. Nemevsek, F. Nesti, G. Senjanović and Y. Zhang, "First Limits on Left-Right Symmetry Scale from LHC Data," Phys. Rev. D **83** (2011) 115014 [arXiv:1103.1627 [hep-ph]].

34. B. Bajc, A. Momen and G. Senjanović, "Classicalization via Path Integral," arXiv:1102.3679 [hep-ph].

35. H. Martinez, A. Melfo, F. Nesti and G. Senjanović, "Three Extra Mirror or Sequential Families: a Case for Heavy Higgs and Inert Doublet," Phys. Rev. Lett. **106** (2011) 191802 [arXiv:1101.3796 [hep-ph]].

36. V. Tello, M. Nemevsek, F. Nesti, G. Senjanović and F. Vissani, "Left-Right Symmetry: from LHC to Neutrinoless Double Beta Decay," Phys. Rev. Lett. **106** (2011) 151801 [arXiv:1011.3522 [hep-ph]].

37. D. K. Ghosh, G. Senjanović and Y. Zhang, "Naturally Light Sterile Neutrinos from Theory of R-parity," Phys. Lett. B **698** (2011) 420 [arXiv:1010.3968 [hep-ph]].

38. A. Maiezza, M. Nemevsek, F. Nesti and G. Senjanović, "Left-Right Symmetry at LHC," Phys. Rev. D **82** (2010) 055022 [arXiv:1005.5160 [hep-ph]].

39. A. Melfo, A. Ramirez and G. Senjanović, "Type II see-saw dominance in SO(10)," Phys. Rev. D **82** (2010) 075014 [arXiv:1005.0834 [hep-ph]].

40. B. Bajc, T. Enkhbat, D. K. Ghosh, G. Senjanović and Y. Zhang, "MSSM in view of PAMELA and Fermi-LAT," JHEP **1005** (2010) 048 [arXiv:1002.3631 [hep-ph]].

41. B. Bajc, M. Nemevsek and G. Senjanović, "Probing leptonic CP phases in LFV processes," Phys. Lett. B **684** (2010) 231 [arXiv:0911.1323 [hep-ph]].

42. A. Arhrib, B. Bajc, D. K. Ghosh, T. Han, G. Y. Huang, I. Puljak and G. Senjanović, "Collider Signatures for Heavy Lepton Triplet in Type I+III Seesaw," arXiv:0904.2390 [hep-ph].

43. M. Raidal *et al.*, "Flavour physics of leptons and dipole moments," Report of Working Group 3 of the CERN Workshop Flavor in the Era of the LHC, Eur. Phys. J. C **57** (2008) 13 [arXiv:0801.1826 [hep-ph]].

44. B. Bajc, M. Nemevsek and G. Senjanović, "Probing seesaw at LHC," Phys. Rev. D **76** (2007) 055011 [arXiv:hep-ph/0703080].

45. B. Bajc and G. Senjanović, "Seesaw at LHC," JHEP **0708** (2007) 014 [arXiv:hep-ph/0612029].

46. B. Bajc and G. Senjanović, "Proton decay, supersymmetry breaking and its mediation," Phys. Lett. B **648** (2007) 365 [arXiv:hep-ph/0611308].

47. B. Bajc, A. Melfo, G. Senjanović and F. Vissani, "Fermion mass relations in a supersymmetric SO(10) theory," Phys. Lett. B **634** (2006) 272 [arXiv:hep-ph/0511352].

48. B. Bajc, A. Melfo, G. Senjanović and F. Vissani, "Yukawa sector in non-supersymmetric renormalizable SO(10)," Phys. Rev. D **73** (2006) 055001 [arXiv:hep-ph/0510139].

49. B. Bajc and G. Senjanović, "Radiative seesaw and degenerate neutrinos," Phys. Rev. Lett. **95** (2005) 261804 [arXiv:hep-ph/0507169].

50. B. Bajc and G. Senjanović, "Radiative seesaw: A case for split supersymmetry," Phys. Lett. B **610** (2005) 80 [arXiv:hep-ph/0411193].

51. L. Boubekeur, T. Hambye and G. Senjanović, "Low-scale leptogenesis and soft supersymmetry breaking," Phys. Rev. Lett. **93** (2004) 111601 [arXiv:hep-ph/0404038].

52. B. Bajc, G. Senjanović and F. Vissani, "Probing the nature of the seesaw in renormalizable SO(10)," **hep-ph/0402140**. Submitted to *Phys. Lett. B*.

53. B. Bajc, A. Melfo, G. Senjanović and F. Vissani, "The minimal supersymmetric grand unified theory. I: Symmetry breaking and the particle spectrum," **hep-ph/0402122**. Submitted to *Phys. Rev. D*.

54. T. Hambye and G. Senjanovic, "Consequences of triplet seesaw for leptogenesis," Phys. Lett. B **582** (2004) 73 **hep-ph/0307237**.

55. C. S. Aulakh, B. Bajc, A. Melfo, G. Senjanovic and F. Vissani, "The minimal supersymmetric grand unified theory," **hep-ph/0306242**. Submitted to *Phys. Lett. B*.

56. A. Melfo and G. Senjanovic, "Minimal supersymmetric Pati-Salam theory: Determination of physical scales," Phys. Rev. D **68** (2003) 035013 **hep-ph/0302216**.

57. B. Bajc, G. Senjanovic and F. Vissani, "b - tau unification and large atmospheric mixing: A case for non-canonical see-saw," Phys. Rev. Lett. **90** (2003) 051802 **hep-ph/0210207**.

58. B. Bajc, P. F. Perez and G. Senjanovic, "Proton decay in minimal supersymmetric SU(5)," Phys. Rev. D **66** (2002) 075005 **hep-ph/0204311**.

59. B. Bajc, I. Gogoladze, R. Guevara and G. Senjanović, "Flat directions, doublet-triplet splitting, the monopole problem, and all that," Phys. Lett. B **525**, 189 (2002) **hep-ph/0108196**.

60. C. S. Aulakh, B. Bajc, A. Melfo, A. Rasin and G. Senjanović, "SO(10) theory of R-parity and neutrino mass," Nucl. Phys. B **597**, 89 (2001) **hep-ph/0004031**.

61. B. Bajc and G. Senjanović, "Large Lepton Number and High Temperature Symmetry Breaking in MSSM." Phys.Lett. **B472** 373, 2000. **hep-ph/9907552**

62. C. S. Aulakh, B. Bajc, A. Melfo, A. Rasin and G. Senjanović, "Intermediate scales in supersymmetric GUTs: The survival of the fittest," Phys. Lett. B **460**, 325 (1999) **hep-ph/9904352**.

63. C. S. Aulakh, A. Melfo, A. Rasin and G. Senjanović, "See-saw and supersymmetry or exact R-parity," Phys. Lett. B **459**, 557 (1999) **hep-ph/9902409**.

64. C. S. Aulakh, A. Melfo, A. Rasin and G. Senjanović, "Supersymmetry and large scale left-right symmetry," Phys. Rev. D **58**, 115007 (1998) **hep-ph/9712551**.

65. C. S. Aulakh, A. Melfo and G. Senjanović, "Minimal supersymmetric left-right model," Phys. Rev. D **57**, 4174 (1998) **hep-ph/9707256**.

66. B. Bajc, A. Riotto and G. Senjanović, "Large lepton number of the universe and the fate of topological defects," Phys. Rev. Lett. **81**, 1355 (1998) **hep-ph/9710415**.

67. R. N. Mohapatra, A. Rasin and G. Senjanovic, "P, C and strong CP in left-right supersymmetric models," Phys. Rev. Lett. **79** (1997) 4744 [hep-ph/9707281].

68. C. S. Aulakh, K. Benakli and G. Senjanovic, "Reconciling supersymmetry and left-right symmetry," Phys. Rev. Lett. **79** (1997) 2188 [hep-ph/9703434].

69. A. Riotto and G. Senjanovic, "Supersymmetry and broken symmetries at high temperature," Phys. Rev. Lett. **79** (1997) 349 [hep-ph/9702319].

70. B. Bajc and G. Senjanovic, Nucl. Phys. Proc. Suppl. **52A** (1997) 246 [hep-ph/9610352].

71. B. Bajc, A. Melfo and G. Senjanovic, "On supersymmetry at high temperature," Phys. Lett. B **387** (1996) 796 [hep-ph/9607242].

72. G. R. Dvali, A. Melfo and G. Senjanovic, "Nonrestoration of spontaneously broken P and CP at high temperature," Phys. Rev. D **54** (1996) 7857 [hep-ph/9601376].

73. G. R. Dvali, A. Melfo and G. Senjanovic, "Is There a monopole problem?," Phys. Rev. Lett. **75** (1995) 4559 [hep-ph/9507230].

74. K. Benakli and G. Senjanovic, "Stringy unification helps seesaw mechanism," Phys. Rev. D **54** (1996) 5734 [hep-ph/9507219].

75. G. R. Dvali and G. Senjanovic, "Is there a domain wall problem?," Phys. Rev. Lett. **74** (1995) 5178 [hep-ph/9501387].

76. G. R. Dvali and G. Senjanovic, "Semiglobal Alice strings," Phys. Rev. D **51** (1995) 7148 [hep-ph/9407306].

77. G. R. Dvali and G. Senjanovic, "Topologically stable Z strings in the supersymmetric Standard Model," Phys. Lett. B **331** (1994) 63 [hep-ph/9403277].

78. G. R. Dvali and G. Senjanovic, "Flavor changing strings and domain walls," Phys. Rev. Lett. **72** (1994) 9.

79. G. R. Dvali and G. Senjanovic, "Topologically stable electroweak flux tubes," Phys. Rev. Lett. **71** (1993) 2376 [hep-ph/9305278].

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123. R. N. Mohapatra and G. Senjanovic, "Cosmological Baryon Production in a 'Superconducting' Early Universe," Phys. Rev. D **21** (1980) 3470.

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126. G. Senjanovic and P. Senjanovic, "Suppression of Higgs Strangeness Changing Neutral Currents in a Class of Gauge Theories," Phys. Rev. D **21** (1980) 3253.

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128. R. N. Mohapatra and G. Senjanovic, "Broken Symmetries at High Temperature," Phys. Rev. D **20** (1979) 3390.

129. R. N. Mohapatra and G. Senjanovic, "Soft CP Violation at High Temperature," Phys. Rev. Lett. **42** (1979) 1651.

130. R. N. Mohapatra and G. Senjanovic, "Higher Order Induced Axial Isoscalar Neutral Current in Gauge Theories," Phys. Rev. D **19** (1979) 2165.

131. G. Senjanovic, "Spontaneous Breakdown of Parity in a Class of Gauge Theories," Nucl. Phys. B **153** (1979) 334.

132. R. N. Mohapatra and G. Senjanovic, "Natural Suppression of Strong p and t Noninvariance," Phys. Lett. B **79** (1978) 283.

133. R. N. Mohapatra and G. Senjanovic, "Are There Limits On Gauge Hierarchies?," Hadronic J. **1** (1978) 903.

134. G. C. Branco and G. Senjanovic, "The Question of Neutrino Mass," Phys. Rev. D **18** (1978) 1621.

135. G. Senjanovic and A. Sokorac, "Effects of Heavy Higgs Scalars at Low-energies," Phys. Rev. D **18** (1978) 2708.

136. G. Senjanovic and A. Sokorac, "Left-right Symmetric Gauge Theory and Its Prediction for Parity Violation in Atoms," Phys. Lett. B **76** (1978) 610.

137. R. N. Mohapatra and G. Senjanovic, "Cabibbo Angle, CP Violation and Quark Masses," Phys. Lett. B **73** (1978) 176.

138. G. Senjanovic, "Radiative Corrections to Parity Violation in Atoms in Gauge Theories," Nucl. Phys. B **136** (1978) 301.

139. G. Senjanovic, "Higher Order Corrections to Parity Violation in Atoms in SU(2) x U(1) Models," Phys. Rev. D **17** (1978) 892.

140. G. Senjanovic, "Hamiltonian Formulation and Quantization of the Spin 3/2 Field," Phys. Rev. D **16** (1977) 307.

141. G. Senjanovic and R. N. Mohapatra, "Exact Left-Right Symmetry and Spontaneous Violation of Parity," Phys. Rev. D **12** (1975) 1502.

## Invited Talks-Conference Proceedings.

1. Closing talk at the International conference LHC Days in Split/Hvar, September 2018, Hvar Croatia

2. Plenary talk at the Fundamentals school, Split, Croatia, September 2024

3. Plenary talk at the International conference on Discrete symmetries, Baden Baden, Germany, November 2022

4. Closing talk at the International conference LHC Days in Split, Split, Croatia, October 2022

5. Opening talk at the "Workshop on Baryon and Lepton Number Violation", BLV2022, Bruxelles, Belgium, September 2022

6. Invited talk at the Corfu High energy conference, September 2022

7. Solvay lecture, Bruxelles, Belgium, May 2022

8. Closing talk at the International conference, LHC Days in Split, September 2018, Split, Croatia

9. Plenary talk at the Pascos 2018 International conference, Cleveland, USA, May 2018

10. Plenary talk at the Planck 2015 conference on High Energy Physics, Ioannina, Greece, May 2015

11. Summary talk at the "LHC days at Split" conference, Split, Croatia, October 2014.

12. Closing talk at the "Workshop on Baryon and Lepton Number Violation", BLV2013, Heidelberg, Germany, April 2013.

13. Invited talk at the PACIFIC 2011 conference, Moorea, French Polynesia, September 2012.

14. Colloquium at the Niels Bohr Institute, Copenhagen University, June 2012.

15. Colloquium at the Institut Jozef Stefan, Ljubljana, Slovenia, 2012.

16. Invited talk at the "Conference in honor of the 300th. anniversary of Ruder Boskovic", Dubrovnik, Croatia, 2011.

17. Opening talk at the "Workshop on Baryon and Lepton Number Violation, BLV2011", Tennesee USA, September 2011.

18. G. Senjanovic, "Supersymmetry and Unification: Heavy Top Was the Key," arXiv:1205.5557 [hep-ph]. *The Scientific and Human Legacy of Julius Wess,* Memorial Workshop held in Donji Milanovac, Serbia, August 2011.

19. Closing talk in "Portoroz 2011: The Role of Heavy Fermions in Fundamental Physics", Portoroz, April 2011.

20. Opening talk in the " 2011 Workshop on Lepton and Baryon Number Violation" Gatlinburg, Tennessee, September 2011.

21. Plenary talk at "Planck 2011" International Conference, Lisbon, June 2011.

22. CERN colloquium "Neutrino Paradigm at the LHC", Geneva, August 2011.

23. Plenary talk at "Planck 2010" International Conference, CERN, June 2010.

24. Summary theory talk at "LHC Days 2010", International Conference on High Energy Physics, Split, October 2010.

25. Invited talk at the Meeting of Croatian Particle and Astro-Particle Physics, Zagreb, October 2010

26. G. Senjanovic, "Seesaw at LHC through Left-Right Symmetry," arXiv:1012.4104 [hep-ph]. Based on the plenary talk given at the Conference in Honor of Murray Gell-Mann's 80th Birthday: Quantum Mechanics, Elementary Particles, Quantum Cosmology and Complexity, February 2010, Singapore.

27. G. Senjanovic, "Proton decay and grand unification," Published in AIP Conf. Proc. **1200** (2010) 131. Prepared for 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 09), Boston, Massachusetts, June 2009. [arXiv:0912.5375 [hep-ph]].

28. Plenary talk at SILAFAE 2009: VII Latin American Symposium on High Energy Physics Bariloche, January 09

29. Plenary talk at PASCOS09 : 15th International Conference on Particles Strings and Cosmology DESY, July 2009

30. Opening talk at NNN09: 10th International Workshop on Next generation Nucleon decay and Neutrino interactions, Colorado, October 2009

31. Plenary talk at the Annual Meeting of the Croatian Physical Society, Primosten, September 2009

32. Nath:2010zj P. Nath *et al.*, "The Hunt for New Physics at the Large Hadron Collider," summary document Pre-SUSY 2009: Beyond the Standard Model Physics and LHC Signatures (BSM-LHC), Boston, Massachusetts, 2-4 Jun 2009. arXiv:1001.2693 [hep-ph].

33. G. Senjanovic, "Proton decay and grand unification," prepared for 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 09), Boston, Massachusetts, 5-10 Jun 2009 and plenary talk at 17th International Conference on Supersymmetry and the Unification of Fundamental Interactions (SUSY 09), Boston, Massachusetts, 5-10 Jun 2009. AIP Conf. Proc. **1200** (2010) 131 [arXiv:0912.5375 [hep-ph]].

34. G. Senjanovic, "LHC And The Origin Of Neutrino Mass," prepared for 23rd International Conference on Neutrino Physics and Astrophysics (Neutrino 2008), Christchurch, New Zealand, 26-31 May 2008 J. Phys. Conf. Ser. **136** (2008) 022039.

35. M. Buric, G. Djordjevic, M. Haack, D. Lust and G. Senjanovic, "Challenges Beyond The Standard Model. Proceedings, 3rd Southeastern European Workshop, Balkan Workshop, Bw2007, Kladovo, Serbia, September 2-9, 2007," *Fortschr. Phys. 56 (2008) 313-551*

36. G. Senjanovic, "Probing seesaw at LHC," *Prepared for 12th International Workshop on Neutrinos Telescopes: Twenty Years after the Supernova 1987A Neutrino Bursts Discovery, Venice, Italy, 6-9 Mar 2007*

37. Plenary talk at PLANCK07: From the Planck scale to the Electro-weak scale Warsaw, Poland, June 2007

38. Talk at the Workshop on Parity Restoration at High Energy Bejing, China, June 2007

39. Invited talk at BW2007 Workshop: Challenges Beyond the Standard Model Kladovo, Serbia, September 2-9, 2007

40. Plenary talk at PLANCK06: From the Planck scale to the Electro-weak scale Paris, France May 2006.

41. B. Bajc, A. Melfo, G. Senjanovic and F. Vissani, "Fermion mass relations in a supersymmetric SO(10) theory". Prepared for 11th International Symposium on Particles, Strings and Cosmology (PASCOS 2005), Gyeongju, Korea, 30 May - 4 Jun 2005. Published in AIP

Conf.Proc.805:152-157,2006. Also in *Gyeongju 2005, Particles, strings and cosmology* 152-157 AIP Conf. Proc. **805** (2006) 152.

42. Plenary talk at the LHC days Split, Croatia, September 2006.

43. G. Senjanovic, "Course on grand unification," *Prepared for 2nd International Summer School in High Energy Physics, Mugla, Turkey, 25-30 Sep 2006*

44. G. Senjanovic, "SO(10): A theory of fermion masses and mixings," *Prepared for GUSTAVOFEST: Symposium in Honor of Gustavo C. Branco: CP Violation and the Flavor Puzzle, Lisbon, Portugal, 19-20 Jul 2005*

45. Plenary talk at PASCOS05: International Conference on Particles, Strings and Cosmology, Gyeongju, Korea, June 2005

46. B. Bajc, A. Melfo, G. Senjanovic and F. Vissani, "Lepton And Quark Masses In SO(10)," *Prepared for 11th International Workshop on Neutrino Telescopes, Venice, Italy, 22-25 Feb 2005*

47. G. Senjanovic, "Physical scales and neutrino masses in Grand Unified Theories," Nucl. Phys. Proc. Suppl. **145** (2005) 250.

48. G. Senjanovic, "See-saw and grand unification," Talk given at SEESAW25: International Conference on the Seesaw Mechanism and the Neutrino Mass, Paris, France, 10-11 Jun 2004. Published in *Paris 2004, Seesaw 25* 45-64 arXiv:hep-ph/0501244.

49. A. Masiero, G. Senjanovic, A. Y.Smirnov and G. Thompson, "Particle Physics. Proceedings, Ictp Summer School, Trieste, Italy, June 18-July 6, 2001," *Prepared for ICTP Summer School in Particle Physics, Trieste, Italy, 18 Jun - 6 Jul 2001*

50. B. Bajc, A. Melfo and G. Senjanovic, "Proton decay and fermion masses in supersymmetric grand unified theories," **hep-ph/0304051**.
Invited talk in *International Conference on 20 Years of SUGRA and Search for SUSY and Unification (SUGRA 20)*, Boston, Massachusetts, March 2003.

51. G. Senjanovic, "The role of baryon and lepton numbers in the physics beyond the standard model,"
Plenary talk at 9th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY01), Dubna, Russia, 11-17 Jun 2001, and Talk given at 8th Summer Institute at Gran Sasso National Laboratory: New Dimensions in Astroparticle Physics, Assergi,

Italy, 6-19 Jul 2002. Published in "Dubna 2001, Supersymmetry and unification of fundamental interactions" 137-143. **hep-ph/0303255**.

52. B. Bajc, P. F. Perez and G. Senjanovic, "Minimal supersymmetric SU(5) theory and proton decay: Where do we stand?,"
Talk given at Conference on Physics Beyond the Standard Model: Beyond the Desert 02, Oulu, Finland, 2-7 Jun 2002. Published in "Oulu 2002, Beyond the desert" 131-139. **hep-ph/0210374**.

53. B. Bajc, G. Senjanovic and F. Vissani, "How neutrino and charged fermion masses are connected within minimal supersymmetric SO(10),"
Presented at International Europhysics Conference on High-Energy Physics (HEP 2001), Budapest, Hungary, 12-18 Jul 2001. Published in "Budapest 2001, High energy physics" hep2001/198. **hep-ph/0110310**.

54. B. Bajc, I. Gogoladze, R. Guevara and G. Senjanovic, "Flat directions in SUSY GUTs,"
Talk given at 9th International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY01), Dubna, Russia, 11-17 Jun 2001. Published in "Dubna 2001, Supersymmetry and unification of fundamental interactions" 293-295. **hep-ph/0110018**.

55. **B and L and effective low-energy theory**
Review talk in *SUSY-01, The 9th International Conference on Supersymmetries in Physics*, Dubna, Russia, June 2001.

56. **SUSY SO(10) GUT - a review**
Invited talk in *Planck 01: International Conference on Physics from Planck to weak scale*, Provence, France, May 2001.

57. **Supersymmetry and neutrino mass**
Invited lecture at *Annual meeting of the Greek HEP society*, Crete, Greece, April 2001.

58. **See-saw and supersymmetry**
Talk in *COSMO-98, The Second International Conference on the Physics of the Early Universe*, Monterey, California, September 1998; AIP Conf. Proc. **478**, 464 (1999).

59. G. R. Dvali, G. Gabadadze and G. Senjanović, "Constraints on extra time dimensions,"
A Contribution to the Yu.A. Golfand memorial volume, Ed. M.A. Shifman, World Scientific, 1999. In "Shifman, M.A. (ed.): The many faces of the superworld" 525-532. **hep-ph/9910207**.

60. **The problem of magnetic monopoles**
Review talk in *CAPP98, The First International Conference on Cosmology and Particle Physics*, CERN, Geneva, June 1998.

61. **Symmetry breaking at high temperature in SUSY**
Review talk in *SUSY98, The 6th International Conference on Supersymmetries in Physics*, Oxford, England, June 1998.

62. **Broken symmetries at high temperature**
Review talk in *COSMO-97, The First International Conference on the Physics of the Early Universe*, Ambleside, England, October 11-15 1997.

63. **Supersymmetry at high temperature**
Invited talk at the *Third Warsaw Workshop: Physics from the Planck Scale to Electroweak scale*, April 2-5 1997.

64. **Symmetry Restoration in Hot SUSY**
Invited talk at the 4th International Conference on Supersymmetries in Physics (SUSY 96)
Maryland, 29 May - 1 June 1996. Published in Nucl.Phys.Proc.Suppl.52A:246-250,1997.

65. **Broken Symmetries in the Early Universe**
Invited talk *5th. Hellenic School on Elementary Particle Physics*,
Corfu, Greece, 2-20 Sep 1995.

66. **Are There Monopole and Domain Wall Problems ?**
Invited talk, *Four Seas Conference*
Trieste, 1995.

67. **Symmetry Breaking at High Temperature**
Invited talk, *Future perspectives in elementary particle Physics*
Valencia 1995

68. **Symmetry Nonrestoration in the Early Universe and the Domain Wall Problem**
Invited talk, *VII Adriatic Meeting*
Brioni, Croatia, 10-30 Sep. 1994. Published in the Proceedings, 280-289 .

69. **Low Energy Probe of Quantum Gravity**
Invited talk, "International Conference on Astrophysics"
Bangalore, 1994.

70. **Valencia 93: The summary of Particle Theory**.
International School on Cosmological Dark Matter, Valencia, Spain, 4-8 Oct 1993. Published in Cosmol.Dark Matter 1993:321-336

71. **Neutrino Mass**. Talk given at *International Europhysics Conference on High Energy Physics*, Marseille, France, 22-28 Jul 1993. In Marseille 1993, Proceedings, High energy physics 569-571, and Trieste Int. Cent. Theor. Phys.- IC-94-033.

72. **Planck Scale Effects in Neutrino Physics**
Talk at the Moriond meeting on weak Interactions.
Les Arcs, 1993.

73. **Discrete Symmetries, Strong CP Problem and Gravity**.
Invited talk at *4th. Hellenic School on Elementary Particle Physics*, Corfu, Greece, 2-20 Sep 1992.

74. **Neutrino Magnetic Moment**, w/D. Chang, Moriond Meeting,
Les Arcs, 1990.

75. **Searching for Light Pseudoscalar Particles**
Invited talk *ICTP Summer School in Particle Physics and Cosmology.*
Trieste, 1987.

76. **Grand Unification: Quo Vadis Domine**, Invited talk given at *Int. Symposium on Elementary Particles*,
Kazimierz, Poland, 1985. Published in Warsaw Sympos.1985:669

77. **Superstrings and Outlook for Particle Physics** , Discussion leader-*Summer Workshop on Particle Physics*
Trieste, 1985.

78. **The Problem of Families**, Proceedings, *Conference on Particles and the Universe*, 103:113, Thessaloniki, 1985

79. **Who Ordered the Muon? - From Families to Communities**, em Perspectives in Electroweak Interactions
Les Arcs, 1985. Published in Moriond 1985:Electroweak:237

80. **Proton Decay and GUTs** Invited talk, *ICTP Summer School in Particle Physics and Cosmology.*
Trieste, 1984.

81. **Mirror Fermions and Cosmology**. Presented at *Inner Space/Outer Space Conf.*,
Fermilab 1984. In Batavia 1984, Proceedings, Inner Space/Outer Space, 554-560

82. **Left-Right Symmetry: 1984**, Procceedings, *SSC Workshop*,
Texas, 1984. Proc. of SSC Fixed Target Workshop, The Woodlands, TX, Jan 26-30, 1984. In *The Woodlands 1984, Proceedings, Ssc*, 43-47.

83. **N=1 Supergravity and Strong CP Violation** *Sixth Warsaw Meeting on Elementary Particle Physics*,
Kazimierz, 1983. Proc. of 6th Warsaw Symp. in Elementary Particle Physics, Kazimierz, Poland, May 30 - Jun 3, 1983. Published in Acta Phys.Polon.B15:511,1984.

84. **Left-Right Symmetry In Weak Interactions: Present Status** Invited Talk at the *Conf. on Phenomenology of Unified Theories*
Dubrovnik, 1983. Published in Dubrovnik Top.Conf.1983:133

85. **Left-Right Symmetry and CP Violation**, w/ R.N. Mohapatra, *Symp. on Intense Medium Energy Sources at Strangeness*,
Santa Cruz, CA, Mar 18-20, 1983. Published in Santa Cruz Strangeness 1983:99

86. **Broken Symmetries at High temperatures**, Published in *Selected Papers on gauge Theories of Fundamental Interactions*, Eds. R.N. Mohapatra and C.H. Lai,
Singapore 1981.

87. **Natural Suppression of Strong P and T Non-invariance**, Published in *Selected Papers on gauge Theories of Fundamental Interactions*, Eds. R.N. Mohapatra and C.H. Lai,
Singapore 1981.

88. **Neutrino Mass and Matter-Antimatter Oscillations**, Invited talk, *II Neutrino Mass Conference*
Cable, WI 1982. Published in Telemark Conf.1982:117

89. **Higgs Mass scales and Matter-Antimatter Oscillation in Grand Unified Theories** Invited talk, *Workshop on N-N oscillations*,
Harvard 1983.

90. **Symmetry Breaking at High Temperature** Invited talk *IV Warsaw Symposium on Elementary Particle Physics*
Kazimierz, Poland, May 25-30, 1981

91. **An Oasis in the Desert: Weakly Broken Parity in Grand Unified Theories**, Invited talk *IV Warsaw Symposium on Elementary Particle Physics*
Kazimierz, Poland, May 25-30, 1981.

92. **Grand Unification and Cosmology** Lectures given at *Triangular Meetting*
Zagreb, 1981.

93. **Neutrino Mass as the Probe of Unification** Invited talk *BNL Workshop on Neutrino Oscillations*
BNL, Upton NY, Jan. 1981. Published in Telemark Wkshp.1980:121

94. **CP Violation and the Development of Cosmological baryon Asymmetry**, Invited talk, *VPI Workshop On Weak Interactions as a Probe of Unification*
Blacksburgh, 1980. Published in Blacksburg Workshop 1980:192

95. **Left-Right Symmetric Gauge Theories** Procceedings *Fermilab Workshop on Physics for the Fixed target Tevatron*
Fermilab 1980.

96. **Neutrino Mass as the probe of the Intermediate Mass Scales** Invited talk *I. Conference on Neutrino Mass*
Cable, WI 1980.

97. **Soft CP Violation: Present Status** Invited talk, *XX Int. Conf. on High Energy*
Madison, WI, 1980.Published in Madison H.E. Physics 1980:524

98. **Hierarchy of Mass Scales and Baryon and Lepton Number Violation** Invited talk *VPI Workshop on Weak Interactions and Related Topics*,
Blacksburg, 1980. Published in Blacksburg Wkshp.1979:394

99. **Broken Symmetries at High Temperature** w/ R.N. Mohapatra, *European Physics Society Meeting*
Geneva,Switzerland, Jun 27 - Jul 4, 1979. Published in EPS High Energy 1979:931

## Lectures given at schools and invited courses.

1. Lectures on Neutrino and Beyond the Standard Model, 14th International Neutrino Summer School (INSS), Fermilab, USA August 2023

2. Lectures on Neutrino mass, 13th International Neutrino Summer School (INSS), Fermilab, USA August 2019

3. Lectures on Beyond the Standard Model, Summer school, Ioannina, Greece, June 2019

4. Lectures at the Sarajevo School on High Energy Physics, April 2011.

5. Lectures at the BS2011 School: Cosmology and Particle Physics Beyond the Standard Models, Donji Milanovac, Serbia, September 2011.

6. Lectures at the XV SERC School on High Energy Physics, Chandigarh, April 2010

7. Lectures at the Sarajevo School on High Energy Physics, May 2010.

8. Lectures for PhD students from Ljubljana, Vienna, Split, Prague, Zagreb, Trieste on Neutrino Mass and Grand Unification, Ljubljana, May 2010.

9. International Summer School on High Energy Physics: Standard Model and Beyond, ISSCSMB-10 Akyaka, Turkey, September 2010

10. Lectures on Neutrino Mass and Grand Unified Theories, Feza Gursey Institute for Fundamental Sciences Istanbul, July 2009.

11. Lectures at the BCSPIN School of High Energy Physics Bejing, China, June 2007.

12. Lectures at the International Summer School and Conference on High Energy Physics; Standard Model and Beyond, ISSCSMB-07, Akyaka, Turkey, September 2007.

13. Lectures at the school and International conference on Lepton and Hadron Physics (LHP06) Tehran, Iran, May 2006.

14. Lectures at the International Summer School and Conference on High Energy Physics; Standard Model and Beyond, ISSCSMB-06 Akyaka, Turkey, October 2006.

15. Lectures in the KAIST-KIAS School and Workshop on Particle Physics, Seul, Korea, October 2005.

16. Lectures at the Vietnam School of Physics (VSOP), Hanoi, Vietnam, December 2005.

17. **The Standard Model**
Course given at the Universidad Autónoma de Barcelona, Spain, May 2002.

18. **Beyond SM in four and more dimensions**
Lectures given at the *Adriatic School on Particle Physics and Physics Informatics*, Split, Croatia, September 2001.

19. **Topological Defects**
Lectures given at the *II Venezuelan School of Physics*, Mérida, Venezuela, November 1996. Published in the Procedings.

20. **High T Field Theory and Phase Transitions in the Early Universe**
Lectures at ICTP Summer School in Particle Physics and Cosmology. Trieste, 1995.

21. **The Standard Model and Beyond**
Lectures in the International School on Cosmological Dark Matter, Valencia, Spain, 4-8 Oct 1993. Published in Cosmol. Dark Matter 1993.

22. **From the Standard Model to Grand Unification**
Lectures at ICTP Summer School in Particle Physics and Cosmology. Trieste, 1993.

23. **Issues in the Standard Model**
Lectures at *ICTP Summer School in Particle Physics and Cosmology.* Trieste, 1992.

24. **From Ten to Four Dimensions**
Lectures at the *26th Int. School on Elementary particle Physics*
Trogir, Yugoslavia, 1990.

25. **Superstring Phenomenology**,
Invited Lectures at the *XXV Int. School on Elementary Particles*
Dubrovnik, 1989.

26. **Axions, Familons, Mirrors and All That**, Lectures at the *V Adriatic Meeting*
Dubrovnik, 1986.

27. **Unification of Families**, Lectures presented at the *XX Int. School on Elementary Particles*
Dubrovnik, 1985.

28. **Family Symmetry in Particle Physics** Lectures at the *Summer School on Particle Physics*
Trieste, 1984.

29. **Supersymmetry and Weak Interactions**, Lectures presented at the *IVth. Adriatic Meeting*
Dubrovnik, 1983. Published in Adriatic Mtg.1983:281

30. **Grand Unification Without a Desert** Lectures given at the *Summer School on Particle Physics*
Trieste 1982.