

## Alexandru Luca Mezincescu: PUBLICATIONS

### Refereed Journals

1. L. Mezincescu and J. L. Uretsky “Duality and the Scattering Length” , Lettere al Nuovo Cimento, IV, 579-582,(1970) and preprint ANL/HEP 7022 Argonne (1970)
2. L. Banyai and L. Mezincescu “Unitarization of  $SU_3 \times SU_3$  Field Algebra Amplitudes” , Il Nuovo Cimento, XI, 23-36, (1972) and preprint Institute of Physics Bucharest
3. L. Banyai and L. Mezincescu “Null-Plane Field Algebra”, Phys. Rev. D8, 417-423, (1972) and preprint Institute of Phys., Bucharest
4. L. Banyai and L. Mezincescu “Canonical Quantization on the Null-Plane” , Rev. Roum Phys. T18, 1035-1049, (1973)
5. V. I. Ogievetsky and L. Mezincescu “The Symmetry Between Bosons and Fermions and Superfields”, Uspehi Fiz Nauk 117, 637, (1975) (in Russian) translation Sov. Phys. Usp vol 18, 960-982, (1976)
6. L. Mezincescu “Wigner Eckart Theorem for Tensor Operators of Graded Lie Algebras”, Journal of Math. Phys. 18, 453-455, (1977) and preprint Institute of Phys. Bucharest 1976
7. S. Marculescu and L. Mezincescu “Phase Factors and Point Splitting in Supersymmetry” , Nucl. Phys. B181, 127-140, (1981) and preprint IC/79/165, Trieste
8. L. Mezincescu and York-Peng Yao “Non-Existence of Renormalizable Self-Interactions in N=2 Supersymmetry for Scalar Hypermultiplets” , Nucl. Phys. B241, 605-612,(1984) and preprint UM-Th-83-8
9. J.M. Frere, L. Mezincescu and York-Peng Yao “Finiteness Conditions and Gauge Symmetry Breakdown in N=2 Supersymmetric Models”,Phys. Rev. D29, 1196-1201, (1984) and preprint SLAC-PUB-3198 (1983)
10. D. R. T. Jones and L. Mezincescu “The  $\beta$ -function in Supersymmetric Yang-Mills Theory” , Phys. Lett. 136B, 242-244, (1984) and preprint UTTG-14-83

11. D. R. T. Jones and L. Mezincescu “The Chiral Anomaly and a Class of Two-loop Finite Supersymmetric Theories”, Phys. Lett. *138B*, 293-295, (1984) and preprint University of Colorado
12. L. Mezincescu, P. K. Townsend and P. van Nieuwenhuizen “Stability of Gauged d=7 Supergravity and the Definition of Masslessness in  $(adS)_7$ ”, Phys. Lett. *143B*, 384-388, (1984) and preprint UTTG-6-84
13. L. Mezincescu and P. K. Townsend “Stability at a Local Maximum in Higher Dimensional Anti de Sitter Space and Application to Supergravity” , preprint UTTG-8-84, Annals of Physics *160*, 406-419, (1985)
14. J. M. Frere, L. Mezincescu and York-Peng Yao “Constraints on Soft Parameters in Finite N=2 Supersymmetry for Arbitrary Gauge Groups” , preprint UM TH-84-4, Phys. Rev. *D30*, 2238-2241, (1984)
15. D. R. T. Jones, L. Mezincescu and York-Peng Yao “Soft Breaking of Two-loop Finite N=1 Supersymmetric Gauge Theories” , preprint COLO-HEP-73, UTTG-11-84 Phys. Lett. *149B*, 317-322, (1984)
16. D. R. T. Jones, L. Mezincescu and P. West “Anomalous Dimensions, Supersymmetry and the Adler-Bardeen Theorem”, preprint UTTG-25-84 and COLO-HEP-81, Phys. Lett. *151B*, 219-222, (1985)
17. L. Mezincescu and M. Henneaux “A  $\sigma$  Model Interpretation of Green-Schwarz Covariant Superstrings” , preprint UTTG-26-84, Phys. Lett. *152B*, 340-342, (1985)
18. T. Curtright, L. Mezincescu and C. Zachos “Geometrostasis and Torsion in Covariant Superstrings” , preprint ANL-HEP-PR-85-28 UTTG-85-04, UTTG-10-85, Phys. Lett., *161B*, 70-84, (1985)
19. M. Grisaru, P. Howe, L. Mezincescu B. Nilsson and P. Townsend “N=2 Superstrings in a Supergravity Background” , preprint UTTG-15-85, Phys. Lett., *162B*, 116-120, (1985)
20. A. Eastaugh, L. Mezincescu, E. Sezgin and P. van Nieuwenhuizen “Critical Dimensions of Spinning Strings on Group Manifolds from Fujikawa Method” , preprint ITP-SB-86-11, Phys. Rev. Lett. *57*, 29-32, (1986)

21. M. T. Grisaru, L. Mezincescu and P. K. Townsend, "Heterotic String Anomalies in (1,0) Superspace" , preprint UTTG-19-86, Phys. Lett. *179B*, 247-250, (1986)
22. S. J. Gates, M. T. Grisaru, L. Mezincescu and P. K. Townsend, "(1,0) Supergraphity", preprint UTTG 20/86 and BRX-TH-205, Nucl. Phys. *B286*, 1-26, (1987)
23. S. De Alwis, M. Grisaru and L. Mezincescu, "Unitarity In Antisymmetric Tensor Gauge Theories," preprint UTTG 07/87 and UMTG 137, Phys. Lett. *162B*,122-126,(1987)
24. S. De Alwis, M. Grisaru and L. Mezincescu, "Ward Identities In Open String Field Theory," preprint BRX-Th-237 and UMTG 141, Phys. Lett. *197B*,96-100, (1987)
25. S. De Alwis, M. Grisaru and L. Mezincescu "Quantization and Unitarity in Antisymmetric Tensor Gauge Theories " , preprint BRX-Th-235 and UMTG 138, Nucl. Phys. *B303*,57-76, (1988)
26. L. Mezincescu, R. Nepomechie and P. van Nieuwenhuizen " Do Supermembranes Contain Massless Particles? " preprint UMTG-139 and ITP-SB- 43A, Nucl. Phys. *B303*,317-329, (1988)
27. L. Mezincescu and R. Nepomechie "Critical Dimensions for Chiral Bosons " preprint UMTG 140, Phys. Rev.D*37*,3067-3069,(1988)
28. L. Mezincescu, R. Nepomechie and C. Zachos " (Super)conformal algebra on the (Super)torus " preprint UMTG-144,ANL-HEP-PR-88-23, Nucl. Phys. *B315*, 43-78, (1989)
29. L. Mezincescu, R. Nepomechie and P. Townsend " Elliptic Functions and the Closed Spinning String Propagator preprint UMTG-146, Class. Quant. Grav. *6*, L29-40 (1989)
30. L. Mezincescu, R. Nepomechie and P. Townsend " Path Integral Calculation of the Closed Spinning String Propagator" preprint UMTG-147, Nucl. Phys. *B322*, 127-166, (1989).
31. L. Mezincescu, J. Liu and R. Nepomechie "Riemann-Double Construction for Spinning String Propagators,"Phys. Lett. *224B*, 265 (1989).

32. M. Batchelor, L. Mezincescu, R.I. Nepomechie and V. Rittenberg, “ $q$ -deformations of the  $O(3)$  Symmetric Spin-1 Heisenberg Chain,” J. Phys. *A23*, L141-L144 (1990).
33. L. Mezincescu, R.I. Nepomechie and V. Rittenberg, “Bethe Ansatz Solution of the Fateev-Zamolodchikov Quantum Spin Chain with Boundary Terms,” Phys. Lett. *A147*, 70-78 (1990).
34. L. Mezincescu and R.I. Nepomechie, “Unitarity and Irrationality for the Quantum Algebra  $U_q[SU(2)]$ ,” Phys. Lett. *246B*, 412-416 (1990).
35. L. Mezincescu and R.I. Nepomechie, “Integrable Open Spin Chains with Nonsymmetric  $R$  Matrices,” J. Phys. *A24*, L17-L23 (1991).
36. L. Mezincescu and R.I. Nepomechie, “Integrability of Open Spin Chains with Quantum Algebra Symmetry,” Int’l J. Mod. Phys. *A6*, 5231-5248 (1991); Addendum, Int’l J. Mod. Phys. *A7*, 5657-5659 (1992).
37. L. Mezincescu and R.I. Nepomechie, “Quantum Algebra Structure of Exactly Soluble Quantum Spin Chains,” Mod. Phys. Lett. *A6*, 2497-2508 (1991).
38. L. Mezincescu and R.I. Nepomechie, “Fusion Procedure for Open Chains,” J. Phys. *A25*, 2533-2543 (1992).
39. L. Mezincescu and R.I. Nepomechie, “Analytical Bethe Ansatz for Quantum-Algebra-Invariant Spin Chains,” Nucl. Phys. *B372*, 597-621 (1992).
40. L. Mezincescu, R.I. Nepomechie, P.K. Townsend, and A.M. Tsvelik, “Low-Temperature Thermodynamics of  $A_2^{(2)}$  and  $su(3)$ -invariant Integrable Spin Chains,” Nucl. Phys. *B406*, 681-707 (1993).
41. H.J. de Vega, L. Mezincescu, and R.I. Nepomechie, “Thermodynamics of Integrable Chains with Alternating Spins,” Phys. Rev. *B49*, 13223-13226 (1994).
42. H.J. de Vega, L. Mezincescu, and R.I. Nepomechie, “Scalar Kinks,” Int. J. Mod. Phys. *B8*, 3473-3485 (1994).
43. M.T. Grisaru, L. Mezincescu, and R.I. Nepomechie, “Direct Calculation of the Boundary  $S$  Matrix for the Open Heisenberg Chain”, J. Phys. *A28*, 1027-1045 (1995).

44. S. Artz, L. Mezincescu, and R.I. Nepomechie, “Spectrum of the Transfer Matrix for the  $U_q(B_n)$ -invariant  $A_{2n}^{(2)}$  Open Spin Chain”, *Int. J. Mod. Phys. A* **10**, 1937-1952 (1995).
45. S. Artz, L. Mezincescu, and R.I. Nepomechie, “Analytical Bethe Ansatz for  $A_{2n-1}^{(2)}$ ,  $B_n^{(1)}$ ,  $C_n^{(1)}$ ,  $D_n^{(1)}$  Quantum-Algebra-Invariant Open Spin Chains”, *J. Phys. A* **28**, 5131-5142 (1995).
46. A. Doikou, L. Mezincescu, and R.I. Nepomechie, “Simplified Calculation of Boundary  $S$  Matrices”, *J. Phys. A* **30** (1997) L507-512.
47. A. Doikou, L. Mezincescu, and R.I. Nepomechie, “Factorization of Multiparticle Scattering in the Heisenberg Spin Chain”, *Mod.Phys.Lett. A* **12** (1997) 2591-2598
48. A. Doikou, L. Mezincescu, and R.I. Nepomechie, “Boundary  $S$  Matrix for the XXZ Chain”, *J. Phys. A* **31** (1998) 53-59.
49. L. Mezincescu and R.I. Nepomechie, “Fractional-Spin Integrals of Motion for the Boundary Sine-Gordon Model at the Free Fermion Point ”, *Int. J. Mod. Phys. A* **13** (1998) 2747-2764.
50. G. A. Mezincescu, and L. Mezincescu , “Factorization Method and the Supersymmetric Monopole Harmonics ”, accepted for publication in *J. Math. Phys.* **44**, 3595-3606 (2003), (special issue: “Integrability, Topological Solitons and Beyond” ) , [arXiv:hep-th/0109002].
51. E. Ivanov, L. Mezincescu, A. Pashnev, and P.K. Townsend “ Odd Coset Quantum Mechanics”, *Phys. Lett.* **B566**, 175-182 (2003) [arXiv:hep-th/0301241].
52. J. Brugues, T. Curtright, J. Gomis, L. Mezincescu “Non-relativistic strings and branes as non-linear realizations of Galilei groups” *Phys. Lett.* **B594**, 227 (2004), [arXiv:hep-th/0404175].
53. T. Curtright, and L. Mezincescu “ Biorthogonal Quantum Systems” , [arXiv:hep-th/0507015], to appear in *J.Math.Phys.*
54. E. Ivanov, L. Mezincescu, and P.K. Townsend “ Planar Super-Landau Models ” [arXiv:hep-th/0510019], *JHEP* **0601** 143 (2006).

- 55 T. Curtright, L. Mezincescu, and D. Schuster “Sumersymmetric Biorthogonal Quantum Systems,” [arXiv:quant-ph/0603170], to appear in J.Math.Phys.
- 56 T. Curtright, E. Ivanov, L. Mezincescu, and P.K. Townsend “Biorthogonal Quantum Systems on Supermanifolds” ,to appear on the net and to be submitted for publication.
- 57 T. Curtright, L. Mezincescu, and A. Veitia, “ Quasi-hermitean Quantum Mechanics in Phase Space,” to appear on the net and to be submitted for publication.
- 58. P. Howe, E. Ivanov, L. Mezincescu, and P.K. Townsend “ Classical and Quantum Supersphere ” to be posted on the net and submitted for publication.

**Books**

- 1. T.L. Curtright, L. Mezincescu and R.I. Nepomechie (editors), *Quantum Field Theory, Statistical Mechanics, Quantum Groups and Topology*, ,World Scientific Publishing Co. (1992).

**Festschrifts, Conference Proceedings etc.**

- 1. L. Mezincescu and V. I. Ogievetsky “Action Principle in Superspace” preprint JINR E2-8277,1-8, (1974) Dubna
- 2. L. Mezincescu “On the Superfield Approach for 0(2) Supersymmetry” , preprint JINR Dubna P2-12572 (in Russian),1-19, (1979)
- 3. S. Marculescu and L. Mezincescu “Axial Anomaly in Nonrenormalizable Theories” Topics in Theoretical Physics 2, ed. A. Dorobantzu. Bucharest63-69, (1979) and preprint FT-162-1978, IFIN, Bucharest
- 4. L. Mezincescu “On the Superfield Formulation of 0(2) Extended Supersymmetry”, Topics in Theoretical Physics 2, ed. A. Dorobantzu, Bucharest 49-52, (1979)
- 5. L. Mezincescu “Superspace  $\sigma$  Models and Green-Schwarz Covariant Superstring Actions”, published in Proceedings of the Workshop on Supersymmetry and its applications ed. G.W. Gibbons, S.V. Hawking, and P.K. Townsend, Cambridge Univ. Press 225-243, 1986, preprint UTTG 29-85

6. L. Mezincescu “Curved Superspace  $\sigma$  Models and Green-Schwarz Covariant Actions”, preprint  
UTT-27-85, published in the Proceedings of the Workshop: Unified String Theories, ed. M. Green and D. Gross 547-558.1986.
7. P. G. O. Freund and L. Mezincescu “String Superalgebras and Integrability” , preprint  
UTT-07-86, in Progress in Theoretical Physics in honor of Y. Nambu Supplement  
86, 180-184, (1986)
8. L. Mezincescu “On the Massless Excitations of the 11-d Supermembrane”, preprint  
UMT-143, Invited talk at the Workshop on Superstrings, Boulder Colorado 1987,  
301-311, Editors P.G.O. Freund and K.T. Mahanthappa, Plenum (1988)
9. L. Mezincescu and R.I. Nepomechie, “Integrable Higher-Spin Chains with  $SU_q(2)$   
Symmetry,” in *Argonne Workshop on Quantum Groups*, ed. by T.L. Curtright, D.B.  
Fairlie and C.K. Zachos, World Scientific Publishing Co., 206-235 (1991).
10. L. Mezincescu and R.I. Nepomechie, “Exactly Solved Models with Quantum Algebra  
Symmetry,” in *Quantum Field Theory, Statistical Mechanics, Quantum Groups and  
Topology*, ed. by T.L. Curtright, L. Mezincescu and R.I. Nepomechie,, World Scientific  
Publishing Co., 200 - 217 (1992).
11. L. Mezincescu and R.I. Nepomechie, “Models with Quantum Symmetry and Their  
Spectra,” in *Topics on Quantum Gravity and Beyond: Essays in Honor of Louis  
Witten*, ed. by F. Mansouri and J.J. Scanio, World Scientific Publishing Co., 322 -  
333 (1993).
12. L. Mezincescu and R.I. Nepomechie, “Introduction to the Thermodynamics of Spin  
Chains,” in *Quantum Groups, Integrable Models and Statistical Systems*, ed. by J.  
LeTourneux and L. Vinet, World Scientific Publishing Co., 168 - 191 (1993).
13. L. Mezincescu and R.I. Nepomechie, “Exact  $S$  Matrices for Integrable Quantum Spin  
Chains,” in *Recent Progress in Statistical Mechanics and Quantum Field Theory*, ed.  
by P. Bouwknegt, P. Fendley, J. Minahan, D. Nemeschansky, K. Pilch, H. Saleur, and  
N. P. Warner, World Scientific Publishing Co., 271 - 291 (1995).

14. L. Mezincescu and R.I. Nepomechie, “Lectures on Integrable Quantum Spin Chains,” in *New Developments of Integrable Systems and Long-Ranged Interaction Models*, ed. by M.-L. Ge and Y.-S. Wu, World Scientific Publishing Co., 96 - 142 (1995).
15. L. Mezincescu and R.I. Nepomechie, “Integrals of Motion for the Sine-Gordon Model with Boundary at the Free Fermion Point,” in *Unified Symmetry: In the Small and in the Large 2*, ed. by B. Kursunoglu, S. Mintz and A. Perlmutter, Plenum Publishing Co., 213 - 219 (1995).
16. L. Mezincescu and R.I. Nepomechie, “Boundary  $S$  Matrix for the Boundary Sine-Gordon Model from Fractional-Spin Integrals of Motion,” in *Neutrino Mass, Dark Matter, Gravitational Waves, Monopole Condensation, and Light Cone Quantization*, ed. by B. Kursunoglu, S. Mintz and A. Perlmutter, Plenum Publishing Co., 359 - 367 (1996).
17. L. Mezincescu , “Star Operation in Quantum Mechanics ”, hep-th 0007046.
18. E. Ivanov, L. Mezincescu, and P. K. Townsend, “Fuzzy  $CP^{(n|m)}$  as a Quantum Superspace ”, published in the volume commemorating the 60th birthday of J. A. de Azcárraga, [arXiv:hep-th/0311159].
- 19 E. Ivanov, L. Mezincescu, and P. K. Townsend, “ A Super-Flag Landau Model ” in “From Fields to Strings: Circumnavigating Theoretical Physics Ian Kogan Memorial Volume” Eds M. Shifman, A Vainshtein, and J. Wheeler, 3 vol, World Scientific, 2004 [arXiv:hep-th/0404108].
20. L. Mezincescu, “ Super Chern-Simons Quantum Mechanics”, Proceedings of the International Workshop “Supersymmetries and Quantum Symmetries ” ( SQS’03 , 24-29 July, 2003), Eds. E. Ivanov and A. Pashnev , Dubna 2004. [arXiv:hep-th/0405031]



## Alexandru Luca Mezincescu: TALKS

### Invited Conference Talks

1. “Wigner Eckart Theorem for Graded Lie Algebras,” Scientific Session of Central Institute of Physics, Bucharest, 1976.
2. “Soft Breakings of the 2-loop Finite Supersymmetric Yang-Mills Theories,” Workshop on Finite Unified Theories, Aspen Center for Physics, 1984.
3. “Superspace  $\sigma$ -Models and the Green-Schwarz Covariant Superstring Action,” Workshop on Supersymmetry and its Applications, University of Cambridge, U.K., 1985.
4. “Superspace  $\sigma$ -Models and the Green-Schwarz Covariant Superstring Actions in Flat and Curved Backgrounds,” Workshop on Unified String Theories Santa Barbara, 1985.
5. Unitarity and Antisymmetric Gauge Fields Workshop on Superstrings Maryland 1987
6. The 11-d Supermembrane and its Excitations Workshop on Superstrings Aspen 1987.
7. On the Massless Excitations of the 11-d Supermembrane, Workshop on Superstrings, Boulder, Colorado 1987.
8. Quantum Groups and Quantum Spin Chains, invited talk at the Workshop on Quantum Groups (Argonne National Laboratory, Chicago), May 1990.
9. “Exactly Solved Models with Quantum Algebras Symmetry,” invited talk at NATO Advanced Research Workshop on Quantum Field Theory, Statistical Mechanics, Quantum Groups and Topology (University of Miami, Coral Gables), January 1991.
10. “Introduction to the Thermodynamics of Spin Chains,” invited talk at CAP/NSERC Summer Institute on Quantum Groups, Integrable Models and Statistical Systems (Queen’s University, Kingston), July 1992.
11. “Thermodynamics of Integrable Models”, invited talk at workshop on integrable models (University of Bonn), June 1993.
12. “Integrable Field Theories with Boundaries ” , invited talk at Coral Gables Conference, January 1994.

13. “Integrals of Motion for the Sine-Gordon Model with Boundary at the Free Fermion Point ” , invited talk at Coral Gables Conference, February 1995.
14. “Integrals of Motion for the Sine-Gordon Model with Boundary” , invited talk at Workshop on Integrable Models, Bologna, Italy, September 1995.
15. “ Factorization Method and Supersymmetric Monopole Harmonics”, invited talk at Workshop on Quantum Gravity and Superstrings, Dubna, Russia, June 2000.
16. “Quantum Mechanics on a Super-sphere”, invited Talk at the International Seminar “Supersymmetries and Quantum Symmetries” JINR- Dubna, Russian Federation, July 24-July 29 2003
17. Quantum Mechanics on Super-Flags, invited Talk at “Argonne Workshop on Branes and Generalized Dynamics”, October 20-24, 2003.
18. Graded Landau Problem, invited Talk at “Miami 2004 A topical conference on elementary particle physics and cosmology sponsored by the Department of Physics, and the College of Arts and Sciences, University of Miami Wednesday - Sunday, 15 - 19 December 2004, Coral Gables and Key Biscayne, Florida” .

### **Technical Seminars**

1. “Null-Plane Field Algebra,” at University of Bern, Switzerland, 1972.
2. “Null-Plane Field Algebra,” JINR, USSR, 1973.
3. “On Extended  $0(2)$  Supersymmetry,” Dubna, USSR, 1979.
4. “Point Splitting in Supersymmetry,” ICTP, Trieste, Italy, 1979.
5. “N=2 Supersymmetry and Finite Field Theoretical Models,” at University of Michigan, 1983.
6. “N=2 Supersymmetry and the Spontaneous Breakdown of Gauge Symmetry,” at University of Texas at Austin, 1983.
7. “N=2 Soft Breakings,” at University of Colorado-Boulder, 1983.

8. "Stability in Anti de Sitter Space," at Los Alamos National Lab, 1984.
9. "The  $\sigma$ -model Interpretation of Green-Schwarz Covariant Superstring Action," at Fermilab, 1984.
10. "Covariant Superstring Actions," at University of Florida, Gainesville, 1985.
11. "Green-Schwarz Covariant Actions in External Backgrounds," at University of Texas at Austin, Texas, 1985.
12. "Superspace  $\sigma$ -Models and Superstrings," at University of Chicago, 1985.
13. "Superstrings and  $\sigma$ -Models in Superspace," University of California Los Angeles, 1985.
14. "Superstrings and  $\sigma$ -Models in Superspace," SLAC, Stanford University, 1985.
15. "Superstrings in Superbackgrounds," at Rockefeller University, New York, 1986.
16. "Superspace  $\sigma$ -Models," at City College, New York, 1986.
17. "Green-Schwarz Covariant Actions," at Rutgers University, New Brunswick, NJ, 1986.
18. "Superspace  $\sigma$ -Models and Superstrings," Los Alamos National Lab, 1986.
19. "Superspace  $\sigma$ -Models and Superstrings," at University of Washington, Seattle, WA, 1986.
20. Various talks at the Professor Weinberg's "Brown Bag Seminar", at University of Texas at Austin, 1983-86.
21. Quantum Antisymmetric Gauge Theories, University of Michigan 1987
22. Massless modes of the 11-d Supermembrane, Los Alamos National Lab, 1987
23. About the massless Excitations of the 11-d Supermembrane, Stanford Linear Accelerator, Stanford University, 1987.
24. Path-Integral Calculation of Spinning String Propagator, University of Texas at Austin, 1988.
25. Path-Integral Calculation of Spinning String Propagator, Texas A&M University at College Station, 1988.

26. Path-Integral Calculation of Spinning String Propagator, University of California at Santa Barbara, 1989.
27. Path-Integral Calculation of Spinning String Propagator, California Institute of Technology, 1989.
28. Path-Integral Calculation of Spinning String Propagator, University of Florida, 1989.
29. Path-Integral Calculation of Spinning String Propagator, University of Bonn, W. Germany, 1989.
30. Path-Integral Calculation of Spinning String Propagator, Joint Institute for Nuclear Energy, Dubna, USSR, 1989.
31. Quantum Groups, informal talk at University of Florida, July 1990.
32. Quantum Groups and Quantum Spin Chains, Stanford Linear Accelerator Center, July 1990.
33. Quantum Groups and Quantum Spin Chains, University of California Berkeley, July 1990.
34. Quantum Groups and Quantum Spin Chains, W. Goethe Universitet, Frankfurt, Germany, September 1990.
35. Quantum Groups and Quantum Spin Chains, University of Bonn, Germany, September 1990.
36. Quantum Groups and Quantum Spin Chains, The University of Texas at Austin, November 1990.
37. Exactly Solved Models with Quantum Algebra Symmetry, at CERN, July 1991.
38. Thermodynamics of Integrable Models, at University of Paris VI/VII, May 1993.
39. Thermodynamics of Some Integrable Spin Chains , at University of Florida, November 1993.
40. Integrable Spin Chains with Boundaries at Ohio State University, April 1994.

41. Integrable Field Theories with Boundaries and Constants of Motion, at University of Bonn, May 1995.
42. Integrable Field Theories on Half Line, at University of Milano, November 1995
43. Integrable Field Theories on Half Line, at University of Siegen, Germany, November 1995
44. Integrable Quantum Field Theory in 1+1 Dimensions with Boundary, at Clark Atlanta University, May 1996.
- 45 Odd Coset Quantum Mechanics, mini talk at Theory Group seminar at Stanford University, December 13, 2002.
- 46 Super-Landau, Imaginary Liouville and Superficially Non -Hermitian Hamiltonians, at Perimeter Institute Waterloo, Canada, April 2006.

### **Colloquia and Review Talks**

1. "P.C.T.- Status," at Institute of Physics, Bucharest, Romania, 1970.
2. "Light Cone Current Commutators and Deep Inelastic Lepton Hadron Scattering," at Institute of Physics, Bucharest, Romania, 1971.
3. "Lectures on Quantization and Renormalization of the Theories with Spontaneously Broken Local Symmetry," at Institute of Physics, Bucharest, together with L. Banyai. 1972.
4. "Renormalizable Models of Weak and Electromagnetic Interactions," at Institute of Physics, Bucharest, 1972.
5. "Axial Anomaly," at Institute of Physics, Bucharest, 1973.
6. "Lectures on Supersymmetry," JINR, Dubna and ITEP, Moscow, USSR, together with Professor V.I. Ogievetsky, 1974.
7. "Supersymmetry," at Institute of Physics, Bucharest, Romania, 1974.
8. "Lectures on Supergravity," at Stanford University, Stanford, CA, 1982.
9. "Talks on String Theories," Theory Group, University of Texas at Austin, 1984.
10. "Two Lectures on String," at University of Michigan, Ann Arbor, 1984.

11. “Covariant Green Schwarz-Actions and the Heterotic String,” at Pennsylvania State University, 1985.
12. Four lectures on “Strings and Superstrings,” at University of Liverpool, U.K., 1985.
13. “Covariant Superstrings” University of Southern California, 1985
14. “Covariant Fermions and Strings,” at University of Alabama, Tuscaloosa, 1985.
15. “Fermions in String Theories,” University of Miami, Coral Gables, 1985.
16. “Quantum Mechanics on Manifolds and Supermanifolds”, Invited lecture, Advanced School of Modern Mathematical Physics, July 11-22, 2003, Dubna, Russia, (video-taped [http://thsun1.jinr.ru/diastp/summer03/Summer-2003\\_page2.html](http://thsun1.jinr.ru/diastp/summer03/Summer-2003_page2.html)).