Curriculum Vitae Larisa Jonke

PERSONAL INFORMATION

Name and surname	Larisa Jonke
Academic title	Dr. sc.
Phone	+38514680221
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E-mail	Larisa@irb.hr
Personal web page	http://thphys.irb.hr/?show=people&id=jonkel
Citizenship	Croatian

CURRENT EMPLOYMENT

01/2018 – Head of the Quantum Gravity and Mathematical Physics Group, Division of Theoretical Physics, Ruđer Bošković Institute

04/2010 - Senior Scientific Associate, Ruđer Bošković Institute

PREVIOUS EMPLOYMENT

11/2003 – 04/2010 Scientific Associate, Ruđer Bošković Institute
01/2003 - 01/2004 Postdoctoral researcher, Ludwig-Maximilians-Universität, Munich, Germany
04/1994 - 11/2003 Research assistant, Ruđer Bošković Institute

EDUCATION

12/1999 - PhD in theoretical physics obtained at University of Zagreb, Croatia.
03/1997 - MSc in theoretical physics obtained at University of Zagreb, Croatia.

TRAINING AND VISITS

10/2018 – 12/2018 - visiting scientist, Ludwig-Maximilians-Universität, Munich, Germany

10/2014 – 09/2015 - visiting scientist, Institute for Theoretical Physics, Leibniz University, Hannover, Germany

04/2012 – 07/2012 - visiting scientist, Physics Institute, University Bonn, Germany

01/2003 – 01/2004 - postdoc, Ludwig-Maximilians-Universität, Munich, Germany

RESEARCH INTERESTS

Main areas of Research - Theoretical High Energy Physics and Mathematical Physics

Fields of Research Experience – Generalized geometry, Higher gauge theories, Non-commutative field theory, Dualities in field and string theory, Matrix models

RESEARCH PROJECTS

03/2020 – 02/2024 - principal investigator of the project "Symmetries for Quantum Gravity" IP-2019-04-4168, Croatian Science Foundation

09/2015 – 08/2019 - principal investigator of the project "Generalized Geometry and Symmetries" IP-2014-09-3258, Croatian Science Foundation

02/2016 – 01/2019 – work-package leader of EU H2020 CSA-2015 number 692194 RBI-T-WINNIG project

01/2012 – 12/2013 – coordinator of the Croatian-Austrian bilateral project "Geometry and Quantum Fields from Noncommutative Landscape", (coordinator on Austrian side dr. H. Steinacker), Ministry of Science, Education and Sport of Croatia, OEAD

01/2009 – 12/2011 - principal investigator of the project "Matrix models, duality and field theory" No. 098-0982930-286, Ministry of Science, Education and Sport of Croatia

TEACHING

"Differential equations and dynamical systems", undergraduate course, University of Zagreb (04/05, 07/08, 08/09, 09/10)

"Introduction to differential geometry", undergraduate course, University of Zagreb (07/08, 08/09, 09/10)

AWARDS AND RECOGNITIONS

- Alexander for Humboldt fellowship (2003, 2012, 2015)
- RBI directors' award for distinguished publication 2011, 2018

ORGANIZATIONAL SKILLS AND COMPETENCES

Organization of 14 international schools and meetings. In last five years:

1. Mini-Symposium on Physics and Geometry, 05/2019, Zagreb, Croatia, co-organizer
2. Workshop on Quantum structure of spacetime: Generalized geometry and symmetries, 04/2019, Bayrischzell, Germany, member of the organizing committee
3. Conference on Symmetries, Geometry and Quantum Gravity, 06/2018, Primošten, Croatia, member of the scientific advisory board.
4. First Zagreb School on Theoretical Physics, 07/2017, Zagreb, Croatia, member of the organizing committee.
5. Workshop on "Recent Advances in T/U-dualities and Generalized Geometries", 06/2017, Zagreb, Croatia; member of the organizing committee
6. "Quantum Structure of Spacetime and Gravity School", 08/2016, Belgrade, Serbia; member of the local organizing committee

MEMBERSHIP IN SCIENCE ORGANIZATIONS AND BODIES

04/2019 – 04/2023 Deputy member of the Management Committee of the COST action "Quantum gravity phenomenology in the multi-messenger approach"

04/2015 – 04/2019 Member of the Management Committee of the COST action "Quantum Structure of Spacetime".

07/2007 – 12/2011 - Member of the Steering Committee of the Research Networking Programme of the European Science Foundation "Quantum Geometry and Quantum Gravity".

2004 – Member of the Southeastern European Network in Mathematical and Theoretical Physics

2006 – 2014 Member of the administrative board of the Humboldt-Club of Croatia.

Member of the Croatian Physical Society.

INSTITUTIONAL RESPONSIBILITIES

2018 –	Head of the Group for Quantum Gravity and Mathematical Physics
2016 – 2019	Member of the Scientific Council of RBI
2016 -	Deputy head of the Physics Scientific Council, RBI
2008	Member of the committee for development strategy of RBI
2009, 2013	Organizer of Division of Theoretical Physics Seminars at RBI
2014	Organizer of Division of Theoretical Physics Journal Club meetings at RBI
2004 -	Partial development and maintenance of Division of Theoretical Physics web

OTHER RESEARCH RELATED ACTIVITIES

Editor of „The proceedings of the 3rd Quantum Gravity and Quantum Geometry School, Zakopane 2011", Proceedings of Science, http://pos.sissa.it/cgi-bin/reader/conf.cgi?confid=140 .

Guest editor of „The proceedings of the 2nd School on Quantum Gravity and Quantum Geometry session of the 9th Hellenic School on Elementary Particle Physics and Gravity, Corfu 2009", Gen. Relativ. Gravit. 43 (2011) 2331.

External expert/evaluator for the Croatian Science Foundation (HRZZ), Irish Research Council and CINECA (Italy).

Refereeing for the following journals: JHEP, Comm. Math. Phys., Nucl. Phys. B, Class. Quantum Grav., Phys. Lett. B, J. Phys. A: Mathematical and General, J. Phys. G: Condensed Matter

COMPUTER SKILLS

Use of MS Office tools, Mathematica.

LANGUAGES

MOTHER TONGUE	Croatian
ENGLISH	very good
GERMAN	good
GREEK	basic

Publication and citation summary:

37 published research papers and 1 published conference proceedings
Complete list:
inSPIRE
https://inspirehep.net/literature?sort=mostrecent&size=25&page=1&q=a%20jonke%2C%20l&ui-citation-summary=true

Total (published only) bibliographic data according to inspire database (February 2020)

Total number of papers:	49 (40)
Total number of citations:	621 (692)
Average citations per paper:	14.7 (17.3)
h-index:	14 (14)

Research papers

1. C. J. Grewcoe and L. Jonke, „Courant sigma model and Lie_infinity algebras,^ Fortsch. Phys. 68 (2020), 2000021.
2. A. Chatzistavrakidis, L. Jonke, D. Luest, R. J. Szabo, „Fluxes in Exceptional Field Theory and Threebrane Sigma-Models", J. High Energy Phys. 05 (2019) 055.
3. A. Chatzistavrakidis, L. Jonke, D. Jurman, G. Manolakos, P. Manousselis, G. Zoupanos, "Noncommutative Gauge Theory and Gravity in Three Dimensions", Fortsch. Phys. 66 (2018), 1800047.
4. A. Chatzistavrakidis, L. Jonke, F. S. Khoo, R. J. Szabo, "Double field theory and membrane sigma-models", J. High Energy Phys. 07 (2018) 015.
5. A. Chatzistavrakidis, A. Deser, L. Jonke, T. Strobl, „Strings in Singular Space-Times and their Universal Gauge Theory", Annales Henri Poincare 18 (2017) 2641.
6. I. Andrić, L. Jonke, D. Jurman, H.B. Nielsen, "Dynamical and Quenched Random Matrices and Homolumo Gap", Int. J. Mod. Phys. A32 (2017) 1750046.
7. A. Chatzistavrakidis, A. Deser, L. Jonke, T. Strobl, „ Beyond the standard gauging: gauge symmetries of Dirac Sigma Models", J. High Energy Phys. 08 (2016) 172.
8. A. Chatzistavrakidis, A. Deser, L. Jonke, „T-duality without isometry via extended gauge symmetries of 2D sigma models", J. High Energy Phys. 01 (2016) 154.
9. A. Chatzistavrakidis, L. Jonke, O. Lechtenfeld, „Sigma models for genuinely non-geometric backgrounds", J. High Energy Phys. 11 (2015) 182.
10. M. Dimitrijević, L. Jonke, A. Pachoł, "Gauge Theory on Twisted κ-Minkowski: Old Problems and Possible Solutions", SIGMA 10 (2014) 063.
11. A. Chatzistavrakidis, L. Jonke, and O. Lechtenfeld, "Dirac structures on nilmanifolds and coexistence of fluxes", Nucl. Phys. B 883 (2014) 59.
12. A. Chatzistavrakidis, L. Jonke, "Matrix theory origins of non-geometric fluxes", J. High Energy Phys. 02 (2013) 040
13. A. Chatzistavrakidis, L. Jonke, "Matrix theory compactifications on twisted tori", Phys. Rev. D85 (2012) 106013.

14. M. Dimitrijević, L. Jonke, "A twisted look on kappa-Minkowski: U(1) gauge theory", J. High Energy Phys. 12 (2011) 080.

15. I. Andrić, L. Jonke, D. Jurman, H.B. Nielsen, "Homolumo gap from dynamical matrices", Phys. Rev. D (2009) 107701.

16. I. Andrić, L. Jonke, D. Jurman, H.B. Nielsen, "Homolumo gap and matrix model", Phys. Rev. D77 (2008) 127701.

17. I. Andrić, L. Jonke, D. Jurman, "Comment on 'Waves and solitons in the two-family Calogero model'", Phys. Rev. D77 (2008) 108701.

18. I. Andrić, L. Jonke, D. Jurman, "Solitons and giants in matrix models", J. High Energy Phys. 12 (2006) 006.

19. M. Dimitrijević, L. Jonke, L. Möller, "U(1) gauge field theory on kappa-Minkowski space", J. High Energy Phys. 09 (2005) 068.

20. I. Andrić, L. Jonke, D. Jurman, "Solitons and excitations in the duality-based matrix model", J. High Energy Phys. 08 (2005) 064.

21. I. Dadić, L. Jonke, S. Meljanac, "Harmonic oscillator on noncommutative spaces", Acta Phys. Slovaka 55 (2005) 1-16.

22. M. Dimitrijević, L. Jonke, L. Möller, E. Tsouchnika, J. Wess, M. Wohlgenannt, "Deformed Field Theory on kappa-spacetime", Eur. Phys. J. C31 (2003) 129-138.

23. L. Jonke, S. Meljanac, "Representations of noncommutative quantum mechanics and symmetries", Eur .Phys. J. C29 (2003) 433-439.

24. I. Dadić, L. Jonke, S. Meljanac "Harmonic oscillator with minimal length uncertainty relations and ladder operators", Phys. Rev. D 67 (2003) 087701.

25. L. Jonke, S. Meljanac, "Algebra of observables in the Calogero model and in the Chern-Simons matrix model", Phys. Rev. B 66 (2002) 205313.

26. V. Bardek, L. Jonke, S. Meljanac, M. Mileković, "Calogero model, deformed oscillators and the collapse", Phys. Lett. B 531 (2002) 311-315.

27. I. Andrić, L. Jonke, "Duality and quasiparticles in the Calogero-Sutherland model: Some exact results", Phys. Rev. A 65 (2002) 034707.

28. L. Jonke, S. Meljanac, "Finite Chern-Simons matrix model – algebraic approach", J. High Energy Phys. 01 (2002) 008.

29. L. Jonke, S. Meljanac, "Bosonic realization of algebras in the Calogero model", Phys. Lett. B526 (2002) 149.

30. L. Jonke, S. Meljanac, "Dynamical symmetry algebra of the Calogero model", Phys. Lett. B511 (2001) 276.

31. V. Bardek, L. Jonke and S. Meljanac, "Perturbative Spectrum of Trapped Weakly Interacting Bosons in Two Dimensions", Phys. Rev. A64 (2001) 015603.

32. I. Andrić, V. Bardek, L. Jonke, "Quantum fluctuations of the Chern-Simons theory and dynamical dimensional reduction", Phys. Rev. D59 (1999) 107702.

33. I. Andrić, V. Bardek, L. Jonke, "Edge excitations and the contact term in anyonic systems", Nuovo Cimento B113 (1998) 1253.

34. I. Andrić, V. Bardek, L. Jonke, "Multivortex solution in the Sutherland model", J. Phys. A30 (1997) 717.

35. I. Andrić, V. Bardek, L. Jonke, "Solitons in the Calogero-Sutherland Collective-Field Model", Phys. Lett. B357 (1995) 374.

36. I. Andrić, V. Bardek, L. Jonke, "Collective-field fluctuations around the wall solution of the Chern-Simons theory", Fizika B7 (1998) 119.

37. I. Andrić, V. Bardek, L. Jonke, "Collective field excitations in the Calogero model", Fizika B4 (1995) 93.

Conference proceedings

1. C. J. Grewcoe and L. Jonke, „ Lie_infinity algebras and membrane sigma models,^ PoS CORFU2019 (2020) 156.

2. A. Chatzistavrakidis, C. J. Grewcoe, L. Jonke, F. S. Khoo and R. J. Szabo, "BRST symmetry of doubled membrane sigma-models,'' PoS CORFU2018 (2019) 147.

3. A. Chatzistavrakidis, L. Jonke, F. S. Khoo and R. J. Szabo, "The Algebroid Structure of Double Field Theory,'' PoS CORFU2018 (2019) 132.

4. A. Chatzistavrakidis, A. Deser, L. Jonke, T. Strobl, "Gauging as constraining: the universal generalised geometry action in two dimensions", PoS CORFU2016 (2017) 087

5. L. Jonke, "Sigma models for genuinely non-geometric backgrounds", Proc. of the Corfu Summer Institute 2015 "School and Workshops on Elementary Particle Physics and Gravity", 2015, Greece, PoS CORFU2015 (2016) 124.

6. A. Chatzistavrakidis, L. Jonke, "Generalized fluxes in matrix compactifications", Proc. of the Corfu Summer Institute 2012 "School and Workshops on Elementary Particle Physics and Gravity", 2012, Greece, PoS Corfu2012 (2013) 095.

7. M. Dimitrijević, L. Jonke, " Twisted symmetry and noncommutative field theory", Proc. of the SEENET-MTP Workshop JW2011: Scientific and Human Legacy of Julius Wess., Serbia, Eds: M. Dimitrijević, G. Djordjević, G. Fiore, P. Schupp; Int. J. Mod. Phys. Conf. Ser. 13 (2012) 54-65.

8. M. Dimitrijević, L. Jonke, " Gauge theory on kappa-Minkowski revisited: The Twist approach", Proc. of the 7th Quantum theory and symmetries, 2011, Prague, Eds: C. Burdik, O. Navratil, S. Posta, M. Schnabl, L. Snobl; J.Phys.Conf.Ser. 343 (2012) 012049.

9. I. Andrić, L. Jonke, D. Jurman, "Solitons and giants in matrix model", Proc. of the III Southeastern European Workshop Challenges Beyond the Standard Model, 2007, Serbia. Eds: M. Burić, G. Djordjević, M. Haack, D. Luest, G. Senjanović, Fortschritte der Physik 56 (2008) 324-329.

10. M. Dimitrijević, L. Jonke, L. Möller, "U(1) gauge field theory on kappa-Minkowski space", Proc. of the XIV International Colloquium on Quantum Groups: Integrable Systems and Quantum Symmetries, 2005, Prague, Eds: C. Burdik, O. Navratil, S. Posta; Czech. J. Phys. 55 (2005) 1391-1396.

11. I. Andrić, L. Jonke, D. Jurman, "Matrix-model dualities from conformal field theory", Proc. of the QCD 2004, Paris, Eds: B. Mueller, Chung-I Tan, Int. J. Mod. Phys. A 20 (2005) 4540-4545.

12. M. Dimitrijević, L. Jonke, L. Möller, E. Tsouchnika, J. Wess, M. Wohlgenannt, "Field theory on kappa-spacetime", Proc. of the XIII International Colloquium on Integrable Systems and Quantum Groups, 2004, Prague, Eds: C. Burdik, O. Navratil; Czech. J. Phys. 54 (2004) 1243-1248.

13. L. Jonke, S. Meljanac, "Finite Chern-Simons matrix model - algebraic approach", Particle Physics in the New Millennium - Proc. of the 8th Adriatic Meeting (Lecture Notes in Physics), Eds: J. Trampetić, J. Wess, Springer-Verlag, 2003, (CD).

14. I. Andrić, V. Bardek, L. Jonke, "Quantum fluctuations of the Chern-Simons theory and the Calogero model", Topology of Strongly Correlated Systems, Proceedings of the XVIII Lisbon Autumn School, Eds: P. Bieudo, J. E. Ribeiro, P. Sacramento, J. Seixas, V. Vieira, World Scientific 2001, p.232-235.

15. I. Andrić, L. Jonke, "Duality and Coherent States in the Calogero Model", Nonperturbative QFT methods and their applications, Proceedings of the 24th Johns Hopkins Workshop, Eds: Z Horváth, L Palla, World Scientific 2001, p.445-450.

16. I. Andrić, L. Jonke, "Duality and SU(1,1) coherent states in the Calogero-Moser Model" , Quantum Chromodinamics, Proceedings of the Fifth Workshop, Eds: H. M. Fried, B. Mueller, Y. Gabellini, World Scientific 2000, p.263-268.

17. I. Andrić, V. Bardek, L. Jonke, "Dimensional Reduction of the Chern-Simons Theory in Large-N Limit", Proceedings of the IV Workshop on QCD, Paris 1998, Eds: H. M. Fried and B. Mueller, World Scientific 1999, p. 326-331.

18. I. Andrić, V. Bardek, L. Jonke, "Solitons in the Calogero-Sutherland Collective-Field Model", Proceedings of the Schladming School 1995 (Lecture Notes in Physics 469), Eds: H. Grosse and L. Pittner, Springer-Verlag 1996, p. 245-248.

CONFERENCE TALKS AND SEMINARS

CONFERENCE TALKS

1. "Courant algebroid and Lie_infinity algebras", Solvay Workshop on "Higher Spin Gauge Theories, Topological Field Theory and Deformation Quantization", 17 – 21.02.2020, Brussels, Belgium.

2. "Gauge symmetry of doubled membrane sigma model and Lie-infinity algebra", Humboldt Kolleg Frontiers in Physics: From the Electroweak to the Planck Scales, 15-19.09.2019, Corfu, Greece.

3. "Sigma models, gauging and generalized geometry", 8th Bangkok workshop on high-energy theory, 07-11.01.2019, Thailand.

4. "The Algebroid Structure of Double Field Theory", On Noncommutativity and Physics: Hopf algebras in Noncommutative Geometry, Bayrischzell, Germany, 20-23. 04. 2018.

5. "Membrane Sigma Models & DFT", Workshop on String Dualities and Geometry, Bariloche, Argentina, 14-19. 01. 2018.

6. "Sigma models from Courant algebroids and background fluxes of string theory", XXXVII Max Born Symposium, Wroclaw, Poland, 04-07. 07. 2016.

7. "Sigma models for genuinely non-geometric backgrounds", Workshop on Noncommutative Field Theory and Gravity, Corfu, Greece, 18-22. 09. 2015.

8. "Dynamical and Quenched Random Matrices and Homolumo Gap", eNLarge Horizons, Madrid, Spain, 01-05. 06. 2015.

9. "Dirac structures on nilmanifolds and coexistence of fluxes", The 9-th Workshop "Quantum Field Theory and Hamiltonian Systems", Sinaia, Romania, 24-28. 09. 2014.

10. "Dirac structures on nilmanifolds and coexistence of fluxes", Supersymmetry in Integrable Systems - SIS'13, Hannover, Germany, 28-30. 11. 2013.

11. "A Twisted Look on Kappa-Minkowski: U(1) Gauge Theory", Particle Physics from TeV to Plank Scale (BW2011), D. Milanovac, Serbia, 27. 08. – 01. 09. 2011.

12. "Gauge theory on kappa-Minkowski revisited: the twist approach", The Seventh International

Conference Quantum Theory and Symmetries (QTS7), Prag, Češka, 07-13. 08. 2011.

13. "U(1) gauge field theory on kappa-Minkowski space - revisited", Satellite Workshop on Noncommutative Field Theory and Gravity, Krf, Grčka, 08 – 12. 09. 2010.

14. "U(1) gauge field theory on kappa-Minkowski space", Supersymmetry and Noncommutative Quantum Field Theory, Workshop in Memoriam Julius Wess, Vienna, Austria, 04-06. 12. 2008.

15. "Solitons and Giants in Matrix model(s)", III Southeastern European Workshop Challenges Beyond the Standard Model, Kladovo, Serbia, 02-09. 09. 2007.

16. "Solitons and Giants in Matrix model(s)", 7th International Conference Symmetry in Nonlinear Mathematical Physics, Kiev, Ukraine, 24-30. 06. 2007.

17. "U(1) gauge field theory on kappa-Minkowski space", XIV International Colloquium on Integrable Systems, Prague, Czech Republic, 16-18. 06. 2005.

18. "Field theory on kappa-spacetime", XIII International Colloquium on Integrable Systems and Quantum Groups, Prague, Czech Republic, 17-19. 06. 2004.

19. "Representations of noncommutative quantum mechanics and symmetries", Triangle Seminar on Particle Physics, Vienna, Austria, 29-30. 11. 2002.

20. "Finite Chern-Simons matrix model – algebraic approach", 8th Adriatic Meeting, Dubrovnik, Hrvatska, 04-14. 09. 2001.

21. "Quantum fluctuations of the Chern-Simons theory and the Calogero model", XVIII Autumn School " Topology of Strongly Correlated Systems", Instituto Superior Tecnico, Lisbon, Portugal, 8-13. 10. 2000.

22. "Duality and Coherent States in the Calogero Model", John Hopkins Workshop on Nonperturbative QFT methods and their applications, Bolyai College, Budapest, Hungary, 19-21. 08. 2000.

23. "Duality in Low-Dimensional Theories", Workshop "Duality in String Theory", Erwin Schrödinger International Institute of Mathematical Physics, Vienna, Austria, 03-12. 04. 2000.

24. "Quantum Fluctuations of the Chern-Simons Theory and Dynamical Dimensional Reduction", Triangle Seminar on Particle Physics, Vienna, Austria, 27-28. 11. 1998.

INVITED SEMINARS

1. "DFT algebroid and Lie_infinity algebra", Integrability, Dualities and Deformations seminar series (online), 04.11.2020.

2. "Sigma models, gauging and generalized geometry", Ludwig-Maximilians-Universität, String theory seminar, Munich, Germany, 04. 05. 2017.

3. "Extended gauge symmetries of 2D sigma models and T-duality without isometry", Van Swinderen Institute for Particle Physics and Gravity, Groningen, Netherlands, 29. 10. 2015.

4. "Generalized Fluxes and Matrix Compactications", Institute for physics, Zemun, Serbia, 04. 10. 2013.

5. "Non-commutative (gauge) field theory and matrix models", BCTP and Physikalisches Institut, University of Bonn, Germany, 21. 05. 2012.

6. "Homolumo Gap and Matrix Model", Institute for physics, Zemun, Serbia, 08. 05. 2009.