OLEG A. STARYKH

Address

Department of Physics and Astronomy
University of Utah
115 South 1400 East
Salt Lake City, UT 84112-0830

Telephone: (801) 581-6424
fax: (801) 581-4801
Email: starykh@physics.utah.edu
webpage: http://www.physics.utah.edu/~starykh

Biographical Info

Born: June 29, 1965, in Novokuznetsk, Russia.
family status: married with two children.

Education

Ph.D. in Physics, October 1991:
Institute for High Pressure Physics, Russian Academy of Sciences, Moscow.
M.S. in Physics and Engineering, June 1988:
Diploma with honors, Moscow Institute of Physics and Technology, Moscow.

Honors and Awards

NSF DMR, award # 1507054, amount $306,000, 3/2016-2/2019:
• project title: *Order-by-frustration: emergent condensed states of frustrated magnets.*
NSF DMR, award # 1206774, amount $270,000, 9/2012-8/2016:
• project title: *Frustrated magnetism in spin-orbit coupled materials.*
Co-PI (together with Prof. Pesin) of Utah MRSEC Seed Grant, amount $24,000, 2014:
• project title: *Transport and correlated phases in system with strong spin-orbit interaction*
NSF DMR, award # 0808842, amount $210,000, 5/2009-4/2013:
• project title: *Competing orders in frustrated magnets and nanostructures.*
The Petroleum Research Fund, American Chemical Society, amount $80,000, 9/2005-8/2007.
• project title: *Frustrated magnetism as a problem of coupled spin chains.*
ITP Scholar for 2001-2003, KITP, University of California, Santa Barbara.
Cottrell College Science Award, Research Corporation, amount $27,500, 9/2001-2004.
• project title: *Effect of geometric frustration and disorder on weakly coupled spin chains.*

Research Experience

7/12 - present	*Professor*, University of Utah
8/04 - 6/12	*Associate Professor*, University of Utah
9/00 - 8/04	*Assistant Professor*, Hofstra University, NY
9/98 - 8/00	*Postdoctoral Associate*, Yale University, New Haven, CT
11/96 - 8/98	*Postdoctoral Fellow*, University of Florida, Gainesville, FL
9/95 - 10/96	*Postdoctoral Fellow*, University of California, Davis, CA
4/93 - 8/95 5/92 - 10/92	*Postdoctoral Research Associate*, Texas Center for Superconductivity and University of Houston, Houston, TX
9/91 - 5/92	*Junior Researcher*, Institute for High Pressure Physics, Moscow
6/88 - 8/91	*Graduate Student*, Moscow Institute of Physics and Technology, Moscow, Russia

Teaching Experience	Fall 2016	Physics5510: *Solid State Physics I*,
	Spring 2016	Physics7120: *Electrodynamics II* (together with E. Mishchenko),
	Fall 2015	Physics7110: *Electrodynamics I* (together with E. Mishchenko),
	Spring 2015	Physics7510: *Advanced Solid State I*,
	Fall 2014	Physics7640: *Quantum Field Theory I*,
	Spring 2014	Physics7120: *Electrodynamics II* (together with E. Mishchenko),
	Fall 2013	Physics7110: *Electrodynamics I* (together with E. Mishchenko),
	Spring 2013	Physics7910: *Quantum Magnetism*,
	Fall 2012	Physics7510: *Advanced Solid State: Physics of Modern Materials*,
	Spring 2012	Physics5020: *Theoretical E&M and Statistical Mechanics*,
	Fall 2011	Physics7110: *Electrodynamics I*,
	Spring 2011	Physics5020: *Theoretical E&M and Statistical Mechanics*,
	Fall 2010	`no teaching, sabbatical semester`,
	Spring 2010	Physics5460: *Quantum and Statistical Mechanics*,
	Fall 2009	Physics2110: *General Physics with Calculus I*
	Spring 2009	Physics5460: *Quantum and Statistical Mechanics*,
	Fall 2008	Physics7910: *Quantum Magnetism* (special topics course),
	Spring 2008	Physics5460: *Quantum and Statistical Mechanics*,
	Fall 2007	Physics5450: *Quantum Mechanics*,
	Spring 2007	Physics5460: *Quantum and Statistical Mechanics*,
	Fall 2006	Physics5450: *Quantum Mechanics*,
	Spring 2006	Physics5460: *Quantum and Statistical Mechanics*,
	Fall 2005	Physics5450: *Quantum Mechanics*,
	Spring 2005	Physics1500: *Preparation for College Physics*,
	9/00 - 8/04	Lecturing undergraduate physics, Hofstra University: *Mechanics, Electricity and Magnetism, Physics Laboratory.*
	2/99-5/99	Lecturer for graduate *Solid State Physics*, Yale University.
Students	5/2015 -7/2015	Ethan Lake, undergraduate student (summer REU)
	6/2014 - present	Hassan Allami, graduate student
	6/2014 - present	Ran Tao, graduate student
	9/1/2013 - present	Wen Jin, graduate student
	1/1/2011 - 6/2012	Rachel Glenn, graduate student
	8/1/2009 - 7/31/2010	Shane Head, graduate student
	6/1 - 8/1/2009	Shane Head, undergraduate student, summer research project: "Monte Carlo studies of triangular Heisenberg antiferromagnet", supported by NSF # 0808842 and CHPC Allocation award.
	6/1/2005-7/31/2008	Jianmin Sun, graduate student.
Postdocs	7/1/2005-9/1/2008	Dr. Suhas Gangadharaiah, postdoctoral fellow.
Department Service	2005-2006	*Committees*: Common Exam, Library (chair), Policy Board, Research Council, Solid State Seminar, Theoretical High Energy and Astrophysics (HEAP) Search.
	2006-2007	*Committees*: Advising (graduate), Common Exam, Library (Chair), Solid State Seminar.
	2007-2008	*Committees*: Admissions, Advising (graduate), Common Exam, Policy Board.
	2008-2009	*Committees*: Admissions, Common Exam (chair), Library (chair), Solid State Seminar (chair).
	2006-2008	*College of Science:* Intellectual Explorations Area Committee.
	Fall 2010 semester	`on sabbatical leave`.
	2010-2011	*Committees*: Admissions (chair), Common Exam, Futures.
	2011-2012	*Committees*: CMT search (chair), Futures.
	2013-2014	*Committees*: Common Exam, Futures, CM seminar, Program Development (grad), Web Page, Policy Board.
	2014-2015	*Committees*: Awards, CM seminar, Web Page, Policy Board.
	2015-2016	*Committees*: condensed matter seminar, Policy board.
Community Service	Fall 2015	Focus Topic organizer for the March 2016 APS meeting, topic "10.1.6 Frustrated Magnetism" (GMAG/DMP);
	01/2003 - 12/2005	APS Committee for the International Freedom of Scientists (CIFS);
	10/97 - present	Referee for *Physical Review Letters* and *Physical Review B*, *Europhysics Letters* and *Journal of Physics: Condensed Matter*; *New Journal of Physics* and *Nature*;

Funding

3/2016-2/2019	**NSF DMR** award # 1507054, amount \$306,000: • title: *Order-by-frustration: emergent condensed states of frustrated magn*
9/2012-8/2016	**NSF DMR** award # 1206774, amount \$270,000: • project title: *Frustrated magnetism in spin-orbit coupled materials.*
2/2014-2015	Co-PI (with Prof. Pesin) of Utah MRSEC Seed Grant, amount \$24,000: • *Transport and correlated phases in system with strong spin-orbit interacti*
5/2009-2013	**NSF DMR**, award # 0808842, amount \$210,000: • title: *Competing orders in frustrated magnets and nanostructures,* supports graduate and summer undergraduate students.
9/2005-8/2007	**The Petroleum Research Fund**, American Chemical Society, amount \$80,000. • title: *Frustrated magnetism as a problem of coupled spin chains.*
9/2001-2004	**Cottrell College Science Award**, Research Corporation, amount \$27,500. • title: *Effect of geometric frustration and disorder on* *weakly coupled spin chains.*
2001-2003	**ITP Scholar**, Kavli Institute for Theoretical Physics, UCSB.

Visiting Positions

07/2004	Visiting Scientist, Condensed Matter Group, International Centre for Theoretical Physics (ICTP), Trieste, Italy
05/12/ - 06/12/2005	Visiting Scientist, Theory Institute, Brookhaven National Laboratory, Upton, NY
5/14 - 6/8/2007	Participant in KITP Program "Strongly Correlated Phases in Condensed Matter and Degenerate Atomic Systems", UCSB.
9/30 - 10/20/2007	Participant in KITP Program "Moments and multiplets in Mott materials", University of California, Santa Barbara.
03/10-22/2008	Visiting Scientist, Condensed Matter Theory Laboratory, RIKEN, Japan (two weeks including Spring Break).
06/15-27/2008	Invited Speaker, International Seminar "Unconventional phases and Phase Transitions in Strongly Correlated Electron Systems", Max-Planck-Institut für Physik Komplexer Systeme, Dresden, Germany.
07/14-26/2008	Visiting Scientist, Joint Theory Institute, University of Chicago and Argonne National Laboratory.
07/10/2010 - 10/06/2010	Visiting Professor, Condensed Matter Group, Max Planck Institute for Physics of Complex Systems, Dresden, Germany.
11/01 - 11/30/2010	Participant in KITP Program "Disentangling Quantum Many-body Systen Computational and Conceptual Approaches ", UCSB.
05/13 - 05/27/2012	Participant in program "New quantum states of matter in/out of equilibriu Galileo Galilei Institute for Theoretical Physics, Florence, Italy
07/20 - 08/14/2015	Participant in KITP Program "New Phases and Emergent Phenomena in Correlated Materials with Strong Spin-Orbit Coupling ", UCSB.

Seminars and Invited Talks

1. *Frustration-driven multi-magnon condensates*, solid state seminar, Department of Physics, ETH, Zurich, Switzerland, September 19, 2016.

2. *Frustration-driven multi-magnon condensates*, invited talk at the workshop "Recent progress in low-dimensional quantum magnetism" (LDQM2016), EPFL, Lausanne, Switzerland, September 5-16, 2016.

3. *Rashba vs Kohn-Luttinger: evolution of p-wave superconductivity in magnetized two-dimensional Fermi gas subject to spin-orbit interaction*, invited talk at the workshop "Multi-component and strongly-correlated superconductors", Nordita, Stockholm, Sweden, July 15, 2016.

4. *Frustration-driven multi-magnon condensates*, seminar at the University of Utah, January 12 (part 1) and January 26 (part 2), 2016.

5. *Frustration-driven multi-magnon condensates and their excitations*, colloquium at Los Alamos National Laboratory, November 18, 2015.

6. *Unusual phases of antiferromagnetic spin chains with uniform Dzyaloshinskii-Moriya interaction*, invited talk a the SPICE workshop "Magnetic Adatoms as Building Blocks for Quantum Magnetism", Mainz, Germany, August 17-20, 2015.

7. *Magnon collapse near the Lifshitz point and multipolar phases of frustrated magnets*, talk at KITP program "New Phases and Emergent Phenomena in Correlated Materials with Strong Spin-Orbit Coupling", Kavli Institute for Theoretical Physics, UCSB, Santa Barbara, July 24, 2015.

8. *Frustration-driven multi magnon condensates and their excitations*, seminar at the Condensed Matter Theory Laboratory, RIKEN, Wako, Japan, March 16, 2015.

9. *Quasi-one-dimensional spin nematic states and their excitations*, invited talk at the APS March Meeting, San Antonio, March 2 - 5, 2015.

10. *Frustration-driven multi magnon condensates and their excitations*, invited talk at the ICTP workshop on Current trends in frustrated magnetism, Jawaharlal Nehru University, New Delhi, India, February 9 - 13, 2015.

11. *Two-magnon instabilities and other surprises in magnetized quantum antiferromagnets*, invited talk at the Conference on Field Theory Methods in Low-Dimensional Strongly Correlated Quantum Systems, ICTP, Trieste, Italy, August 25-29, 2014.

12. *Unusual ordered phases of magnetized frustrated antiferromagnets*, talk at the International Conference on Highly Frustrated Magnetism 2014, University of Cambridge, Queen's College, Cambridge, UK, July 7 - 11, 2014.

13. *Unusual ordered phases of magnetized frustrated antiferromagnets*, invited talk at the workshop "Latest Developments in Frustrated Magnetism:spin liquids, spin glass, spin ice states", University of Warwick, UK, July 5, 2014.

14. *Unusual ordered phases of magnetized frustrated antiferromagnets*, invited talk at 2nd International Symposium on "Novel states in correlated condensed matter - from model systems to real materials", Königstein near Frankfurt am Main, Germany, April 8-10, 2014.

15. *Unusual ordered phases of magnetized frustrated antiferromagnets*, colloquium at the Department of Physics, University of Regensburg, Regensburg, Germany, April 7, 2014.

16. *Unusual ordered phases of magnetized frustrated antiferromagnets*, condensed matter seminar, Department of Physics, University of Waterloo, Waterloo, Canada, March 20, 2014.

17. *Frustrated magnetism via bold diagrammatic Monte Carlo*, invited talk at SIGN 2014, an international EMMI Workshop on the "Sign Problem in QCD and beyond", GSI Helmholtzzentrum für Schwerionenforschung GmbH, Darmstadt, Germany, 18-21 February 2014.

18. *Spin-current and other unusual phases in magnetized triangular lattice antiferromagnets*, talk at the International Seminar and Workshop on "Spin Orbit Entanglement: Exotic States of Quantum Matter in Electronic Systems", Max Planck Institute for Physics of Complex Systems, Dresden, Germany; July 15 - 27, 2013.

19. *Surprises at the magnetization plateau*, condensed matter seminar, Department of Physics and Astronomy and Institute for Quantum Matter, Johns Hopkins University, Baltimore, MD; April 29, 2013.

20. *Surprises at the magnetization plateau*, condensed matter seminar, Department of Physics, Texas A& M University, College Station, TX; March 29, 2013.

21. *Spin ice and magnetic monopoles*, undergraduate seminar, University of Utah, November 15, 2012.

22. *Magnetization Plateaux of Frustrated Antiferromagnets*, invited plenary talk at the APS Four Corners Section regional meeting, New Mexico Tech, Socorro, NM, October 26-27, 2012.

23. *Electron spin resonance of spinon gas*, invited talk at the KITP Conference "Exotic Phases of Frustrated Magnets", KITP, UCSB, Santa Barbara, October 8-12, 2012.

24. *Exotic ordered phases of triangular magnets*, invited talk at the Quantum Condensed Matter Division and the Virtual Institute Joint Meeting "New States of Matter and their Excitations", Oak Ridge National Laboratory, Knoxville, TN, September 12-14, 2012.

25. *Fate of 1/3 magnetization plateau in spatially anisotropic triangular lattice antiferromagnets*, talk at the Highly Frustrated Magnetism conference (HFM 2012), McMaster University, Hamilton, ON, Canada, June 4 - 8, 2012.

26. *Magnetization plateau and other unusual phases of a spatially anisotropic quantum antiferromagnet on triangular lattice*, invited talk at the conference on "New quantum states of matter in and out of equilibrium", the Galileo Galilei Institute for Theoretical Physics, Florence, Italy, May 25, 2012.

27. *Breaking the spin waves: spinons and other strange excitations of frustrated quantum antiferromagnets*, colloquium at the Department of Physics, Brigham Young University, Provo, March 28, 2012.

28. *Breaking the spin waves: spinons in Cs_2CuCl_4 and elsewhere*, colloquium at the Department of Physics, Iowa State University, Ames, February 13, 2012.

29. *Triangular lattice antiferromagnet in magnetic field: ground states and spin excitations*, seminar at P.L.Kapitza Institute for Physical Problems, Moscow, Russia, October 4, 2011.

30. *Breaking the spin waves: spinons in Cs_2CuCl_4 and elsewhere*, invited talk, International Symposium Spin Waves 2011, St. Petersburg, Russia, June 5-11, 2011.

31. *Modes of magnetic resonance in spin liquids with spinon excitations*, invited talk, International Conference on Novel Phenomena in Frustrated Systems, Santa Fe, New Mexico, May 23-27, 2011.

32. *Modes of magnetic resonance in spin liquids with spinon excitations*, condensed matter seminar, Department of Physics, University of Arizona, Tuscon, April 21, 2011.

33. *Magnetization plateaux in triangular lattice antiferomagnets*, condensed matter seminar, Department of Physics, University of Waterloo, Canada, December 14, 2010.

34. *Magnetization plateaux in triangular lattice antiferomagnets*, condensed matter seminar, Department of Physics, University of Toronto, Canada, December 13, 2010.

35. *Triangular lattice antiferromagnets – open questions*, Workshop on "Disentangling quantum many-body systems", KITP, Santa Barbara, November 11, 2010.

36. *Spin-orbit-induced spin-density wave in quantum wires and spin chains*, seminar, Dahlem Centex for Complex Quantum Systems, Freie Universitat Berlin, Berlin, Germany, September 29, 2010.

37. *Magnetization plateaux in triangular lattice antiferromagnets*, seminar, Institute for Complex Magnetic Materials, Helmholtz-Zentrum-Berlin, Berlin, Germany, September 21, 2010.

38. *Spatially anisotropic triangular antiferromagnet in a magnetic field*, invited talk, workshop on "Emergent Quantum States in Complex Correlated Matter", Max Planck Institute for Physics of Complex Systems, Dresden, Germany; August 23 - 27, 2010.

39. *Quantum (and classical) physics of Cs_2CuCl_4*, seminar, Leibniz Institute for Solid State and Materials Research, IFW Dresden, Germany; August 17, 2010.

40. *Quasi-one-dimensional version of quantum kagomé antiferromagnet*, seminar, Max Planck Institute for Physics of Complex Systems, Dresden, Germany; August 16, 2010.

41. *Quantum (and classical) physics of Cs_2CuCl_4*, seminar, High Magnetic Field Laboratory, Forschungszentrum Dresden - Rossendorf, Germany; July 21, 2010.

42. *Frustrated quasi-one-dimensional quantum magnet in magnetic field*, invited talk, workshop on "Correlated phenomena in low-dimensional systems", Max Planck Institute for Physics of Complex Systems, Dresden, Germany; July 15, 2010.

43. *Ground States and Excitations of Spatially Anisotropic Quantum Antiferromagnets*, invited talk, "Workshop on the Heisenberg model: past, present and future", International Center on Condensed Matter Physics, University of Brasilia, Brasilia, Brasil; July 20 - 27, 2009.

44. *Spatially anisotropic spin-1/2 Heisenberg kagomé antiferromagnet*, invited talk, APS March Meeting, Pittsburgh, PA; March 19, 2009.

45. *Ice, Spin and Spin Ice*, undergraduate seminar, University of Utah, December 4, 2008.

46. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, condensed matter seminar, Department of Physics, University of Wisconsin, Madison, October 23, 2008.

47. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, condensed matter seminar, Department of Physics, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, July 1, 2008.

48. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, Max-Planck-Institut für Physik komplexer Systeme, Dresden, Germany, June 18, 2008.

49. *Spin-orbit induced spin-density wave in an interacting quantum wire*, Institute for Solid State Physics, University of Tokyo, Japan, March 18, 2008.

50. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, Condensed Matter Theory Laboratory, RIKEN, Japan, March 17, 2008.

51. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, solid state seminar, Department of Physics, Texas A & M University, November 27, 2007.

52. *Spinons and triplons in a spatially anisotropic triangular antiferromagnet*, solid state seminar, Department of Physics, Stony Brook University, November 9, 2007.

53. *Spin-orbital effects in interacting electrons: quantum dots and wires*, talk at the "Hard Times" seminar, Department of Physics, UCSB, October 19, 2007.

54. *Orders and Excitations in Frustrated Quasi-One-Dimensional Antiferromagnets*, talk at the "Moments and Multiplets in Mott Materials" Program, Kavli Institute for Theoretical Physics, University of California at Santa Barbara, October 18, 2007.

55. *Spontaneous Dimer Order in Spatially Anisotropic Antiferromagnets*, talk at the "Strongly Correlated Phases in Condensed Matter and Degenerate Atomic Systems" Program, Kavli Institute for Theoretical Physics, University of California at Santa Barbara, May 21, 2007. (the talk is available online: http://online.kitp.ucsb.edu/online/coldatoms07/starykh/)

56. *Heisenberg antiferromagnet on an anisotropic triangular lattice: spin order and excitations*, seminar, Argonne National Laboratory, March 23, 2007.

57. *Spin-1/2 Heisenberg antiferromagnet on an anisotropic triangular lattice*, invited talk, APS March Meeting, Denver, Colorado, March 5, 2007.

58. *Flat spin wave dispersion in a triangular antiferromagnet*, regular talk, APS March Meeting, Denver, Colorado, March 5, 2007.

59. *Ice, spin and spin ice*, undergraduate seminar, University of Utah, September 21, 2006.

60. *Magnons, rotonsm and spinons in quantum antiferromagnets*, colloquium, University of Utah, September 14, 2006.

61. *Spin density wave in a quantum wire with spin-orbit interaction*, seminar, UC Santa Barbara, June 9, 2006.

62. *Spin density wave in a quantum wire with spin-orbit interaction*, seminar, UC Irvine, June 7, 2006.

63. *Spin density wave in a quantum wire with spin-orbit interaction*, condensed matter seminar, University of Utah, April 25, 2006.

64. *A spin on ice*, undergraduate seminar, University of Utah, October 27, 2005.

65. *Spontaneous dimerization in frustrated magnets*, seminar, University of Colorado, Boulder, October 6, 2005.

66. *Dimerized phases of quasi-one-dimensional magnets*, seminar at the Brookhaven National Laboratory, June 9, 2005.

67. *Spin fluctuations in one dimension: NMR in spin chains and tunneling in quantum wires*, condensed matter seminar, University of Utah, April 5, 2005.

68. *One-dimensional view of frustrated magnets*, invited talk at the International Workshop on Physics of Strongly Correlated Electron Systems, Yukawa Institute for Theoretical Physics, Kyoto University, Kyoto, Japan, November 1-19, 2004.

69. *Quantum mechanics of electrical current circuits*, undergraduate seminar, October 21, 2004.

70. *One-dimensional view of frustrated magnets*, invited talk at the International Workshop on Evolution of Quantum Effects from the Nano- to the Macroscale, Cargese, Corsica, France, May 17-21, 2004.

71. *One-dimensional view of frustrated magnets*, seminar, Yale University, Aprill 8, 2004.

72. *Breaking the spin waves*, colloquium, Department of Physics, University of Utah, March 8, 2004.

73. *Zeeman splitting of zero-bias anomaly in Luttinger liquids*, invited talk at the International Workshop on Field Theory Methods in Correlated Nanoscale Systems, Brookhaven National Laboratory, August 26-30, 2003.

74. *A 'one-dimensional' view of geometrically frustrated magnets*, seminar, The Johns Hopkins University, October 2, 2002; and SUNY Stony Brook, May 3, 2002.

75. *ibid*, invited talk at the Workshop on Quantum Spins, Lorentz Center, Leiden University, August 5-16, 2002.

76. *A 'one-dimensional' approach to frustrated magnets*, seminar, University of Massachussets, Amherst, March 2002.

77. *Spinons in a crossed-chains model of a 2D spin liquid*, seminar, Leiden University, The Netherlands, July 2001.

78. *ibid*, Utrecht University, The Netherlands, July 2001.

79. *Thermally fluctuating superconductors in d=2*, seminar, Utrecht University, The Netherlands, June 2000.

80. *ibid*, University of Groningen, The Netherlands, June 2000.

81. *ibid*, Leiden University, The Netherlands, July 2000.

82. *Electrons on the line: field theory meets experiments*, Colloqium, Utrecht University, the Netherlands, June 2000.

83. *Electrons on the line: spin chains, quantum wires and beyond*, Colloqium, University of California at Riverside, February 2000.

84. *ibid*, colloqium at Clark University, Worchester, MA, February 2000.

85. *Logarithmic corrections to quantum-critical scaling in the S=1/2 Heisenberg chain*, Talk at the ITP Conference on Quantum Magnetism, University of California at Santa Barbara, August 16-20, 1999.

86. *Luttinger liquid behavior of quantum wire*, seminar, Argonne National Laboratory, July, 1999.

87. *Finite temperature dynamics of the spin-1/2 Heisenberg chain*, Invited Talk at the March Meeting of the American Physical Society, Los Angeles, CA, March 16, 1998.

88. *Quantum Phase Transitions and Quantum Antiferromagnets*, Colloqium at the Department of Physics, University of Colorado, Boulder, March 4, 1998.

89. *Conductance of the Mott quantum wire*, seminar, Department of Physics, University of Illinois at Urbana-Champaign, December 10, 1997.

90. *ibid*, Department of Physics, University of Chicago, December 9, 1997.

91. *ibid*, Department of Physics, University of Indiana at Bloomington, December 5, 1997.

92. *ibid*, Department of Physics, University of Wisconsin at Madison, December 4, 1997.

93. *Origin of spin gap behavior of* CaV_4O_9, seminar, Texas Center for Superconductivity, University of Houston, July 23, 1996.

94. *Unusual properties of low-dimensional quantum antiferromagnets*, seminar at the Department of Physics, Yale University, April 24, 1996.

95. *Spin gap behavior of two-dimensional quantum antiferromagnet and effect of spin-lattice coupling*, University of Chicago, April 22, 1996.

96. *Quantum Antiferromagnet and Confinement of Spinons in the CP^{N-1} Model*, Department of Physics, University of Pittsburgh, Pittsburgh, PA, 1994.

Publications of Oleg A. Starykh

1. Shou-Shu Gong, Wei Zhu, Kun Yang, Oleg A. Starykh, D. N. Sheng, Leon Balents, *Emergent quasi-one-dimensionality in a kagomé magnet: A simple route to complexity*, Phys. Rev. B **94**, 035154 (2016); arxiv:1604.01459 (2016).

2. Ethan Lake*, Caleb Webb*, D. A. Pesin, O. A. Starykh, *Rashba vs Kohn-Luttinger: evolution of p-wave superconductivity in magnetized two-dimensional Fermi gas subject to spin-orbit interaction*, Phys. Rev. B **93**, 214516 (2016); arXiv:1602.02741 (2016) [* undergraduate student].

3. Leon Balents and Oleg A. Starykh, *Quantum Lifshitz Field Theory of a Frustrated Ferromagnet*, Phys. Rev. Lett. **116**, 177201 (2016); also known as *A Panoply of Orders from a Quantum Lifshitz Field Theory*, arxiv:1510.07640 (2015).

4. Oleg A. Starykh, *Unusual ordered phases of highly frustrated magnets: a review*, Reports on Progress in Physics **78**, 052502 (2015); arXiv:1412.8482 (2014); (an invited review).

5. E. G. Mishchenko, O. A. Starykh, *Equilibrium currents in chiral systems with non-zero Chern number*, Phys. Rev. B **90**, 035114 (2014); arxiv:1404.7535 (2014).

6. Oleg A. Starykh, Wen Jin, Andrey V. Chubukov, *Phases of triangular lattice antiferromagnet near saturation*, Phys. Rev. Lett. **113**, 087204 (2014); arxiv:1404.1046 (2014).

7. Oleg A. Starykh and Leon Balents, *Excitations and quasi-one-dimensionality in field-induced nematic and spin density wave states*, Phys. Rev. B **89**, 104407 (2014); arxiv:1312.0992 (2013).

8. Andrey V. Chubukov and Oleg A. Starykh, *Spin-current order in anisotropic triangular antiferromagnets*, Phys. Rev. Lett. **110**, 217210 (2013); arxiv:1303.3519 (2013).

9. S.A. Kulagin, N. Prokof'ev, O.A. Starykh, B. Svistunov, C.N. Varney, *Bold Diagrammatic Monte Carlo Applied to Fermionized Frustrated Spins*, Phys. Rev. Lett. **110**, 070601 (2013); arXiv:1212.0055.

10. Sergey Kulagin, Nikolay Prokof'ev, Oleg A. Starykh, Boris Svistunov, Christopher N. Varney, *Bold Diagrammatic Monte Carlo technique for frustrated spin systems*, Phys. Rev. B **87**, 024407 (2013); arxiv:1211.3631 (2012).

11. Ru Chen, Hyejin Ju, Hong-Chen Jiang, Oleg A. Starykh, Leon Balents, *Ground States of Spin-1/2 Triangular Antiferromagnets in a Magnetic Field*, Phys. Rev. B **87**, 165123 (2013); arxiv:1211.1676 (2012).

12. Zhihao Hao and Oleg A. Starykh, *Half-metallic magnetization plateaux*, Phys. Rev. B **87**, 161109(R) (2013); arxiv:1207.7124 (2012).

13. Ratchel Glenn, Oleg A. Starykh, Mikhail E. Raikh, *Interplay of spin-orbit coupling and Zeeman splitting in the absorption lineshape of 2D fermions*, Phys. Rev. B **86**, 024423 (2012); arxiv:1203.6118 (2012).

14. Christian Griset, Shane Head, Jason Alicea, Oleg A. Starykh, *Deformed triangular lattice antiferromagnets in a magnetic field: role of spatial anisotropy and Dzyaloshinskii-Moriya interactions*, Phys. Rev. B **84**, 245108 (2011); arxiv:1107.0772 (2011).

15. E.M. Stoudenmire, Jason Alicea, Oleg A. Starykh, Matthew P.A. Fisher, *Interaction Effects in Topological Superconducting Wires Supporting Majorana Fermions*, Phys. Rev. B **84**, 014503 (2011) [selected for *Editors' Suggestion* and highlighted in **Physics**, see http://physics.aps.org/synopsis-for/10.1103/PhysRevB.84.014503]; arxiv:1104.5493 (2011).

16. E. M. Mishchenko and O. A. Starykh, *Intersubband Edge Singularity in Metallic Nanotubes*, Phys. Rev. Lett. **107**, 116804 (2011); arxiv:1104.1743 (2011).

17. K. Yu. Povarov, A. I. Smirnov, O. A. Starykh, S. V. Petrov, A. Ya. Shapiro, *Modes of magnetic resonance in the spin liquid phase of Cs_2CuCl_4*, Phys. Rev. Lett. **107**, 037204 (2011); arxiv:1101.5275 (2011).

18. Oleg A. Starykh, Hosho Katsura, Leon Balents, *Extreme sensitivity of a frustrated quantum magnet: Cs_2CuCl_4*, - Phys. Rev. B **82**, 014421 (2010); arxiv:1004.5117. [This work has been selected for *Editors' Suggestion* and highlighted in **Physics**, see http://physics.aps.org/synopsis-for/10.1103/PhysRevB.82.014421]

19. Oleg A. Starykh, *Spin-density wave in a quantum wire*, - Book Chapter in *Handbook of Nanophysics* vol.4: *Nanotubes and Nanowires*, Klaus D. Sattler (Editor), published by CRC Press (September 3, 2010), ISBN-10: 142007542X, page 30-1.

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