

VakInternational workshop «Dzyaloshinskii-Moriya Interaction and Exotic Spin Structures»

- Session 1.** Crystal handedness and spin chirality.  
**Session 2.** Critical spin fluctuations at the phase transition in helimagnets.  
**Session 3.** Monoaxial chiral helimagnets  
**Session 4.** Chiral couplings and phase transitions in helimagnets.  
**Session 5.** Phase transitions in helimagnets.  
**Session 6.** Spin excitations in helimagnets with DM interaction  
**Session 7.** Exotic spin structures (skyrmions) – I  
**Session 8.** Exotic spin structures (skyrmions) – II  
**Session 9.** Theory of DMI effect on the magnetic structure  
**Session 10.** Hall effect in chiral magnetic structures  
**Session 11.** Thin films and surface effects in cubic ferromagnets without center of symmetry.  
**Session 12.** Antiferromagnets and multiferroics  
**Session 13.** Neutron scattering for non-collinear magnetism

**Tuesday. 23 May 2017**

8.00 – 13.30	<b>Check in at the hotel, Registration, Lunch</b>	
13.50 – 14.00	<b>Opening ceremony</b>	
<b>Session 1. Crystal handedness and spin chirality. Chairperson Catherine Pappas</b>		
14.00 – 14.30	<b>Gen Tatara</b> Dr., RIKEN, Japan	«Doppler shift picture of Dzyaloshinskii-Moriya interaction»
14.30 – 15.00	<b>Rostislav Mikhaylovskiy</b> Mr, Radboud University, The Netherlands	«Femtosecond Opto-magnetism in Materials with the Dzyaloshinskii- Moriya Interaction»
15.00 – 15.30	<b>Ohta Hitoshi</b> Prof., Kobe University, Molecular Photoscience Research Center, Japan	«Determination of DMI in Kagome Lattice Antiferromagnet Cr-Jarosite by High-Frequency ESR»
15.30 -16.00	<b>Coffee break</b>	
<b>Session 2. MnGe-based helimagnets. Chairman Vladimir Dmitrienko</b>		
16.00 – 16.30	<b>Isabelle Mirebeau</b> Prof., LLB, Saclay, France	«Two-step pressure induced collapse of magnetic order and fluctuating chiral phase in MnGe chiral magnet»
16.30 – 16.50	<b>Gleb Valkovskiy</b>	«Small structural variation and various

	Dr., Saint-Petersburg State University, St-Petersburg, Russia	physical properties of the B20 type compounds»
16.50 – 17.20	<b>Vladimir Sidorov</b> , Dr., Vereshchagin Institute for High Pressure Physics, RAS, Moscow, Troitsk, Russia	«Effect of high pressure on the properties of cubic noncentrosymmetric compounds of $Mn_{1-x}Rh_xGe$ »
17.20 – 17.40	<b>Nicolas Martin</b> Dr., LLB, Saclay, France	«Long-period smectic-like magnetic structures in $Mn_{1-x}(Co,Rh)_xGe$ alloys»
17.40 – 18.00	<b>Evgeny Altynbayev</b> Mr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Fragile equilibrium in Fe and Co-doped MnGe compounds»
18.00 – 18.20	<b>P. Kizhe</b> Dr., Grad-Kitezh University, Grad-Kitezh, Russia	«Spin wave stiffness in $Mn_{1-x}Fe_xGe$ helimagnets studied by SANS»
19.00	<b>Welcome party</b>	

### Wednesday. 24 May 2017

#### Session 3. Monoaxial chiral helimagnets .

Chairman **Javier Campo**

9.00 – 9.30	<b>Jun-ichiro Kishine</b> Prof., The Open University of Japan, Japan	«Mono-axial chirality in magnetism and optics»
9.30 – 10.00	<b>Yoshihiko Togawa</b> , Dr., Osaka Prefecture University, Japan	«Structure and Functionality of Chiral Monoaxial Magnetic Crystals»
10.00 – 10.30	<b>Masayuki Hagiwara</b> Prof., Osaka University, Osaka, Japan	«Spiked structures on esr signals of the chiral helimagnet $CrNb_3S_6$ »
10.30 – 10.50	<b>Yusuke Kato</b> , Prof., The University of Tokyo, Tokyo, Japan	«Spin structures in precursor region of uniaxial chiral magnets»
10.50 – 11.20	<b>Shigeo Ohara</b> , Prof., Nagoya Institute of Technology, Nagoya, Japan	Magnetic phase diagram of uniaxial chiral helical magnet $Yb(Ni_{0.94}Cu_{0.06})_3Al_9$
11.20 – 11.30	<b>Coffee break</b>	

#### Session 4. Chiral couplings and phase transitions in helimagnets.

Chairman **Jun-ichiro Kishine**

11.30 – 12.00	<b>Alexander S. Ovchinnikov</b> Prof., Ural Federal University Ekaterinburg, Russia	« Functional RG analysis of Pokrovsky-Talapov model »
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12.00 – 12.20	<b>Alexander M. Belemuk</b> Institute for High Pressure Physics of RAS, Moscow, Russia	«Phase transitions in chiral magnets from Monte Carlo simulation»
12.20 – 12.40	<b>Oleg Utesov</b> Dr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Cascades of phase transitions in spiral magnets caused by dipolar forces»
12.40 – 13.00	<b>Javier Campo</b> Prof., Instituto de Ciencia de Materiales de Aragón – Universidad de Zaragoza, Zaragoza, Spain	«Nucleation, Instability and discontinuous phase transitions in the monoaxial helimagnet with oblique fields»
13.00 – 14.00	<b>Lunch</b>	

**Session 5. Phase transitions in helimagnets.**  
Chairman **Yoshihiko Togawa**

14.00– 14.30	<b>Catherine Pappas</b> Prof., TUDelft, Delft, Netherlands	«Phase transition of MnSi under magnetic field: A SANS and Neutron Spin Echo Study»
14.30 – 14.50	<b>Alla Petrova</b> Dr., Institute for High Pressure Physics of RAS, Moscow, Russia	«On phase diagram of the itinerant helical magnet MnSi at strong magnetic fields»
14.50 – 15.10	<b>Fengjiao Qian</b> Ms., TUDelft, Delft, Netherlands	«Dissipation phenomena and magnetic phase diagram of Cu <sub>2</sub> OSeO <sub>3</sub> »
15.10 – 15.30	<b>Misako Shinozaki</b> Dr., The University of Tokyo, Tokyo, Japan	«Metastability and Hysteresis in Chiral Helimagnet»
15.30 – 16.00	<b>Coffee break</b>	

**Session 6. Spin excitations in helimagnets with DM interaction**  
Chairman **Arsen Gukasov**

16.00 – 16.30	<b>Tobias Weber</b> Dr., Technische Universität München, Munich, Germany	«From helimagnons towards non- reciprocal spin-waves in MnSi »
16.30 – 17.00	<b>Sergey Grigoriev</b> Dr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Spin wave stiffness in Mn <sub>1-x</sub> Fe <sub>x</sub> Si helimagnets studied by SANS»
17.00 – 17.20	<b>Francisco Jose Trindade Goncalves</b> Dr., Osaka Prefecture University, Osaka, Japan	«Spin wave propagation in a chiral monoaxial crystal CrNb <sub>3</sub> S <sub>6</sub> »

17.20 – 17.40	<b>Sergey Maleyev</b> , Prof., Petersburg Nuclear Physics Institute, Gatchina, Russia	«DM helices and magnetic field »
17.40 – 18.00	<b>Igor Proskurin</b> Dr., The Open University of Japan, Chiba, Japan	«Spin-wave chirality and its manifestation in antiferromagnets»
18.00	<b>Evening in St-Petersburg (free time)</b>	

**Thursday 25 May 2017**

**Session 7. Exotic spin structures (skyrmions) - I**  
Chairman **Ted Monchesky**

9.00 – 9.30	<b>Sergey Demishev</b> Prof., Prokhorov General Physics Institute of RAS, Moscow, Russia	«Different Skyrmion Lattice States in the A-Phase of MnSi Revealed by Magnetoresistance Probing»
9.30 – 9.50	<b>Lars Bannenberg</b> Mr., TUDelft, Delft, Netherlands	«Unraveling the coupling between skyrmion and crystallographic lattices»
9.50 – 10.10	<b>Victor Ukleev</b> Dr., CEMS, RIKEN, Japan	«Topological spin textures probed by coherent resonant soft X-ray scattering»
10.10 – 10.40	<b>Victor Laliena</b> , Prof. Instituto de Ciencia de Materiales de Aragón – Universidad de Zaragoza, Zaragoza, Spain	«Stability of Skyrmionic textures in cubic helimagnets and the role of fluctuations.»
10.40 – 11.00	<b>Nadya Chubova</b> Dr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Conical lattice versus skyrmion lattice in MnSi: competition of two structures above $T_C$ .»
11.00 – 11.20	<b>Takashi Kurumaji</b> Dr., RIKEN Center for Emergent Matter Science, Japan	«Neel-type Skyrmion lattice formation in a new class of polar magnet»
11.20 – 12.20	<b>Coffee break, Poster session</b>	

**Session 8. Theory of DMI effect on the magnetic structure**  
Chairman **Dmitry N. Aristov**

12.20 – 12.40	<b>Maria Jose Martinez-Perez</b> , Dr., University of Zaragoza, Spain	«Individual magnetic vortices investigated by nanosquid magnetometry»
12.40 – 13.00	<b>Laura Köhler</b> Ms., IFW Dresden, Dresden, Germany	«Topological domain walls in helimagnets»

13.00 – 14.00

**Lunch**

**Session 9. Exotic spin structures (skyrmions) - II**  
Chairman **Alexander S. Ovchinnikov**

14.00 – 14.30

**Dmitry Aristov**,  
Dr., Petersburg Nuclear  
Physics Institute, Gatchina,  
Russia

«Stability of a skyrmion and interaction  
of magnons»

14.30 – 15.00

**Victor Mironov**  
Dr., Institute for physics of  
microstructures RAS, Russia

«Skyrmion spin-wave resonances in  
ferromagnetic film with spatially  
modulated perpendicular anisotropy»

15.00 – 15.20

**Andrey Tsypilnikov**,  
Mr., Petersburg Nuclear  
Physics Institute, Gatchina,  
Russia

«Magnon spectrum in magnetic  
materials with skyrmion superlattice»

15.20 – 15.40

**Coffee break**

**Session 10. Hall effect in chiral magnetic structures**  
Chairman **Sergey V. Demishev**

15.40 – 16.10

**Vladimir V. Glushkov**,  
Prof., A.M. Prokhorov General  
Physics Institute Moscow,  
Russia

«Fermi Surface Evolution and Quantum  
Criticality in  $Mn_{1-x}Fe_xSi$ »

16.10 – 16.30

**Inna Lobanova**,  
Dr., Prokhorov General  
Physics Institute of RAS,  
Moscow, Russia

«Effect of magnetic field on the  
intermediate phase in  $Mn_{1-x}Fe_xSi$ : spin-  
liquid vs. fluctuations scenario»

**Session 11. Thin films and surface effects in cubic ferromagnets without center of  
symmetry**

Chairman **Sergey V. Demishev**

16.30 – 17.00

**Ted Monchesky**,  
Prof., Dalhousie University,  
Halifax, Canada

«Chiral magnetic states in MnSi thin  
films»

17.00 – 17.20

**Dirk Menzel**,  
Dr., TU Braunschweig,  
Institute for Condensed  
Matter Physics,  
Braunschweig, Germany

«Electronic Transport in MnSi Thin  
Films and Nanostructures»

17.20 – 17.40

**Vyacheslav Gritzaenko**  
IRC "Smart Materials",  
Southern Federal University,  
Rostov-on-Don, Russia

«Time-dependent entanglement within  
a framework of Dzyaloshinskii-Moriya  
interaction effect»

17.40

**Evening in St-Petersburg (free time)**

Friday 26 May 2017

**Session 12. Antiferromagnets and multiferroics**

Chairperson **Isabelle Mirebeau**

9.00 – 9.30	<b>Vladimir Dmitrienko</b> Prof. Dr., A.V.Shubnikov Institute of Crystallography RAS, Moscow, Russia	«Spin-orbit effects in non-collinear magnetism»
9.30 – 10.00	<b>Kazuhisa Kakurai</b> Prof., Japan Atomic Energy Agency, Tokai, JAPAN	«Magnetic structure and excitations in multiferroic hexaferrites »
10.00 – 10.20	<b>Igor Zobkalo</b> Dr., Petersburg Nuclear Physics Institute Gatchina, Russia	«Chirality evolution in RMn <sub>2</sub> O <sub>5</sub> multiferroics»
10.20 – 10.40	<b>Andrey Fraerman,</b> Prof., Institute for physics of microstructures RAS, Nizhny Novgorod, Russia	«Second harmonic generation in non-collinear magnetic system due to spin current: theory and experiment »
10.40 – 11.00	<b>Vadim Dyadkin</b> Dr. SNBL, ESRF Grenoble, France	«Probing chirality with high energy synchrotron light»
11.00 – 11.30	<b>Coffee break</b>	

**Session 13. Neutron scattering for non-collinear magnetism**

Chairman **Kazuhisa Kakurai**

11.30 – 12.00	<b>Arsen Gukasov</b> Prof., LLB, Saclay, France	«Bilayered crystal of magnetic monopoles and multiferroicity in spin ice »
12.00 – 12.20	<b>Dmitriy Tatarskiy</b> Mr., Institute for physics of microstructures RAS, Russia	«Nonreciprocal neutron diffraction on helical magnets»
12.20 – 12.40	<b>Konstantin Metlov</b> Dr. Donetsk Institute for Physics and Technology, Donetsk	«Micromagnetic theory of a third-order effect in magnetic small-angle neutron scattering by a spatially inhomogeneous medium»
12.40 – 13.00	<b>Alexander Kurbakov,</b> Dr., Petersburg Nuclear Physics Institute Gatchina, Russia	«Magnetism of layered triangular antimonates and tellurates with and without existence of structural and magnetic chiralities coupling»
13.00 – 14.30	<b>Lunch</b>	

15.00 – 19.00

**Excursion through town Peterhof**

19.00 – 22.00

**Closure of conference and Conference dinner**

**Poster session**

(11:00-12:00 Thursday 25 May 2017)

<b>Tatiana Ischenko,</b> Dr., A.M. Prokhorov General Physics Institute Moscow, Russia	«Mn <sub>1-x</sub> Fe <sub>x</sub> Si as a liquid crystal»
<b>Alexey Bykov,</b> Dr., Saint Petersburg State University, St- Petersburg, Russia	«Quasi two-dimensional character of the magnetic transition in YMn <sub>6</sub> Sn <sub>6</sub> »
<b>Denis Salamatin,</b> Mr., Institute of High Pressure physics, Moscow, Russia	«Incommensurate antiferromagnetism induced by a charge density wave in the cubic phases of REGe <sub>2.85</sub> (RE = Tb, Dy)»
<b>Alexander Samarin,</b> Mr., Prokhorov General Physics Institute of RAS, Moscow, Russia	«Magnetic Field Induced Griffiths Phase in Mn <sub>1-x</sub> Fe <sub>x</sub> Si Solid Solutions»
<b>Yusuke Araki,</b> Mr., University of Tokyo, Tokyo, Japan	«Magnetic and magnetoelectric properties in a chiral polar magnet Ni <sub>2</sub> InSbO <sub>6</sub> »
<b>Victor Timofeev,</b> Mr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Stereographic projection approach to skyrmionic spin structures»
<b>Kirill Pschenichnyi,</b> Mr., Saint Petersburg State University, St- Petersburg, Russia	«Neutron scattering cross section on the spin- waves in full polarized state in helimagnets »
<b>Igor Golosovskiy,</b> Dr., Petersburg Nuclear Physics Institute, Gatchina, Russia	«Incommensurate magnetic order in CoO nanoparticles revealed by neutron diffraction»
<b>Mikhail Prosnikov</b> Mr., Ioffe Institute, Petersburg, Russia	«Raman scattering study of the magnetic dynamics in PbFeBO <sub>4</sub> induced by the Dzyaloshinskii-Moriya interaction»
<b>Mariia Kuchugura,</b> Ms., Petersburg Nuclear Physics Institute, Gatchina, Russia	«The diffraction study of new low-dimensional spin frustrated chiral MnSnTeO <sub>6</sub> »
<b>Maria.V. Magnitskaya,</b> Dr., Institute of High Pressure physics, Moscow, Russia	«Electric field gradients in B2O compounds: Experiment and ab initio calculation»
<b>Tsuyoshi Omi,</b> Mr., The University of Tokyo, Tokyo, Japan	«Observation of a nonreciprocal signal in ferromagnetic resonance in multiferroic GaFeO <sub>3</sub> »
<b>Kunio Tokushuku</b> Mr. The University of Tokyo, Tokyo, Japan	«Dynamics of chiral soliton lattice under an electric field and its magnetic dependence»