

International Symposium Spin Waves 2011

Oral Session Program

Monday, June 6

10.00-10.10	Opening address
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10.10-11.10	Session 1	Spintronics
10.10-10.40	J. Nogués (invited)	Controlling magnetic vortices using exchange bias
10.40-11.10	V.V. Kruglyak (invited)	Magnonics: exploiting spin waves in magnonic meta-materials and devices
11.10-11.50	Coffee break and art exhibition	

11.50-12.35	Session 2	Ultrafast magnetization dynamics
11.50-12.20	A.V. Scherbakov (invited)	Magnetization Precession Induced by Picosecond Acoustic Pulses in Ferromagnetic Materials
12.20-12.35	I. Razdolski	Time-Resolved imaging of spin reorientation in rare-earth orthoferrites
13.00-14.30	Lunch	

14.30-15.45	Session 3	Quantum spin phenomena
14.30-15.00	Yu. M. Bunkov (invited)	Magnon Bose-Einstein condensation
15.00-15.15	O. Dzyapko	Direct observation of first order quantum coherence and phase locking in magnon Bose-Einstein condensate
15.15-15.30	A.V. Klochkov	The first observation of magnon BEC in solid antiferromagnet CsMnF ₃
15.30-15.45	V. I. Kozub	Voltage-dependent electron distribution in a small spin valve: emission of nonequilibrium magnons and magnetization evolution
15.45-16.15	Coffee break and art exhibition	

16.15-18.00	Session 4	Spintronics and magnetic films
16.15-16.30	D. I. Kholin	Magneto-optical studies of interlayer coupling in Fe/Si/Fe tri-layers
16.30-16.45	Y. Matiks	Electronic phase transitions in nickel-oxide superlattices
16.45-17.00	E. Th. Papaioannou	Magneto-photonic behavior in 2D hexagonal patterns composed of 3d magnetic metals
17.00-17.15	V. A. Kosobukin	Plasmon-enhanced near-field magneto-optical Kerr effects and related scanning microscopy via a linear nanoprobe
17.15-17.30	D. Brunne	Spin-induced optical harmonic generation in the centrosymmetric semiconductors EuTe and EuSe
17.30-17.45	A. Stashkevich	Detection of buried layers in ferromagnetic metal films
17.45-18.00	R. M. Farzetdinova	Magnetic fluctuations as the reason of the metal-insulator transition in magnetic semiconductors
18.00-19.30	Get-together party	

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Tuesday, June 7

09.00-10.30	Session 5	Quantum and frustrated magnets
09.00-09.30	L. E. Svistov (invited)	Magnetic phases of the frustrated $S=1/2$ chain compound LiCuVO_4
09.30-09.45	A. V. Boris	Spin-fluctuation-mediated superconductivity in iron arsenides: complementary thermodynamics and optical studies
09.45-10.00	S. V. Maleyev	Spin waves in cubic helimagnets
10.00-10.15	A. N. Ignatenko	Z_2 -vortex unbinding transition for two-dimensional frustrated antiferromagnets
10.15-10.30	T. P. Gavrilova	Electron spin resonance in $\text{Ba}_3\text{Cr}_2\text{O}_8$
10.30-11.00	Coffee break	

11.00-12.30	Session 6	Quantum and frustrated magnets
11.00-11.30	O. A. Starykh (invited)	Breaking the spin waves: spinons in Cs_2CuCl_4
11.30-11.45	K. Yu. Povarov	ESR modes in the spin-liquid phase of a two-dimensional frustrated quantum antiferromagnet Cs_2CuCl_4
11.45-12.00	V. Ya. Krivnov	Low-temperature thermodynamics of frustrated classical spin chain near the critical point
12.00-12.15	V. R. Shaginyan	Properties of kagome lattice in $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$
12.15-12.30	S. V. Demishev	Magnetic resonance in CeB_6 and ferromagnetic correlations
13.00-14.30	Lunch	

14.30-17.30	Session 7	Quantum and frustrated magnets
14.30-15.00	O. A. Petrenko (invited)	Spin dynamics in the hyperkagome compound $\text{Gd}_3\text{Ga}_5\text{O}_{12}$
15.00-15.30	D. N. Aristov (invited)	Asymmetric spin ladders: analytical and numerical studies
15.30-15.45	A. V. Syromyatnikov	Anomalously large damping of long-wavelength magnons caused by long-range interaction
15.45-16.00	V. N. Glazkov	Effects of weak interchain coupling on a spin-gap magnet
16.00-16.30	Coffee break	
16.30-16.45	D. S. Inosov	Spin excitations in 122-ferropnictide superconductors studied by inelastic neutron scattering
16.45-17.00	A. M. Vasiliev	Magnetic anisotropy of 2D antiferromagnet with triangular lattice CuCrO_2
17.00-17.15	A. V. Semeno	Probing of MnSi by electron spin resonance
17.15-17.30	S. Sofronova	Magnetic anisotropy and exchange interactions of $\text{Ni}_3\text{B}_2\text{O}_6$ and $\text{Co}_3\text{B}_2\text{O}_6$

17.30-20.00	Poster session and refreshments
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Wednesday, June 8

09.00-11.15	Session 8	Multiferroics
09.00-09.30	S. Kamba (invited)	Review of spin-phonon coupling in cubic SrMnO_3 , EuTiO_3 and hexagonal YMnO_3 antiferromagnets: radiofrequency, THz and far-infrared studies
09.30-10.00	A. Pimenov (invited)	Magnetic and magnetoelectric excitations in multiferroic manganites
10.00-10.15	A. A. Mukhin	Coupled R and Fe magnetic excitations in $\text{RFe}_3(\text{BO}_3)_4$ multiferroics
10.15-10.30	A. P. Pyatakov	Spin flexoelectricity: magnetic domain walls and vortices as sources electric polarization
10.30-10.45	A. V. Malakhovskii	Hysteresis in magnetization of $\text{Nd}_{0.5}\text{Gd}_{0.5}\text{Fe}_3(\text{BO}_3)_4$ single crystal
10.45-11.00	I. E. Chupis	Nonreciprocity of electromagnon polaritons of TbMnO_3 at its boundary with a metal in a magnetic field
11.00-11.15	M. Ivanov	Evidence of p-d and d-d charge transfer and insulator-to-metal phase transitions in nonlinear optical response of $(\text{La}_{0.6}\text{Pr}_{0.4})_{0.7}\text{Ca}_{0.3}\text{MnO}_3$
11.30-12.45		Lunch
13.00-19.00		Excursion to Peterhof park and palace



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Thursday, June 9

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09.00-11.15	Session 9	Nonlinear dynamics and nanostructures
09.00-09.30	B. A. Kalinikos (invited)	Random formation of coherent spin-wave envelope solitons from incoherent microwave signal
09.30-10.00	G. Woltersdorf (invited)	Magnon magnetometry by XMCD and spin wave propagation in wires
10.00-10.15	M. A. Cherkasskii	Observation of black spin wave soliton pairs in yttrium iron garnet thin films
10.15-10.30	A.V. Kondrashov	Dual tunability of microwave chaos auto-generator based on ferrite-ferroelectric film structure
10:30-10:45	F. Mushenok	Non-linear spin-wave phenomena in chiral molecular magnets
10:45-11:00	S. V. Grishin	Self-generation of chaotic dissipative soliton trains in active feedback rings based on the ferromagnetic film
11:00-11:15	S. E. Sheshukova	Envelope solitons formation in magnonic crystals near the band gap
11.30-12.30		Lunch

13.00-14.45	Session 10	Magnetization dynamics and nanostructures
13.00-13.30	V. E. Demidov (invited)	Control of spin-wave emission characteristics of spin-torque nano-oscillators
13.30-13.45	J. Hellsvik	Atomistic spin dynamics simulations of ferrimagnetic resonance
13.45-14.00	N. B. Orlova	The model of ultrafast magnetization reversal without femtosecond spin dynamics
14.00-14.15	A. Taroni	Suppression of standing spin waves in low-dimensional magnets
14.15-14.30	T. V. Murzina	Optical and nonlinear-optical studies of Ni nanorods
14.30-14.45	N. S. Sokolov	Cobalt nanoparticle arrays on fluoride surfaces: growth and MOKE studies
14.45-15.15		Coffee-break

15.15-17.00	Session 11	Magnetostatic waves
15.15-15.30	S. Platonov	Magnetostatic spin waves propagation in wedge superlattices
15.30-15.45	A. Yarygin	Magnetostatic waves propagation in periodic magnetic structures with anisotropy
15.45-16.00	E. H. Lock	Universal formula for angular width of a diffractive spin wave beam
16.00-16.15	M. Logunov	Reorientation of 2D magnetic domain patterns in pulsed fields
16.15-16.30	L. V. Lutsev	Spin waves in nanosized magnetic films
16.30-16.45	N. Volkov	Spin pumping and conversion of spin current into charge current in Co/Y ₃ Fe ₅ O ₁₂ bilayer structure
16.45-17.00	M. Fayzullin	Possible mechanisms of magnon sidebands in KCuF ₃
18.00-20.30		Conference dinner

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Friday, June 10

09.00-11.00	Session 13	Trends in magnetism
09.00-9.35	Th. Rasing (invited)	Ultrafast optical spin manipulation: challenges and opportunities
9.35-10.10	S. S. Sosin (invited)	Spin dynamics of Heisenberg and XY pyrochlore magnets studied by ESR
10.10-10.25	A. A. Sirenko	Far-IR excitations in multiferroics studied with Muller matrix ellipsometry and transmission spectroscopy using synchrotron radiation
10.25-11.00	A. A. Serga (invited)	Collapsing bullet and subwavelength spin-wave beams
11.00-12.00		Closing remarks and coffee

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Poster Session Program

Tuesday, June 7
17:30-20:00

- P01 G. Abramova, M. Boehm, **O. Bolsunovskaya**, B. Ouladdiaf
Elementary excitation spectra of $\text{Fe}_x\text{Mn}_{1-x}\text{S}$ single crystals
- P02 **A. A. Astretsov**, V. V. Pavlov, R. V. Pisarev, V. A. Rusakov, P. A. Usachev, A. I. Stognij, N. N. Novitski
Optical and magneto-optical study of nanosized ferromagnetic metal-dielectric structures $[\text{Co}/\text{TiO}_2]_n/\text{Si}$
- P03 **A. G. Bazhanov**, A. M. Zyuzin
Calculation of the resonant fields of SWR spectra with a smooth change of the symmetry boundary conditions in three-layer magnetic film
- P04 **E. N. Beginin**
Propagation of microwave pulses through the nonlinear transmission line based on ferromagnetic structure
- P05 **E. N. Beginin**, S. A. Nikitov, Yu. P. Sharaevskii, S. E. Sheshukova
Gap solitons in magnonic crystals at 3-wave interactions
- P06 V. D. Bessonov, **R. Gieniusz**, A. Maziewski, H. Ulrichs, V. E. Demidov, S. O. Demokritov, S. Urazhdin
Resonant nonlinear frequency multiplication in microscopic magnetic elements
- P07 **P. Bondarenko**, B. A. Ivanov
Dynamic properties of discrete solitons in 1D magnetic dots array
- P08 **A. Drozdovskii**, A. Ustinov, B. Kalinikos
Pulsed excitation of surface spin-wave envelope solitons in magnonic crystal
- P09 **V. A. Dubovoj**, L. V. Lutsev, A. I. Firsenskov, A. E. Kozin, D. N. Fedin
Traditional and perspective spin-wave devices for the microwave frequency band
- P10 **E. G. Ekomasov**, R. R. Murtazin, Sh. A. Azamatov, A. M. Gumerov, A. E. Ekomasov
Nonlinear dynamics of the domain walls of the magnetic with 1D and 2D case nonhomogeneities modulation of the parameters of the magnetic anisotropy
- P11 **Yu. A. Fridman**, O. A. Kosmachev, Ph. N. Klevets
Phase diagram in spin-1 easy-plane antiferromagnetic
- P12 **A. A. Gippius**, N. E. Gervits, M. Baenitz, M. Schmitt, K. Koch, W. Schnelle, W. Liu, Y. Huang, H. Rosner
NMR study of low dimensional spin system $\text{Cu}_2[\text{PO}_3(\text{CH}_2)\text{PO}_3]$: magnetic versus structural dimers
- P13 **A. Go**, L. Dobrzyński
An influence of local environment on spin densities' distribution in Fe_3Al and Fe_3Si doped with transition metals
- P14 **N. Grigoryeva**, B. Kalinikos
Dipole-exchange spectrum of highly anisotropic ferromagnetic thin-film waveguides on terahertz frequencies
- P15 N. Grigoryeva, **R. Sultanov**, B. Kalinikos
Dependence of the normal wave spectrum in multiferroic layered structure on surface spin-pinning conditions
- P16 S. V. Grishin, **D. V. Romanenko**, Yu. P. Sharaevskii
Nonlinear model of a ferromagnetic film feedback ring at three-wave interactions

- P17 A. N. Ignatenko, **V. Yu. Irkhin**, A. A. Katanin
Self-consistent spin wave theory, elementary excitations and Néel temperature in triangular-lattice antiferromagnets
- P18 P. A. Igoshev, A. V. Zarubin, A. A. Katanin, **V. Yu. Irkhin**
Spin wave and one particle instabilities of ferromagnetic state in the Hubbard model
- P19 **D. Ilyushenkov**, D. Yavsin, V. Kozhevin, I. Yassievich, V. Kozub, S. Gurevich
Magnetic properties of the Ni amorphous nanogranule films
- P20 V. P. Ivanov, **S. A. Manuilov**, A. M. Grishin, G. A. Nikolychuk
Step forward to the new materials for MSSW devices
- P21 **A. S. Kamzin**, Fulin Wei, V. Ganeev, L. D. Zaripova
Preparation and study of Fe/M (M=Co or Pt) thin films for ultrahigh-density magnetic recording
- P22 **A. N. Kalinkin**, V. M. Skorikov
Skyrmion lattices in multiferroics
- P23 **E. Karashtin**, O. Udalov
Properties of high frequency conductivity in noncollinear ferromagnets
- P24 **A. D. Karenowska**, A. V. Chumak, V. S. Tiberkevich, A. A. Serga, J. F. Gregg,
A. N. Slavin, B. Hillebrands
Oscillatory energy exchange between spin wave modes coupled by a dynamic magnonic crystal
- P25 **N. Khasanov**
Some aspects of the influence of defects on the formation of thermoremanent magnetization in two-domain grains ensemble
- P26 **R. Khymyn**, V. E. Kireev, B. A. Ivanov
Ground states of the triangular arrays of magnetic dots in the presence of the external magnetic field
- P27 M. I. Kobets, K. G. Dergachev, **E. N. Khatsko**, S. L. Gnatchenko
Features of high-frequency properties of the crystal $\text{NdFe}_3(\text{BO}_3)_4$ in the incommensurate magnetic phase
- P28 M. I. Kurkin, **N. B. Orlova**
Equations to describe the femtosecond magneto-optics under the electric-dipole excitation of electrons
- P29 **A. P. Kuz'menko**, P. V. Abakumov
Raman image of the magnetic structure in YFeO_3
- P30 N. Leo, D. Meier, **R. V. Pisarev**, S.-W. Cheong, M. Fiebig
Role of the rare-earth magnetism in the magnetic-field induced polarization reversal in multiferroic TbMn_2O_5
- P31 **E. H. Lock**, A. V. Vashkovsky
On the relationship between power and dispersion characteristics of a dipole spin waves
- P32 **L. V. Lutsev**, A. I. Stognij, N. N. Novitskii, A. S. Shulenkova
Spin-wave and spintronic devices on the base of magnetic nanostructures
- P33 M. A. Morozova, **Yu. P. Sharaevskii**, S. E. Sheshukova, M. K. Zhamanova
Self-action effects of magnetostatic waves in layered ferromagnetic structure
- P34 **N. V. Ostrovskaya**, V. V. Polyakova, A. F. Popkov
Analysis of bifurcations in the model of a three-layered magnetic structure
- P35 **K. G. Patrin**, V. Yu. Yakovchuk, D. A. Velikanov, G. S. Patrin, S. A. Yarikov
Magnetic, resonance and magnetoresistivity properties of trilayer NiFe/Bi/NiFe films

- P36 **V. V. Pavlov**, A. B. Henriques, A. Schwan, I. Akimov, R. V. Pisarev, D. Yakovlev, M. Bayer
Picosecond spectroscopy of electronic-spin excitations in magnetic semiconductor EuTe
- P37 **Anna Pimenov**, Ch. Kant, A. Shuvaev, V. Tsurkan, A. Pimenov
Synthesis, characterization and dynamic magnetic properties of multiferroic chromates
- P38 **V. K. Sakharov**, Y. V. Khivintsev, S. A. Nikitov, Y. A. Filimonov
Magnetic structures based on periodically alternating cobalt and permalloy stripes
- P39 **V. K. Sakharov**, Y. V. Khivintsev, S. A. Nikitov, Y. A. Filimonov
Magnetoresistance and domain structure in patterned magnetic microstructures based on cobalt and permalloy films
- P40 **A. V. Sizanov**, A. V. Syromyatnikov
Magnetics with large single-ion easy-plane anisotropy
- P41 **P. M. Shmakov**, A. P. Dmitriev, V. Yu. Kachorovskii
Spin waves in diluted magnetic quantum wells
- P42 **A. I. Smirnov**, K. Yu. Povarov, S. V. Petrov, A. Ya. Shapiro
Magnetic resonance in ordered phase of spin-1/2 antiferromagnet Cs_2CuCl_4
- P43 **A. O. Sorokin**, A. V. Syromyatnikov
Transitions in three-dimensional magnets with extra order parameters
- P44 **R. R. Subkhangulov**, B. R. Namozov, K. V. Kavokin, Yu. G. Kusraev, A. V. Koudinov
Temperature dependence of multiple spin-flip Raman scattering in magnetic quantum wells
- P45 **S. M. Suturin**, L. Pasquali, A. G. Banskchikov, D. A. Baranov, V. V. Fedorov, K. V. Koshmak, Yu. A. Kibalin, P. Torelli, J. Fujii, G. Panaccione, N. S. Sokolov
XMCD studies of magnetic properties and proximity effects in $\text{Co/MnF}_2(111)$ heterostructures
- P46 D. O. Tolmachev, A. S. Gurin, **N. G. Romanov**, P. G. Baranov, B. R. Namozov, Yu. G. Kusraev
ODMR of Mn-related excitations in $(\text{Cd,Mn})\text{Te}$ quantum wells
- P47 **V. Tugarinov**, A. Pankrats, G. Petrakovskii, S. Kondyan, D. Velikanov, V. Temerov
Antiferromagnetic resonance and magnetic investigations of rare-earth ferrobates
- P48 **O. G. Udalov**
NMR spectrum in the non-collinear antiferromagnet $\text{Mn}_3\text{Al}_2\text{Ge}_3\text{O}_{12}$
- P49 **P. A. Usachev**, A. A. Astretsov, V. A. Rusakov, V. V. Pavlov, N. A. Tarima, S. A. Kitan', V. M. Iliyaschenko, N. I. Plusnin
Magneto-optical properties of Fe and Fe/Cu layered nanostructures on $\text{Si}(001)$
- P50 **N. Useinov** and L. Tagirov
Spin-polarized conductivity of double magnetic tunnel junction
- P51 A. G. Volkov, **A. A. Povzner**
The nonlinear effect of external electric field on the spin excitations and the electronic structure of ferromagnetic semiconductors
- P52 **S. L. Vysotsky**, Yu. A. Filimonov, E. S. Pavlov, S. A. Nikitov
Influence of metal on formation of forbidden gaps in SMSW spectrum of 1D ferrite magnonic crystal
- P53 **S. L. Vysotsky**, Yu. A. Filimonov, E. S. Pavlov, S. A. Nikitov
Influence of three magnon parametric instability on MSSW Bragg resonances in 1D magnonic crystal