

## International Workshop Novel Trends in Physics of Ferroics 2017

Thursday, July 6

Oral session program

<b>08.15-09.15</b>	<b>Registration</b>	
<b>09.15-09.30</b>	<b>Opening ceremony</b>	
<b>09.30-11.30</b>	<b>Session 1</b>	<b>Frontiers of physics of ferroics</b>
09.30-10.00	Xiaofeng Jin <i>invited talk</i>	The spin Hall effect learnt from the anomalous Hall effect
10.00-10.30	Theo Rasing <i>invited talk</i>	“Bits and Brains”. New materials and brain-inspired concepts for low energy information processing
10.30-11.00	Sang-Wook Cheong <i>invited talk</i>	Hybrid improper ferroelectricity
11.00-11.30	Josep Fontcuberta <i>invited talk</i>	Electroresistance in ferroelectric junctions: polarization charge and ions at play
<b>11.30-11.50</b>	<b>Coffee break</b>	
<b>11.50-13.10</b>	<b>Session 2</b>	<b>All-optical switching of magnetization</b>
11.50-12.20	Markus Münzenberg <i>invited talk</i>	All-optical magnetization switching of FePt magnetic recording medium
12.20-12.50	Rajasekhar Medapalli <i>invited talk</i>	Multi-scale dynamics of helicity-dependent all-optical switching in ferromagnetic multilayers
12.50-13.10	Andrzej Stupakiewicz <i>invited report</i>	Ultrafast nonthermal light-induced spin dynamics in dielectrics
<b>13.10-14.30</b>	<b>Lunch</b>	
<b>14.30-16.00</b>	<b>Session 3</b>	<b>Advanced probes of ferroic ordering</b>
14.30-15.00	Dmitry Chernyshov <i>invited talk</i>	Probing ferroelectric response with synchrotron light
15.00-15.30	Andrey Rogalev <i>invited talk</i>	X-ray magnetochiral dichroism as a probe of atomic toroidal moment
15.30-16.00	Christopher Stock <i>invited talk</i>	Columns, waterfalls, and the breakdown of phonon excitations in $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$
<b>16.00-16.20</b>	<b>Coffee break</b>	
<b>16.20-18.20</b>	<b>Session 4</b>	<b>Magnetolectric multiferroics</b>
16.20-16.50	Roman Pisarev <i>invited talk</i>	Electronic structure, magnetic phase transitions and optical phenomena in a complex magnetolectric antiferromagnet $\text{CuB}_2\text{O}_4$
16.50-17.05	Wei Bao <i>contributed talk</i>	Simultaneous occurrence of multiferroism and a short-range Dy order in $\text{DyFeO}_3$
17.05-17.20	Rinat Mamin <i>contributed talk</i>	Photostimulated dynamical properties of ferroics
17.20-17.35	Vladimir Men'shenin <i>contributed talk</i>	Excitons at the center of the Brillouin zone in $\text{CuB}_2\text{O}_4$ magnetolectric
17.35-17.50	Oleg Udalov <i>contributed talk</i>	Magneto-electric effect in granular multiferroics
17.50-18.05	Alexander Kamzin <i>contributed talk</i>	Synthesis and properties of multiferroic composites of biphasic ferromagnetic-ferroelectric structure
18.05-18.20	Alok Shukla <i>contributed talk</i>	Effects of (Cd, Ti) co-substitution on structural, electrical and magnetic properties of $\text{BiFeO}_3$
<b>18.20-20.00</b>	<b>Poster session and refreshments</b>	

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**Friday, July 7**

<b>09.00-10.35</b>	<b>Session 5</b>	<b>Spin and lattice dynamics at the nanoscale</b>
09.00-09.30	Stefan Eisebitt <i>invited talk</i>	Field-free deterministic creation and inertial properties of single skyrmions
09.30-10.00	Roy Chantrell <i>invited talk</i>	Multiscale model of the dynamic properties of Fe/MgO multilayers
10.00-10.20	Nikolay Pertsev <i>invited report</i>	Magnetization dynamics and spin pumping induced by elastic waves
10.20-10.35	Johan Hellsvik <i>contributed talk</i>	Spin-lattice dynamics in elemental metals from first principles
<b>10.35-11.00</b>		<b>Coffee break</b>

<b>11.00-12.55</b>	<b>Session 6</b>	<b>Terahertz spin and lattice dynamics in ferroics</b>
11.00-11.30	Matteo Savoini <i>invited talk</i>	Direct excitation of soft-phonon modes with broadband THz pulses
11.30-11.50	Rostislav Mikhaylovskiy <i>invited report</i>	Terahertz nonlinear spin control
11.50-12.20	Alexander Mukhin <i>invited talk</i>	Terahertz magnetoelectric phenomena in rare-earth borates
12.20-12.40	Natalia Sherstyuk <i>invited report</i>	Terahertz-induced dynamics in ferroelectric compounds
12.40-12.55	Sergey Artyukhin <i>contributed talk</i>	Origin of GHz loss and domain wall-localized excitations in improper ferroelectric hexagonal manganites
<b>12.55-14.00</b>		<b>Lunch</b>

<b>14.00-15.50</b>	<b>Session 7</b>	<b>Noncollinear magnetic structures</b>
14.00-14.30	Oleg Tretiakov <i>invited talk</i>	Antiferromagnetic skyrmions
14.30-15.00	Jan-Yves Cheuleau <i>invited talk</i>	Imaging and manipulating antiferromagnetic domains in BiFeO <sub>3</sub>
15.00-15.15	Mikhail Logunov <i>contributed talk</i>	Magneto-optical diffraction by periodic magnetic domain patterns
15.15-15.30	Oleg Utesov <i>contributed talk</i>	Cascades of phase transitions in spiral magnets caused by dipolar forces
15.30-15.45	Cristian Enachescu <i>contributed report</i>	Spin-crossover molecular magnets micro- and nanoparticles: theoretical and experimental investigations
<b>15.45-15.50</b>		<b>Closing remarks</b>

<b>16.00</b>	<b>Departure from the hotel Moscow to Erarta gallery</b>
<b>17.00-19.00</b>	<b>Tour at Erarta gallery</b>
<b>19.00-21.00</b>	<b>Workshop dinner at Erarta gallery</b>
<b>21.00</b>	<b>Departure from Erarta gallery to the hotel Moscow</b>

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<b>17:50 – 20:00</b>		<b>Poster session</b>
1	S. D. Baranovskii	Effect of magnetic field induced tuning of disorder on the magnetoresistance of paramagnetic dilute magnetic semiconductor
2	F. F. L. Bentivegna	Magnetic and electric control of the optical beam shift and the magneto-optic Kerr effect upon light reflection from a magneto-electric structure
3	Y. S. Dadoenkova	Goos-Hänchen shift at light transmission through bi-periodic photonic-magnonic crystal: influence of magneto-electric interaction
4	A. P. Danilov	Magnetization precession in dynamically coupled ferromagnetic layers
5	R. M. Dubrovin	Direct proof of a hidden structural instability and a potential multiferroicity of cobalt fluoroperovskites
6	E. V. Eremin	Investigation of the magnetoelectric and magnetoelastic properties of $\text{HoFe}_{3-x}\text{Ga}_x(\text{BO}_3)_4$ single crystals
7	M. Futamoto	Magnetic Tips for High-Resolution Magnetic Force Microscopy
8	T. T. Gareev	Nucleation of magnetic bubbles by electric field: the phenomenon and optimization of its critical voltage for practical needs
9	K. Yu. Golenitskii	Far-IR Dyakonov surface waves at the interface $\text{TiO}_2/\text{TiO}_2$
10	I. A. Gudim	Comparison of the magnetic properties of $\text{NdSc}_3(\text{BO}_3)_4$ and $\text{NdSc}_{1.5}\text{Ga}_{1.5}(\text{BO}_3)_4$ crystals
11	N. N. Ivakhnenko	Self-organized growth of clustered structures in doped perovskites $\text{La}_{0.6-x}\text{Nd}_x\text{Sr}_{0.3}\text{Mn}_{1.1}\text{O}_{3-\delta}$
12	M. S. Ivanov	Novel properties of organic ferroelectric/reduced graphene oxide system for multifunctional applications
13	A. M. Kalashnikova	All-optical and electric-bias induced magnetization reversal mediated by electron-electron exchange scattering
14	N. E. Khokhlov	Electrically driven magnetic domain wall as a nanodevice for local magneto-optical light modulation
15	V. V. Kononenko	Transport properties of magnesium diboride– $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ manganite nanocomposite
16	M. V. Magnitskaya	Ab initio calculation of electron and phonon properties of high-pressure-synthesized ferromagnet RhGe
17	A. V. Malakhovskii	Transformation of $\text{HoFe}_3(\text{BO}_3)_4$ absorption spectra at reorientation phase transitions
18	A. I. Morosov	Evolution of the antiferromagnetism vector of a multiferroic $\text{BiFeO}_3$ during switching its ferroelectric polarization
19	F. B. Mushenok	Nonuniformity of the demagnetizing field as a broadband source of spin waves
20	M. Ohtake	Structure and magnetic properties of $(\text{Fe}_{0.7}\text{Co}_{0.3})_{100-x}\text{B}_x$ alloy thin films formed on MgO single-crystal substrates
21	M. A. Prosnikov	Lattice and magnetic dynamics of an antiferromagnet $\text{PbFeBO}_4$
22	Ch. K. Sabdenov	Ferroelectric properties of rare-earth garnets
23	Ju. A. Siryuk	The peculiarities of domain boundaries in a spin flipping second-order phase transition in a garnet ferrite film
24	A. G. Smolnikov	$^{17}\text{O}$ NMR study of paramagnetic and magnetic ordered states of $\text{CuCrO}_2$
25	A. V. Telegin	Strain-mediated infrared magneto-optics of magnetostrictive ferrite spinels
26	O. G. Udalov	Electron transport in hybrid ferroelectric/metal systems
27	I. V. Yatsyk	Magnetic properties of Sr-doped ferromanganites of ytterbium
28	G. Zvyagina	Piezomagnetolectric effect in $\text{LiCoPO}_4$ is detected