

Saint Petersburg State University  
Faculty of Physics

International Symposium and Summer School in Saint Petersburg  
**Nuclear Magnetic Resonance in Condensed Matter**

**11<sup>th</sup> meeting “Biomolecular NMR and related phenomena”**  
**July 7 – 11, 2014**

# Timetable

an AMPERE event

Saint Petersburg, Russia  
2014





International Symposium and Summer School in Saint Petersburg  
**Nuclear Magnetic Resonance in Condensed Matter**  
11<sup>th</sup> Meeting "NMR and related phenomena"  
**July 7 – 11, 2014**

an  
**AMPERE**  
event

## Symposium and School are supported by:

Saint Petersburg State University  
Russian Foundation for Basic Research  
Bruker Corporation

<http://www.spbu.ru>  
<http://www.rfbr.ru>  
<http://www.bruker.com>

## Organizing Committee

### Co-Chairmen:

- V. I. Chizhik (Saint Petersburg, Russia)
- M.V. Kovalchuk (Saint Petersburg, Russia)
- R. Z. Sagdeev (Novosibirsk, Russia)

### Vice-Chairmen:

- A. V. Donets (Saint Petersburg, Russia)
- M. G. Shelyapina (Saint Petersburg, Russia)

### International Advisory Board:

- A. S. Arseniev (Moscow, Russia)
- V. Balevicius (Vilnius, Lithuania)
- V. I. Chizhik (Saint Petersburg, Russia)
- J. Fraissard (Paris, France)
- H. Haranczyk (Kraków, Poland)
- S. Jurga (Poznań, Poland)
- O. B. Lapina (Novosibirsk, Russia)
- D. Michel (Leipzig, Germany)
- V. I. Minkin (Rostov-on-Don, Russia)
- K. V. Ramanathan (Bangalore, India)
- R. Z. Sagdeev (Novosibirsk, Russia)
- K. M. Salikhov (Kazan, Russia)
- A. V. Skripov (Ekaterinburg, Russia)
- N. R. Skrynnikov (Purdue, USA)
- M. S. Tagirov (Kazan, Russia)

## Local Organizing Committee

(Saint Petersburg State University)

- Yu. S. Chernyshev
- A. V. Egorov
- V. V. Frolov
- A. V. Komolkin
- V. V. Matveev
- S. O. Rabdano
- S. M. Sukharzhevskii
- P. M. Tolstoy

## Contact Addresses

Sevastyan O. Rabdano (Ref.: NMRCM 2014)

Lab.: Quantum Magnetic Phenomena

St. Petersburg State University

Ulyanovskaya str., 1, Petergof, 198504, Saint Petersburg, RUSSIA

Phone: +7-(812)-428-75-59, +7-(812)-428-43-62

Fax: +7-(812)-428-72-40

E-mail: [nmrcm@nmr.phys.spbu.ru](mailto:nmrcm@nmr.phys.spbu.ru)

URL: <http://nmr.phys.spbu.ru/nmrcm/>

## July 7, Monday

<b>09:00-10:15</b>	<b>Registration in Blue Hall</b>			
<b>10:15-10:30</b>	<b>Opening</b>	Vladimir CHIZHIK		St Petersburg RUSSIA
<b>Morning session</b>				
<b>Chairman: Dieter MICHEL</b>				
<b>10:30-11:30</b>	<b>Lecture</b>	Yury PIROGOV	Local NMR spectroscopy in MRI experiments with small laboratory animals	Moscow RUSSIA
<b>11:30-12:00</b>	<b>Oral</b>	Ivan PETROV	Possibilities of the MRI in a complex assessment of cardiac diseases	St Petersburg RUSSIA
<b>12:00-12:30</b>	<b>Coffee Break</b>			
<b>12:30-13:00</b>	<b>Oral</b>	Tat'yana MAKUROVA	Diffusion-Weighted MRI of the body in oncologic practice: method, comparison with PET/SPECT and prospects	St Petersburg RUSSIA
<b>13:00-13:30</b>	<b>Oral</b>	Aleksandr DROZDOV	Magnetic Resonance features of HIV-associated opportunistic infections of the CNS	St Petersburg RUSSIA
<b>13:30-14:00</b>	<b>Oral</b>	Evgeny MOROZOV	Method development to study heavy crude oils using NMR Imaging joined with Cold Finger testing <i>in situ</i>	Krasnoyarsk RUSSIA
<b>14:00-15:00</b>	<b>Lunch</b>			
<b>Evening session</b>				
<b>Chairman: Vladimir CHIZHIK</b>				
<b>15:00-16:00</b>	<b>Lecture</b>	Dieter MICHEL	NMR high resolution spectroscopy and spin-lattice relaxation of Small Molecules adsorbed in metal-organic frameworks (MOFS)	Leipzig GERMANY
<b>16:00-17:00</b>	<b>Lecture</b>	Jacques FRAISSARD	Co-diffusion of gases in a microporous solid bed: classical NMR imaging or slice selection procedure	Paris FRANCE
<b>17:00-17:30</b>	<b>Conference photo</b>			
<b>17:30-</b>	<b>Welcome party</b>			

## July 8, Tuesday

<b>Morning session</b>				
<b>Chairman: Vyacheslav CHERTKOV</b>				
10:00-11:00	Lecture	Nikolai SKRYNNIKOV	Modeling a system with intrinsic disorder: an NMR/MD study of peptide-protein encounter complex	West Lafayette USA
11:00-11:30	Oral	Sevastyan RABDANO	The study of hydration properties of functional groups of glycine and beta-alanine amino acids by nuclear magnetic resonance and quantum chemical calculations	St Petersburg RUSSIA
11:30-12:00	Oral	Egor GERTS	Structure of two cyanobiphenyl mesogens studied by molecular dynamics simulations	St Petersburg RUSSIA
12:00-12:30	<b>Coffee Break</b>			
12:30-13:30	Lecture	Vladislav OREKHOV	Modern methods of NMR data collections and spectra processing	Gothenburg SWEDEN
13:30-14:00	Oral	Stefan JURGA		Poznan POLAND
14:00-15:00	<b>Lunch</b>			
<b>Evening session</b>				
<b>Chairman: Sergey DVINSKIKH</b>				
15:00-16:00	Lecture	Vitaly VOLKOV	Water exchange in biological cells studied by pulsed NMR techniques	Chemogolovka RUSSIA
16:00-17:00	Lecture	Yury BUNKOV	Spin superfluidity and Bose-Einstein condensation of magnons	Grenoble FRANCE
17:00-17:30	<b>Coffee Break</b>			
17:30-19:00	<b>Poster session</b>			
23:30-02:30	<b>Boat trip "White nights" &amp; Conference dinner</b>			

## July 9, Wednesday

Free day

## July 10, Thursday

Morning session				
Chairman: Nikolai SKRYNNIKOV				
10:00-11:00	Lecture	Vyacheslav CHERTKOV	Novel high resolution NMR techniques for elucidation of molecular solution-state structure and dynamics	Moscow RUSSIA
11:00-12:00	Lecture	Sergey DVINSKIKH	Heteronuclear Dipolar NMR Spectroscopy	Stockholm SWEDEN
12:00-12:30	Coffee Break			
12:30-13:30	Lecture	Yury BUNKOV	Direct observation of Majorano fermions in superfluid <sup>3</sup> He	Grenoble FRANCE
13:30-13:00	Oral	Sergey SHELUDIAKOV	Magnetic resonance study of atomic hydrogen and deuterium stabilized in solid H <sub>2</sub> and D <sub>2</sub> matrices below 1 K	Turku FINLAND
14:00-15:00	Lunch			
15:00-17:00	Poster session			
17:00-17:30	Coffee Break			
17:30-18:30	Poster session			

## July 11, Friday

<b>Morning session</b>				
<b>Chairman: Andrei KOMOLKIN</b>				
<b>10:00-11:00</b>	<b>Lecture</b>	Peter POLYAKOV	Laws of volume elasticity in physical processes of formation of phase states and properties	Donetsk UKRAINE
<b>11:00-11:30</b>	<b>Oral</b>	Vyacheslav RYZHOV	Unusual scenario of temperature evolution of magnetic state in novel (Au, Co) doped carbon-based nanomaterials	Gatchina RUSSIA
<b>11:30-12:00</b>	<b>Oral</b>	Boris KHARKOV	Molecular mobility in nanostructured mesocomposites studied by dipolar NMR spectroscopy	St Petersburg RUSSIA
<b>12:00-12:30</b>	<b>Coffee Break</b>			
<b>12:30-13:00</b>	<b>Oral</b>	Anton KARSEEV	Compact nuclear magnetic relaxometer to express - condition monitoring of liquid and viscous media	St Petersburg RUSSIA
<b>13:00-13:30</b>	<b>Oral</b>	George MOZZHUKHIN	Two frequency nuclear quadrupole resonance for lines identifications	Kaliningrad RUSSIA
<b>13:30-14:00</b>	<b>Closing</b>			
<b>14:00-15:00</b>	<b>Lunch</b>			

## NMRCM 2014 SYMPOSIUM SCHEDULE

	Monday, 07.07	Tuesday, 08.07	Wednesday, 09.07	Thursday, 10.07	Friday, 11.07
9:00 – 10:00	Registration		Free day		
10:00 – 12:00	Opening at 10:15	N. Skrynnikov		V. Chertkov	P. Polyakov
	Yu. Pirogov	S. Rabdano		S. Dvinskikh	V. Ryzhov
	I. Petrov	E. Gerts			B. Kharkov
12:00 – 12:30	Coffee	Coffee		Coffee	Coffee
12:30 – 14:00	T. Makurova	V. Orekhov		Yu. Bunkov (2)	A. Karseev
	A. Drozdov				G. Mozhukhin
	E. Morozov	S. Jurga		S. Sheludiakov	Closing
14:00 – 15:00	Lunch	Lunch		Lunch	Lunch
15:00 – 17:00	D. Michel	V. Volkov		Posters	
	J. Fraissard	Yu. Bunkov (1)			
17:00 – 17:30	Photo	Coffee		Coffee	
17:30 – 19:00	Welcome party	Posters			
		23:30 – 02:30 Boat trip "White nights" & Conference dinner			