Second Circular

# THIRD INTERNATIONAL SCHOOL-SEMINAR ON ELECTROMAGNETIC SOUNDING OF THE EARTH (EMS-2007)



Zvenigorod, RUSSIA

September 3-8, 2007

# Background

EMS-2007 continues tradition established by first two Russian schools held in Moscow (2003, 2005). The objective of the international School is to provide the up-today information on the recent findings in EM studies of the Earth. It is addressed mainly to postgraduate and PhD students. The School-seminar will be interesting also to researchers who wish to present and discuss their recent findings with colleagues from former Soviet Union Republics.

## Scientific themes

- deep EM sounding;
- modeling and inversion of EM fields;
- joint analysis and interpretation of EM and other geophysical data;
- EM studies in seismically active, geothermal and volcanic areas;
- high-resolution electromagnetics and environmental studies.

# Organizers

Geoelectromagnetic Research Center IPE RAS Scientific Council on the Earth's study by EM methods

# **Sponsors**

Department of the Earth's Science of Russian Academy of Sciences Institute of Physics of the Earth RAS Euro-Asian Geophysical Society Petromarker Ltd. Phoenix Geophysics Ltd. North-West Ltd.

# **Scientific Committee**

M. Berdichevsky (Moscow State University, Russia)

V. Cerv (Institute of Geophysics, Prague, Czech Republic)

T. Harinarayana (National Geophysical Research Institute, Hyderabad, India)

Ed. Fainberg (Geoelectromagnetic Research Center IPE RAS, Troitsk, Russia) M. Meju (Lancaster University, Lancaster, UK)

V. Spichak (Geoelectromagnetic Research Center IPE RAS, Troitsk, Russia)

B. Svetov (Geoelectromagnetic Research Center IPE RAS, Troitsk, Russia))

J. Zlotnicki (Observatoire de Physique du Globe, Clermont-Ferrand, France)

### Local organizing committee

V. Spichak - Chairman Ed. Fainberg – Vice-Chairman A. Shablina Yu. Sizov P. Pushkarev A. Goidina T. Vasilieva

#### Secretariat

Ms. Valeria Palmova – ems-07@igemi.troitsk.ru The web-site of the meeting is http://www.igemi.troitsk.ru/ems-07/en/

### Venue

EMS-07 will be held at the pension "Zvenigorodskii" located in Zvenigorod city (45 km to the west from Moscow) close to the Moscow river. Zvenigorod is an ancient Russian town known from the 14<sup>th</sup> century. It is dominated by a monastery that was a favorite of the Father of Peter the Great who built there two palaces. The monastery stands on a hill overlooking the Moscow River. Andrey Rublev, the greate Russian icon painter, had been working in Zvenigorod, in particular, he executed frescos of the Dormition Church.

### Meeting address:

Moscow Region, Odintsovskii district, Zvenigorod city, pension "Zvenigorodskii".

### Schedule

2/09 (Sunday) - Arrival, registration, Ice Breaker (8 p.m.)
3/09 (Monday) - Sessions
4/09 (Tuesday) - Sessions
5/09 (Wednesday) - Excursion (Moscow sightseeing tour), Dinner (BBQ, folk music)
6/09 (Thursday) - Sessions
7/09 (Friday) - Sessions
8/09 (Saturday) - Field seminar, Departure (5.30 p.m.)

## SCIENTIFIC PROGRAMME

#### September, 3

### SECTION 1: DEEP EM SOUNDINGS

Chairman V. Spichak

10.00-10.45 M. Berdichevsky (Moscow State University, Russia). From 2D to 3D - a main tendency of modern magnetotellurics.

10.45-11.30 J. Pek (Institute of Geophysics, Prague, Czech Republic). Effects of electrical anisotropy upon magnetotelluric data: modelling aspects and experimental observations.

11.30-12.00 Coffee-break

12.00-13.30 Presentation of posters

14.00-15.00 Lunch

16.00-18.00 Poster session

N⁰	Authors	Title
1.1.	E. Borzotta	An approach to the diagnostic of distortions in
		magnetotelluric soundings using magnetovaria-
		tional information
1.2.	T. Burakhovich, <u>S.Kulik</u> ,	High conductivity anomalies in the continental
	A. Kushnir	earth crust
1.3.	A. Gürer	Contribution of MT images to tectonic problems
		under debate in Turkey
1.4.	<u>Ahmed Khalil</u> , Abdou Khalaf	First multi-site magnetotelluric experiment in
		Egypt: opportunities of remote reference
		technique
1.5.	S.P. Levashov, N.A. Yakymchuk,	New geophysical models of Drake passage and
	I.N Korchagin, V.G.Bachmutov,	Bransfield strait crustal structure by geoelectrical
	V.D. Solovyov	data
1.6.	A.C. Lisin	Investigation of a comparative noise stability of
		the earth's crust sounding with a power single
		electromagnetic pulse method and an
		accumulation method
1.7.	V.Yu. Maksymchuk,	The results of geoelectromagnetic investigations
	V.E. Korepanov,	in the western part of Antarctic peninsula
	B.T. Ladanivsky,	
	E.F. Nakalov,	
	E.M. Klymovytch	
1.8.	<u>T. Matsuno</u> ,	Preliminary results of marine magnetotelluric
	N. Seama, K. Baba, T. Goto, A.	analysis across the Central Mariana transect
	D. Chave, R. L. Evans, A. White,	
	G. Boren, A. Yoneda,	

	H. Iwamoto, R. Tsujino, Y. Baba,	
	H. Utada, and K. Suyehiro	
1.9.		The research of magnetotelluric field in the
1.9.	Y.F.Moroz	region of the lake Baikal
1 10		
1.10.	<u>G. D. Naidu</u> , K. Ravi Shankar,	Magnetotelluric study to characterize the deep
	R.S. Sastry and	crustal geoelectric structure of the Narmada- son
1 1 1	T. Harinarayana	lineament zone, Central India - a modeling study
1.11.	N. Palshin	Reference profile and electrical conductivity of
1.10	L L D alvitzon alvez	the upper mantle Fundamental models
1.12.	<u>I.I. Rokityansky</u> ,	Fundamental models
1.12	T.S. Savchenko	
1.13.	A.V. Antsiferov,	Geological and geophysical models of the
	Ye.M. Sheremet,	Ukrainian shield Krivorozhsko-
	Ye.B. Glevassky,	Kremenchugskaya suture zone
	K.Ye. Yesipchuk,	
	S.N. Kulik,	
	T.K. Burakhovich,	
	P.I. Pigulevsky,	
	Yu.I. Nikolaev,	
	I.Yu. Nilolaev,	
	L.D. Setaya,	
	V.V.Zakharov,	
1 1 4	N.S. Kurlov	
1.14.	E. Yu. Sokolova,	Geoelectrical cross-section of Central Tian Shan
	V. Yu. Batalev,	according to the broadband and long-period MT
	N.V. Baglaenko,	data
	M. N. Berdichevsky,	
	N.S. Golubtsova,	
	V.E. Matukov,	
	P.Yu. Pushkarev,	
	A.K. Rybin,	
1.1.7	Iv. M. Varentsov	
1.15.	<u>M. Stefaniuk</u> ,	Deep magnetotelluric soundings along
	T. Czerwinski,	Zgorzelec-Wzajny profile
	J. Pokorski,	
	M. Sada &	
116	M. Wojdyla	The EMTERZ DOMED AND A commence and and a
1.16.	EMTESZ-Pomerania Working	The EMTESZ-POMERANIA array experiment:
	Group, <u>Iv.M. Varentsov</u> and	profile interpretation and spatial analysis
1 17	E.Yu. Sokolova	
1.17.	Iv.M. Varentsov, L.M.	Tracing the Kirovograd-Bariatino conductivity
	Abramova, N.V. Baglaenko,	anomaly in SW Russia: a priori knowledge and
	E.Yu. Sokolova, V.A. Kulikov,	new soundings
	N.L. Shustov,	
	A.G. Yakovlev,	
	E.D. Alexanova and	
1 1 0	I.M. Logvinov	Tongon froguenou gounding in the control we the
1.18.	A.A. Zhamaletdinov,	Tensor frequency sounding in the central part of
	A.N. Shevtsov,	the Kola Peninsula

V.V. Kolobov	

18.00-19.00 Discussion (panelists: M. Berdichevsky, Iv. Varentsov)

#### September, 4

#### SECTION 2: FORWARD MODELING AND INVERSION OF EM DATA Chairman J. Pek

10.00-10.45 V. Spichak (Geoelectromagnetic Research Center IPE RAS, Troitsk, Russia). 3D EM tomography of the Earth: methods and case studies.

10.45-11.30 M. Meju (Lancaster University, UK). Joint electromagnetic and seismic crossgradients imaging: implications for structural, lithological and petrophysical classification.

11.30-12.00 Coffee-break

12.00-13.30 Presentation of posters

14.00-15.00 Lunch

16.00-18.00 Poster session

Nº	Authors	Title
2.1.	P.N. Alexandrov	The volume integral equations for anisotropic media
2.2.	V.V. Belyavsky	Application of impedance tensor invariants in studying a the Earth crust and mantle
2.3.	G. Currenti, C. Del Negro, <u>S. Giudice</u>	GEOFIM: a software for Geophysical Forward / Inverse Modeling
2.4.	<u>Z. Dzhatieva</u> , B. Hobbs, J. Linfoot	MTEM in marine shallow water: modeling and inversion with synthetic data
2.5.	<u>E. Fainberg</u> , M. Berdichevsky, B. Singer	Dynamic correction and inversion of MTS curves distorted by subsurface S effect
2.6.	Mahmoud Mekkawi	Imaging of the subsurface structure regions in Egypt as deduced from EM data
2.7.	L. F. Moskovskaya	Modeling of conductive structures on measurings deep-water electrical soundings
2.8.	D.T. Odilavadze	Physical modeling of magnetotelluric field of Georgia territory under sub latitudinal polarizing electric field using standard graphical mathema- tical computer programs
2.9.	<u>K.Ravi Shankar</u> , G.D. Naidu, Sarana Basava, K.K.Abdul Azeez T.Harinarayana	Modeling study of geothermal structure of Beas- Parbati Valley and Sutlej Valley region
2.10.	<u>B. Singer</u> , E. Fainberg, J.K. Kjerstad	On static shift in marine electromagnetic data

2.11.	A.N. Shevtsov	Inverse problem of tensor frequency electromagnetic soundings with the use of industrial transmission lines
2.12.	<u>M.I. Shimelevich</u> , E.A. Obornev	The neuronet technology application at MT data interpretation
2.13.	I.M. Varentsov, N.V. Baglaenko, E.Yu. Sokolova, M.I. Varentsov	2D inversion resolution in the EMTESZ- POMERANIA project: data simulation approach
2.14.	<u>M. Wojdyla</u> , T. Czerwinski, C. Ostrowski, M. Stefaniuk & P. Targosz	Integrated interpretation of magnetotelluric, seismic and gravity data – case studies from Poland
2.15.	I.V. Yegorov	3D magnetotelluric modeling using Trefftz method

18.00-19.00 Discussion (panelists: V. Spichak, M. Meju)

#### September, 5

Morning: Excursion (Moscow sightseeing tour) Evening: BBQ

#### September, 6

#### SECTION 3: EM STUDIES IN GEOTHERMAL, VOLCANIC AND SEISMIC AREAS Chairman M. Meju

10.00-10.30. T. Harinarayana (National Geophysical Research Institute, Hyderabad, India). Geothermal scenario from deep electrical imaging and possible utilization of the resources.

10.30-11.00. J. Zlotnicki (Observatoire de Physique du Globe de Clermont-Ferrand, France). EM methods to image and monitor the volcanic activity: cases study.

11.00-11.30. N. Tarasov (Institute of Physics of the Earth RAS, Moscow, Russia). The changes of a seismic process under irradiation of the crust by the high energy electromagnetic discharges.

11.30-12.00 Coffee-break

12.00-13.30 Presentation of posters

14.00-15.00 Lunch

1 ( 00 10 00 )	n / ·
16.00-18.00	Poster session

No	Authors	Title
3.1.	<u>A.A. Avagimov</u> , V.A. Zeigarnik, V.N. Kliutchkin, V.I. Okunev	Estimation of the electromagnetic impact at variation of the model specimen deformation regime

2.2		
3.2.	<u>V.V. Belyavsky</u> ,	Seismoelectric parameters of the tectonosphere
	A.V. Egorkin,	within Eurasian orogen
	E.E. Zolotov,	
	M.N. Berdichevsky,	
	T.N. Burakhovich,	
	K.M. Carimov,	
	S.N. Kulik	
3.3.	L.M.Bogomolov,	From acoustic emission responses studies
	A.A. Avagimov,	towards seismic manifestations of EM fields
	N.S. Adigamov,	triggering effects and to their understanding
	V.A. Gavrilov,	anggering encers and to their anderstanding
	P.V. Il'ichev,	
	V.E. Matyukov,	
	A.K. Rybin,	
	V.N. Sychev,	
	N.A.Sycheva and A.S. Zakupin	
3.4.	L.M.Bogomolov, B.V.Borovsky,	Using of crossed electric and magnetic fields for
	P.V.Il'ichev, D.N. Miasnikov,	laboratory simulations of seismicity triggering
	V.A. Mubassarova, N.A.Sycheva	
	and G.S.Zakupina	
3.5.	C. Del Negro, <u>S. Giudice</u> , R.	Review of magnetic field monitoring at MT,
	Napoli, A. Sicali	ETNA (Italy): 1981-2006
3.6.	M. Devi, A.K. Barbara, A.	GPS & Demeter observations and low latitude –
	Depueva and	
	V. Depuev	earthquake precursor
3.7.	M. Devi, A. K. Barbara,	Es layer & UHF/VHF anomalous features
	and Y. Ruzhin	propagations prior to earthquake
3.8.	F.H. Karimov,	Electromagnetic approaches to the monitoring
	Sh.Shoziyoev	Earth crust deformation waves
3.9.	M. I. Lytvynchuk,	MTS-MVP study of seismogenic Haiyuan fault
	I. I. Rokityansky,	zone in NE margin of Qinghai-Tibet Plateau
	T. S. Savchenko,	
	Zhao Guoze,	
	Zhan Yan,	
	Tang Ji	
3.10.	<u>N. Nevedrova</u> , M.I. Epov and	Electromognetic gravitations in the Carth
5.10.	S.M. Babushkin	Electromagnetic monitoring in the Gorny Altay
		region in connection with Chuya earthquake
2.11		(2003y, M=7.3)
3.11.	<u>S. Cht Mavrodiev.</u> ,	On the complex regional and global network sets
	L. Pekevski	for researching the possibilities for reliable
		natural risks estimation including "when, where
		and how" earthquake prediction
3.12.	Y.F.Moroz, T.A.Moroz,	The research of vertical and horizontal electric
	E.A.Petukhova	field of the Earth in the Baikal rift zone
3.13.	Y.F.Moroz,	Anomalous effects in natural electric field of the
	E.A.Petukhova	lake Baikal
3.14.	<u>A.Rybin</u> , V.Spichak,	Long time magnetotelluric measurements in the
5.17.	I. Popova and V.Matukov	seismoactive zone of the northern Tien Shan
3.15.		
5.13.	<u>A. A. Shevchuk</u> ,	Geoelectromagnetic study of seismogenic zone

	I. I. Rokityansky,	in the region of Duzce earthquake 12.11.1999 in
	T. S. Savchenko,	Turkey
	M. K. Tunker,	
	S. B. Tank, E. Tolak	
3.16.	V. Spichak,	Application of the indirect EM geothermometer
	O. Zakharova	to the sub-surface temperature estimation
3.17.	A.S. Zakupin,	Tidal Lurr versus geoelectric variations methods
	G.S. Zakupina,	in seismology
	V.D. Bragin	

18.00-19.00 Discussion (panelists: L. Bogomolov, J. Zlotnicki)

### September, 7

#### SECTION 4: ENVIRONMENTAL STUDIES AND MINERAL EXPLORATION Chairman E. Fainberg

10.00-10.45 V. Hallbauer-Zadorozhnaya (Council for Geosciences, Pretoria, South Africa). Membrane polarization on rocks and measured resistivity.

10.45-11.30 Presentation of posters

11.30-12.00 Coffee-break

12.00-13.00 Poster session

N⁰	Authors	Title
4.1.	I.A.Bezruk, V.V.Spichak, I.V.Popova,	Construction of 3D geoelectrical model of an oil- prospective region in the Eastern Siberia
	A.G.Goidina	
4.2.	<u>T. Burakhovich,</u> S. Kulik, G. Zajcev	Geoelectrical anomalies and diamonds prospecting (Ukrainian shield)
4.3.	<u>V.V. Kotok</u> , and A.S. Lisin	Results of the marine electric exploration on the shelf of Rybachy Peninsula North coast
4.4.	V.Yu. Maksymchuk, S.A. Deschytsya, V.I. Shamotko, O.Ya. Sapuzak, F.L. Petrovsky, R.I. Kusajlo, O.I. Pidvirny, O.I. Romanyuk, R.B. Dutko	Electromagnetic diagnostics of ecologically dangerous geological processes
4.5.	<u>A.T. Pavlov,</u> V.P. Lepeshkin, Ju.N. Pavlova	Practical outcomes of electromagnetic soundings of high- resolution for problems of geoecology, engineering and hydrogeology, ore reconnais- sance in zone of permafrost
4.6.	A.T. Pavlov	Estimation of distributed contour capacitance above medium and its influencing on transient process in dynamic behavior at electromagnetic

		sounding
4.7.	A.T. Pavlov	Features of electromagnetic soundings of high- resolution of high-ohmic and low-contrast objects in conditions of perennial frozen rock in Yakutia
4.8.	El-Said A. Al-Sayed	Evaluation of sea water intrusion, at Fan of Wadi Feiran, Sinai, Egypt using Electrical Resistivity and Transient Electromagnetic survey
4.9.	Yu. P. Sizov,	Tsunami – wave model, detection and alarm
	Yu. N. Cherkashin	system

13.00-14.00 Discussion (panelists: A. Pavlov, T. Harinarajana)

14.00-15.00 Lunch

#### SECTION 5: DATA PROCESSING AND EQUIPMENT Chairman A. Saraev

15.00-15.45. O. Ingerov (Phoenix Geophysics Ltd., Toronto, Canada). Recent trends in fifth generation of multifunctional EM equipment: development and application.

15.45-16.15 Presentation of posters

16.15-17.15 Poster session

N⁰	Authors	Title
5.1.	P.N. Alexandrov	On the combined schemes used in DC electrical prospecting
5.2.	<u>V.P. Borisova,</u> M.N. Berdichevsky, E.B. Fainberg, T.A. Vasilieva, N.S. Golubtsova	Evaluation of tipper's stability according to world network of magnetic observatories
5.3.	I. Popova and Y. Ogawa	Processing of time series magnetotelluric data using Hopfield neural network
5.4.	<u>A.K. Saraev,</u> M.I. Pertel, A.B. Nikiforov, N.E. Romanova, R.V. Denisov, K.M. Antaschuk	Experience of application of audiomagnetotelluric soundings with the ACF-4M system
5.5.	M.N. Judin, P.A.Dubinin	Filtering of geophysical data on the basis of nonlinear partial equations

17.15-18.00 Discussion (panelists: E. Fainberg, O. Ingerov)

18.00-18.30 Closing ceremony

#### September, 8

#### FIELD SEMINAR

Chairman P. Pushkarev

The objective of the field seminar is to demonstrate EM equipment, produced both in Russia and abroad, and widely used nowadays by Russian geophysicists for regional, oil and gas, solid minerals, geothermal, groundwater, engineering and permafrost studies. Equipment for the following EM methods will be considered: broadband and audio-frequency magnetotelluric (MT and AMT), controlled-source frequency- and time-domain (FDEM and TEM), direct current resistivity and induced polarization (DC and IP).

The seminar will start with an introductory lecture about the equipment to be displayed, including brief description of technical characteristics and principles of operation. Then participants will be divided into groups, which will in turn visit several demonstration grounds, at which different kinds of equipment will be installed. After that, lectures about data processing and interpretation will be given and case histories will be presented.

Seminar will be held near to the pension at the picturesque beach of the Moscow River.

#### Seminar time schedule

10.00 – 11.00 Introductory lecture about the equipment

11.00 – 14.00 Visit to demonstration grounds

15.00 – 17.00 Lectures on data processing and case histories.

### **Presentation of papers**

All presentations except lectures will be in a poster format (200cm height x 100cm width). The posters should be hanged in the morning of the day of the appropriate session and taken off at the end of that day.

Additionally the poster authors should prepare short oral presentations (5 minutes) of their papers (3-4 slides in the MS Power Point) and hand the USB/CD to the engineer in the morning time of the appropriate session.

There will be one overhead and one PC video projector available for the reporters.

### **Official language**

English is the School official language.

### Registration

If you wish to take part in the meeting, please complete the Registration Form and e-mail as MS Word attachment to **ems-07@igemi.troitsk.ru**.

### **REGISTRATION FORM**

First name:
Last name:
Affiliation:
Title:
Student: YES / NO
Address:
Fax:
Tel.:
E-mail:
Accompanying persons: YES / NO
Participation at the post-workshop field seminar: YES / NO
Participation in the excursion: YES / NO
Participation in the excursion: YES / NO
Arrival date, time and flight number:
Departure date, time and flight number:
Type of accommodation required: SINGLE / DOUBLE / LUXE

### **Registration fee**

Workshop participants (except the Former Soviet Union republics): 200 USD / 150 Euro / 5200 Rbl Accompanying persons: 70 USD / 55 Euro / 1800 Rbl

Workshop participants from Former Soviet Union republics:

- academician institutions and universities: 50 USD / 40 Euro / 1300 Rbl
- other organisations: 100 USD / 75 EURO / 2600 Rbl
- accompanying persons: 20 USD / 15 Euro / 500 Rbl

Lecturers and students are waved from paying the Registration fees

Participants registration fee includes:

- Attendance at all scientific sessions
- Participant's portfolio, including abstracts and lectures books and Programme
- Welcome Ice breaker
- Inter-session coffee breaks
- Dinner on September, 5 (BBQ, folk music)
- Excursion

Accompanying person registration fee includes:

- Welcome Ice breaker
- Dinner on September, 5 (BBQ, folk music)
- Excursion

#### **Registration fee payment**

Registration fee should be paid by the **bank transfer in USD or EURO.** Alternatively, one can pay at the registration desk (in one of the abovementioned currencies, but **only in cash**).

### **Bank transfer**

### In USD:

Swift-code:	SABRRUM3
Bank name:	SAVINGS BANK OF THE RUSSIAN FEDERATION (Srednerussky office, Moscow) MOSCOW
Branch:	Podolsk Branch N 2573
Address:	Kirov str., 21, Podolsk, Moscow Region, RF
For Credit to:	Geoelectromagnetic Research Center (GEMRC IPE RAS)
Account number:	40503840240330241044
Specific Identifiers:	<b>Registration fee of for School EMS-07</b>
Receiving Customer Address:	GEMRC IPE RAS, 142190, Troitsk, Moscow Region, Russia

#### In EURO:

Swift-code:	SABRRUM3
Bank name:	SAVINGS BANK OF THE RUSSIAN FEDERATION
	(Srednerussky office, Moscow) MOSCOW
Branch:	Podolsk Branch N 2573
Address:	Kirov str., 21, Podolsk, Moscow Region, RF
For Credit to:	Geoelectromagnetic Research Center (GEMRC IPE RAS)
Account number:	40503978140330241045
Specific Identifiers:	<b>Registration fee of for School EMS-07</b>
Receiving Customer Address:	GEMRC IPE RAS, 142190, Troitsk, Moscow Region, Russia

In the case of cancellations the refund policy will be as follows:

- 1. For cancellation received 30 days before the meeting, participants will receive a full refund of the deposit.
- 2. For cancellation received less than 30 days before the meeting, participants will receive refund of the deposit less a 50% administrative charge.
- 3. For cancellation received after the meeting, participants will receive nothing.

# **ATTENTION:** Credit card payments are not accepted (neither for the registration fees nor for accommodation).

### **Opening hours of the Registration desk**

2/09 (Sunday): 5p.m.- 7p.m. 3/09 (Monday): 10 a.m. - 7 p.m. 4/09 (Tuesday): 10 a.m. - 7 p.m. 5/09 (Wednesday): 10 a.m. - 7 p.m. 6/09 (Thursday): 10 a.m. - 7 p.m. 7/09 (Friday): 10 a.m. to 7 p.m. 8/09 (Saturday): 10 a.m. to 5 p.m.

### Accommodation

It is supposed that all meeting participants will stay in the pension "Zvenigirodskii". Each room has a balcony and is equipped by own bathroom, TV and freezer.

The pension facilities are: billiards, summer sports facilities with two tennis-courts, Russian sauna with mini swimming pool, restaurant and bar. There will be following paid services at your disposal: massage, solarium, inhalations, phytobar, hydro massage and "pearl" bath, training facilities and therapeutic physical training.

#### Special room rates for the School participants are as follows:

Single room – 1200 Rbl. Double/Twin room 2000 Rbl. Two bedroom apartments –3000 Rbl. (adjacent rooms) / 3300 Rbl. (distinct rooms)

#### All prices are given for a room per night including Breakfast, Lunch and Dinner.

The Check-in and Check-out time is 5 p.m.

LOC will book the accommodation for the participant after receiving a filled Registration form and Registration fee. It is supposed that participants will provide a full payment for the accommodation (**only cash in Rbl**) when arrived in the pension.

The participants who are waved the Registration fees should only provide LOC the information about the accommodation required by filling in the Registration Form. In this case the accommodation will be offered after full payment at the pension reception according to the principle "first come-first served".

# Transportation

**AT THE DAY OF ARRIVAL (September 2, 2007)** LOC organizes the transport for participants from Moscow and International airport Sheremetyevo – II to "Zvenigorodsky" pension.

**From Moscow:** LOC bus departs at 3.00 p.m. from the square in front of the Kievskii railway station (exit from metro station "Kievskaya" in the direction to the railway station). The place of meeting at the square is near to the tower at the right side of the station (see photograph below).



**From Sheremetyevo - II airport:** the bus will depart around 7.00 p.m. In the arrival hall the participants will be met by the LOC member with the poster "EMS-07" in hands.

#### How to reach the Zvenigorodskii pension by your own:

a) From Moscow to the pension

Public transport (bus N 452) between metro staion "Kuntsevskaya" (Blue Line) and "Zvenigorodskii" pension. The exit from the last coach of the train moving from the centre: the bus stop is opposite to the petrol station.

*Bus schedule:* 7.10, 7.55, 8.25, 9.00, 9.25, 10.15, 11.00, 11.40, 12. 30, 13.15, 14.00, 14. 35, 15. 25, 16.10, 17.40, 18.10, 18.35, 19.00, 19.30, 20.30, 21.30.

One should get off at the bus stop "Pension Zvenigorodskii" (the way time is approximately 1 hour 5 min., the ticket price is 60 Rbl), then by foot to the pension (5 minutes along the forest road)

δ) From International airport Sheremetyevo - II to the metro

One can take the mini-bus  $N_{2}$  48 from Sheremetyevo - II to the nearest metro station "Rechnoy Vokzal" (this mini-bus stop is opposite to the Arrival exit). The way time is about 20 min., the ticket price- 40 Rbl)

**AT THE DAY OF DEPARTURE** (September 8, 2007) the bus will pick up the participants from the pension to Moscow (metro station "Kievskaya"). The departure time – 5.30. p.m.

### Currency

Russian ruble is a national currency in Russia (1 USD ~ 26 Rubles, 1 EURO ~ 35 Rubles).

ATTENTION: Credit cards are not accepted in the pension. Since all the payments should be made in cash (Russian rubles), the participants are strongly advised to exchange their currency into Rubles in advance (for instance, in the Moscow international airport). For further currency exchange the participants may use also the exchange offices located in Zvenigorod city.

### Weather conditions

Beginning of September is a golden season in Moscow. This time of the year the temperature rises up to  $+20-22^{\circ}$  C ( $70^{\circ}$ F). Usually it is shining, however, sometimes it may be raining.

### **Social events**

Welcome Ice breaker - September, 2 Excursion – September, 5 (morning) Dinner (BBQ) – September, 5 (evening)

### Liability

The Organizers refuse any liability for personal accidents, loss of or damage to private of participants and accompanying persons, participants should, therefore, take whatever steps they may consider necessary with reference to Insurance.