

PROGRAM



IEEE

Fröhlich Centenary International Symposium

Coherence and Electromagnetic Fields in Biological Systems

July 1-4, 2005



Organized by

Institute of Radio Engineering and Electronics
Academy of Sciences of the Czech Republic

Ist Medical Faculty, Charles University, Prague
Institute of Physiology

Faculty of Electrical Engineering
Czech Technical University in Prague

National Institute of Public Health
Ministry of Health Care of the Czech Republic

The Symposium is organized under the aegis of
Professor Štěpán Svačina
Dean of the 1st Medical Faculty, Charles University
and **Dr. Vlastimil Matějec**

Director of the Institute of Radio Engineering and Electronics,
under the auspices of the International Commission K of URSI,
of the National URSI Committee of the Czech Republic,
and of the Czechoslovak Section of IEEE

Honorary organizers

Università' degli Studi di Milano, Bicocca (Italy)
Università' Degli Studi di Salerno (Italy)

**Department of Biophysics, Faculty of Mathematics, Physics and
Informatics, Comenius University, Bratislava (Slovak Republic)**
Catholic University of Lublin (Poland)

Fröhlich Centenary International Symposium

COHERENCE AND ELECTROMAGNETIC FIELDS IN BIOLOGICAL SYSTEMS

International Scientific Committee:

J. Pokorný – Chair	Czech Republic
I. Y. Belyaev, Sweden	J. C. Lin, USA
H. Berg, Germany	M. Milani, Italy
V. N. Binhi, Russia	F.-A. Popp, Germany
M. Blank, USA	M. Satarčić, Yugoslavia
H. Bolterauer, Germany	D. Simunić, Croatia
L. Brizhik, Ukraine	F. Šrobár, Czech Republic
H.-P. Dürr, Germany	S. Trojan, Czech Republic
E. Del Giudice, Italy	J. A. Tuszyński, Canada
T. Hianik, Slovak Republic	E. Unger, Germany
R. Hoelzel, Germany	V. Vetterl, Czech Republic
G. J. Hyland, Great Britain	G. Vitiello, Italy
S. Kwee, Denmark	J. Vrba, Czech Republic
I. Lamprecht, Germany	J. Zon, Poland
N. Leitgeb, Austria	A. Zrimec, Slovenia

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J. Pokorný – Chair

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A. Jandová	O. Jelínek	F. Šrobár	V. Vetterl	J. Vrba

Organizing Committee:

F. Šrobár – Chair

Z. Benešová M. Brožová A. Jandová M. Nedbalová J. Šároch P. Kacerovský

Symposium Office:

Institute of Radio Engineering and Electronics
Symposium CEFBIOS2005
Chaberská 57
182 51 Prague 8 – Kobylisy
Czech Republic
Tel: +420 2 66773432
Fax: +420 2 84680222
E-mail: pokorny@ure.cas.cz
Internet:

<http://www.ure.cas.cz/events/CEFBIOS2005>

about 22 min) for just 12,-Kč (plus possibly 6,-Kč for your luggage). The tickets have to be bought in advance at the airport at the information stall or at a vending machine.

Train

The Prague stations are the crossroads for passenger trains. The Main Station (Hlavní nádraží), the Holešovice Station (Holešovické nádraží), and the Masaryk Station (Masarykovo nádraží) are linked by the underground (Metro, line C and line B).

Local Public Transportation (information about increase of prices – page 9)

The underground (Metro), trams, and buses form a united transportation system in Prague. The transfer ticket costs 12,-Kč (possibility of change). The ticket is valid for the Metro, trams, and buses in the 0 tariff zone which includes the Ruzyně airport and may be used one hour after stamping. Non transfer ticket for one way by either tram or bus or Metro costs 8,-Kč and is valid 15min or for a trip not longer than 4 Metro stops. Tickets must be bought in advance at the tabacconist shops, in the offices located in the Metro, or in the traffic central control office which is just in the next-door building of the Deanery where the Symposium takes place. The passenger is obliged to stamp the ticket immediately after entering the vehicle or the Metro area for the first time. We must point out that validity of the ticket is time limited. Seasons tickets (valid in the Prague municipal network): The 24 hours ticket costs 70,-Kč, the 3 days ticket 200,-Kč, and the 7 days ticket 250,-Kč (an additional ticket for a luggage costs 6,-Kč).

Information

We would like to inform all participants that prices of the Prague taxi services may have unpredictable significant upward deviations with non-negligible probability of occurrence.

Currency

The monetary unit in the Czech Republic is the Czech crown (Kč) which is divided into hellers (100h = 1Kč). Rates of exchange are subject to change and vary between airport „banks“, hotel cashiers, exchange offices, and banks. The rate is about 1EUR = 29.87Kč.

Banks

Banks are open on Monday through Friday, 9.00-17.00. Exchange offices are also open on Saturday, on Sunday, and in the evening.

Accommodation

Hotel Mars***

Address: Kubánské náměstí 6/1333
Prague 10

Tel: + 420 272 733 628

Fax: + 420 272 731 758

E-mail: hotel.mars@seznam.cz

<http://hotelmars.cz>

Single room (per day)

1000,-Kč (about 36,-EUR)

Double room (per day) 1500,-Kč (about 54,-EUR)

These prices (including breakfast) are valid if reservation with indication for symposium CEFBIOS2005 is made. Booking directly in the hotel. With respect to high summer season in the time of Symposium early reservation is recommended. For direct connection to the Symposium venue trams No. 6, 22, and 23 may be taken (15min).

The participants may arrange accommodation in other Prague hotels by themselves or using a travel agency.

Accommodation is also provided in the hotel rooms of the student residence „**Kajetánka**“.

Address: Radimova 12/35
160 00 Prague 6

Single room (one person per day) 440,-Kč (16,-EUR)
Double room (one person per day) 390,- Kč (14,-EUR)

Breakfast is included in the price.

Reservation in „Kajetánka“ can be arranged by the Symposium office after payment for one day stay to the Symposium account before May 31, 2005.

Participants can get to the „Kajetánka“ by taking bus No 108 or 174 from the Metro A station „Hradčanská“.

Weather

Weather in the first half of July is usually warm (25–30°C) but rain may occur - rain lasting several days with considerable lower temperature (even below 20°C).

SYMPOSIUM INFORMATION

Symposium Location

The building of the Deanery of the 1st Faculty of Medicine, Charles University, Na bojišti 3 (On the Battlefield 3), Prague 2. It is about 4 min walking distance from the tram and Metro stations I.P. Pavlov.

Official Language

The official language of the Symposium is English.

Official Invitations

The Symposium committee will send official invitation on request.

Registration Office

The building of the Deanery of the 1st Medical Faculty
Na bojišti 3, Prague 2

Thursday June 30, 2005
Friday July 1, 2005
Saturday July 2, 2005
Sunday July 3, 2005
Monday July 4, 2005

Registration Fee

Registration fee for participation in the Symposium:

Advanced registration (before June 15, 2005)	90,-EUR (2700,-Kč)
One day advanced registration	40,-EUR (1200,-Kč)
On site registration	95,-EUR (2850,-Kč)
One day on site registration	45,-EUR (1350,-Kč)
Young scientists registration (up to age 35 years)	60,-EUR (1800,-Kč)
Young scientists one day registration	30,-EUR (900,-Kč)
Dinner – Saturday 2, 2005 (Dinner will be payed on site)	25,-EUR (750,-Kč)

The fee for the „Bank transfer“ has to be paid by the orderer. The registration fees are given in nett amounts. On site payment have to be done in cash.

Participants will be registered after payment of the registration fee.

Refunds will be given after cancellation received no later than May 31, 2005. No refunds will be given after May 31, 2005.

Payment

The registration fee may be paid in advance by the „Bank transfer“.

The following data are necessary for payment from abroad:

- 1) IBAN: CZ16 0300 0000 0001 31417340
- 2) SWIFT CODE: CEKO CZPP
- 3) Beneficiary's Bank Address:
CSOB a.s.
Ke Stirce 50, Praha 8
Czech Republic
- 4) Beneficiary:
Institute of Radio Engineering and Electronics AVCR
Address: Chaberska 57, Prague 8-Kobylisy, 182 51
- 5) Purpose of payment:
5563 + Your name

The following data are necessary for payment in the Czech Republic:

Number of account:
131417340/0300 VS 5563 KS 0308
Zpráva pro příjemce:
Your name

On site payment in cash may be done at the registration office.

Attendance Certificate

A „Certificate of Attendance“ will be issued only if requested. These will be available at the Symposium registration office.

Projection Equipment

Facilities are available to project slides (cm 5x5) with plastic frame (not cardboard). Overhead projection will be available as well as data projector.

Platform Sessions

Platform Sessions will contain invited papers and contributions. The time allocated to individual papers (including discussion) is indicated in the program (30 min invited papers, 15min contributions – including discussion).

Posters

Poster boards (1m wide and 1.6m high) will be available beginning at 8.00 on Friday morning (July 1, 2005) till 13.00 on Monday afternoon (July 4, 2005).

Symposium Proceedings

A limited number of selected papers will be published in the journal „Electromagnetic Biology and Medicine“.

Abstract Proceedings – Guidelines

Abstracts will be published in the Abstract Proceedings. If there are significant reasons authors whose papers are included in the program of the Symposium may submit modified versions of their two pages abstracts by e-mail or on disk to the Symposium Office before April 30, 2005 (files in electronic MS WORD format).

Format: Please use A-4 size paper. Leave a 25mm margin at the top of the abstract with 20mm margins left and right and at the bottom. Begin the title flush with the left margin. Capitalize the title only (the title in bold letters). Follow with each authors first name, middle initial and family name. After the author(s) give name and address of the affiliation of each author. Do not include street address or post office box number. Use full names of states and/or countries. Include zip codes. Skip one line and begin text. There is no special format but use 12 point font.

SCHEDULE AT A GLANCE

Friday, July 1, 2005

Deanery of the 1st Medical Faculty, Na bojišti 3
9.00 – 13.00, 14.00 – 15.30 Program of the Symposium

Carolinum, Ovocný trh 3
17.00 – 18.30 Opening Session
Froehlich Centenary Lecture
Concert

Saturday, July 2, 2005

Deanery of the 1st Medical Faculty, Na bojišti 3
9.00 – 13.00, 14.00 – 18.30 Program of the Symposium

Hotel Mars, Kubánské náměstí 6/1333, Prague 10
20.00 – 22.30 Dinner

Sunday, July 3, 2005

Deanery of the 1st Medical Faculty, Na bojišti 3
9.00 – 13.30 Program of the Symposium

Monday, July 4, 2005

Deanery of the 1st Medical Faculty, Na bojišti 3
9.00 – 12.30 Program of the Symposium
12.30 – 13.30 Round table discussion
Closing

Registration of the authors before May 31, 2005 is necessary for inclusion of their contributions into the program of the Symposium (registration will be arranged after payment of the registration fee).

Important Information**The increase of prices in Prague local public transportation from July 1, 2005**

The underground (Metro), trams, and buses form a united transportation system in Prague. The transfer ticket will cost 20,-Kč (possibility of change). The ticket is valid for the Metro, trams, and buses in the 3 tariff zones which includes the Ruzyně airport and may be used 75 min after stamping. The ticket with limited transfer options will cost 14,-Kč and will be valid 20 min for one way by either tram or bus or for a Metro trip not longer than 5 Metro stops or 30 min when changing between A, B or C lines. Tickets must be bought in advance at the tabacconist shops, in the offices located in the Metro, or in the traffic central control office which is just in the next-door building of the Deanery where the Symposium takes place. The passenger is obliged to stamp the ticket immediately after entering the vehicle or the Metro area for the first time. We must point out that validity of the tickets is time limited. Seasons tickets (valid in the Prague municipal network): The 24 hours ticket will cost 80,-Kč, the 3 days ticket 220,-Kč, and the 7 days ticket 280,-Kč.

Program of the Symposium

Friday , July 1, 2005

Lecture Hall – Na bojišti 3

9.00 – 9.10 Introductory Remarks

Chair: H.P. Dürr, E. Del Giudice

9.10 – 9.40 *H.-P. Dürr*

The Living and the Non-Living: Different Composition Modes of
Basic Immaterial Connectedness – The Physical Basis of Life

9.40 – 10.10 *E. Del Giudice, A. De Ninno, M. Fleischmann, G. Mengoli, M. Milani,
G. Talpo, G. Vitiello*

Coherent Quantum Electrodynamics (QED) in Living Matter

10.10 – 10.40 *Avner Priel*

Transitions in Microtubule C-Termini Conformations as a Possible
Dendritic Signaling Phenomenon

10.40 – 11.00 Break

Chair: A.R. Liboff, R. Hölzel

11.00 – 11.30 *A. R. Liboff*

Are there Holistic Physical Laws in Biology?

11.30 – 12.00 *R. Hölzel*

Detection System for Cellular Coherent Vibrations

12.00 – 12.15 *R. Van Wijk, E.P.A. Van Wijk*

Fractal Analysis of Human Body Spontaneous Photon Emission

12.15 – 12.45 *J. R. Zon*

Physical Plasma Switchability in the Brain

12.45 – 13.45 Lunch Break

Chair: V. Vetterl, J.C. Lin

13.45 – 14.00 *M. Teplan, A. Krakovská, S. Štolc*

Long-Term Effects of Audio-Visual Stimulation on Human EEG

14.00– 14.30 *M. Vojtíšek, J. Knotková, L. Kašparová, M. Hornychová, E. Frantík, D.
Hulínská, E. Švandová*

Influence of a Chemical and/or Physical Factor/s on the Brain

14.30 – 14.45 *S. Zeković, Z. Ivić, D. Cevizović*
Absorption of IR Radiation in Hydrogen-bonded Molecular Chains:
The Influence of Small Polaron Induced Modification of Phonon
Spectra

14.45 – 15.15 *James C. Lin and Zhangwei Wang*
Acoustic Pressure Waves Induced in Head Models by Microwave
Pulses from High Field MRI Scanners

Carolinum – Ovocný trh 3

17.00 – 19.00 **Opening Session**

G.J. Hyland

Fröhlich Centenary Lecture

Concert

Posters

Lecture Hall – Na bojišti 3

- D. Barančok, J. Cirák, P. Tomčík, J. Vajda, M. Weis*
Measurement of Molecular Orientational Order in Cell Membrane Model by the MDC Technique
- J. Dvořák, Z. Zoul, B. Melichar, J. Petera, M. Doležel*
Hyperthermia Combined with Cytotoxic Chemotherapy in Thermosensitive Liposomes
- A. Čoček, A. Jandová, A. Dohnalová, A. Hahn, M. Ambruš, J. Pokorný*
Influence of the sinusoidal magnetic field 50Hz/0.5mT on adherence of leukocytes acquired from blood of patients with head and neck carcinoma: Long term following up after medical treatment
- R. Zajiček, L. Oppl, J. Vrba*
Dielectric Properties Measurements of Biological Tissue
- J. Herza, R. Chovanec, J. Cvek, J. Vrba*
TEM Applicators with Enlarged Effective Aperture
- T. Dřížd'al, J. Vrba*
Lucite cone applicator for microwave thermotherapy
- H. Trefná J. Vrba*
Regional Applicator for Microwave Thermotherapy - Numerical Simulations
- M. Tkalec, K. Malarić, Ž. Vidaković-Cifrek, B. Pevalek-Kozlina*
The Effect of Radiofrequency Fields on Lipid Peroxidation and H₂O₂ Content
- E.A. Preoteasa, M.V. Apostol, D. Gurba*
Collective Excitations in Membrane- and Membrane-Biomolecular Chain-Associated specific cellular processes
- S. Zdravković*
Nonlinear DNA Dynamics (Peyrard-Bishop-Dauxois Model and a Coherent Mode)
- Y. Natanzon, L.S Brizhik and A.A. Eremko*
Nonlinear Dynamic of Excitations in Macromolecular Chains With Acoustical and Optical Phonon Modes
- C. Ventura, M. Maioli, Y. Asara, D. Santoni, P. Mesirca, D. Remondini, F. Bersani*
Effects of ELF-Magnetic Fields on Cell Differentiation
- L. Giuliani*
The kT-problem and an approach to the BLZ-effect

Saturday, July 2, 2005

Lecture Hall – Na bojišti 3

Chair: M. Milani, E. Unger

9.00 – 9.30 *M. Milani, E. Del Giudice, G. Santisi, G. Talpo, G. Vitiello*
Yeast Suspensions: A Controllable Example of a Coherent Quantum Machine

9.30 – 10.00 *E. Unger, R. Stracke, A. Michette, N. Mavromatos, J. Tuszyński, K. J. Boehm*
Microtubules in Electric Fields

10.00 – 10.30 *M.V. Satarić*
Nonlinear Dynamics of Microtubules and Its Applications

10.30 – 11.00 *G. Vitiello*
Nonlinear Brain Dynamics and Many-Body Field Dynamics

11.00 – 11.15 Break

Chair: M.V. Satarić, G. Vitiello

11.15 – 11.45 *I. Belyaev*
Non-Thermal Biological Effects of Microwaves: Current Knowledge, Further Perspective and Urgent Needs

11.45 – 12.15 *G.J. Hyland*
Fröhlich Centenary Lecture

12.15– 12.30 *E. Marková, L. Hillert, R. Sarimov, L.O.G. Malmgren, B.R.R. Persson, I. Belyaev*
Adverse Effects of Microwaves from GSM/UTMS Mobile Phones Depend on Carrier Frequency and Type of Signal

12.30 – 12.45 *A.Y. Matronchik, I.Y. Belyaev*
Model of Slow Nonuniform Rotation of the Charged DNA Domain for Effects of Microwaves, Static and Alternating Magnetic Fields on Conformation of Nucleoid in Living Cells

12.45 – 13.00 *M. Škarja, I. Jerman, R.T Leskovar*
Changes of Electrical Potential of Sensors Due to Near Field Contact with Organisms

13.00 – 14.00 Lunch Break

Chair: I. Belyaev, I. Jerman

- 14.00 – 14.15 *R.T. Leskovar, I. Jerman, M. Škarja*
Near-Field Influence of Organism's Endogenous Electromagnetic Field on Environmental Light Particles
- 14.15 – 14.45 *A. Zrimec, M. Berden-Zrimec, L. Drinovec*
Delayed Luminescence Application in Algae and Higher Plants
- 14.45 – 15.00 *J. Barcal, J. Cendelín, I. Korelusová, V. Štenglová, F. Vožeh, V. Žalud*
Neuronal Changes in Healthy and Defective Mouse Brain after High-Frequency Electromagnetic Field Exposure
- 15.00 – 15.15 *C. Vincze, A. Szasz, A.R. Liboff*
New Theoretical Treatment of Ion Resonance Biological Phenomena
- 15.15 – 15.30 *V. Vetterl*
Electric and Magnetic Field Effects on Nucleic Acids
- 15.30 – 16.00 *F. Jelínek, J. Hašek, J. Šaroch, J. Pokorný*
Experimental Investigation of Electromagnetic Activity of Yeast Cells at Millimeter Waves

16.00 – 16.15 Break

Chair: F. Šrobár, A. Zrimec

- 16.00 – 16.30 *A. Jandová, L. Mhamdi, M. Nedbalová, A. Čoček, S. Trojan, A. Dohnalová, J. Pokorný*
Comparison of the Effects of Sinusoidal Magnetic Field (50Hz) 0.1mT and 0.05mT on Leukocyte Adherence Inhibition
L. Mhamdi L. Ponsonnet, N. Jaffrezic
Comparison of the Effects of AC And DC Magnetic Fields 0.1mT
- 16.30 – 16.45 *P. Vitovič, M. Weis, P. Tomčík, J. Cirák, T. Hianik*
Changes of Surface Potential and Maxwell Current of Lipid Monolayer at Presence of Gramicidin A
- 16.45 – 17.00 *D.I. Nikitin, L.E. Nikitin, V.I. Lobyshev*
Species Specificity of Bacterial Response to Low Frequency Magnetic Fields of Low Intensity
- 17.15 – 17.30 *K.R. Foster, A.R. Sheppard, M.L. Swicord*
What Mechanisms are responsible for Biological effects of RF Fields?
- 17.00 – 17.15 *L. Strašák, L. Fojt, V. Vetterl, D. Šmajš*
Low Frequency Magnetic Field Effects on Different Strains of Bacteria

- 17.15 – 17.30 *L. Fojt, L. Strašák, V. Vetterl*
Influence of Magnetic Fields on the Denitrification Activity of Bacteria
Paracoccus Denitrificans
- 17.30 – 17.45 *K.A. Jenrow, A.R. Liboff*
A Model for the Avian Magnetic Compass Involving Centrally-
Mediated Magnetic Field Induction
- 17.45 – 18.00 *E. Cocherová*
The Effects of Microwave Radiation on Processes of the Nerve Cell
Membrane
- 18.00 – 18.15 *I. Jerman, R. Ružič, M. Škarja, R. Leskovar*
New Sensor for Possible Measurement of Bioplasma State of
Organism
- 18.15 – 18.30 *J. Novák, L. Strašák, L. Fojt, V. Vetterl*
Magnetic Field in Public Transportation in Czech Republic
- 19.30 – 23.00 **Symposium Dinner**
Hotel Mars
Kubánské náměstí 6/1333, Prague 10

Sunday, July 3, 2005

Lecture Hall – Na bojišti 3

Chair: J.R. Zon, V.N. Binhi

9.00 – 9.30 *F. Šrobár*

Froehlich System with Modulated Access to Pumping Source

9.30 – 10.00 *L.S. Brizhik, A.A. Eremko*

Energy Supply and Photon Emission by Solitons in Alpha-Helical Proteins

10.00 – 10.30 *V.N. Binhi, D.S. Chernavskii*

Stochastic Dynamics of Magnetic Nanoparticles in Biological Cells

10.30 – 11.00 *Fritz-Albert Popp, Walburg Maric-Oehler, K.-P. Schlebusch*

Evidence of light piping (meridian-like channels) in the human body and non-local emf effects

11.00 – 11.15 Break

Chair: L.S. Brizhik, S. Kwee

11.15 – 11.45 *J. Pokorný, J. Hašek, F. Jelínek*

Endogenous Electrical Fields and Directed Transport in Biological Systems

11.45 – 12.15 *S. Kwee*

Coherence and Changes in Cell Proliferation Caused by Electro-Magnetic Fields

12.15 – 12.30 *Yu.P. Chukova*

Experimental Verification of Thermodynamic Theory of Electromagnetic Radiation Energy Conversion. Bioeffects

12.30 – 13.30 Discussion: What Effects Have Electromagnetic Fields on Water?

Chair: *M. Milani*

Contributions:

V.I. Lobyshev

Water is a Sensor to Weak Forces Including Electromagnetic Fields of Low Intensity

R. Ružič, M. Škarja, I. Jerman

Biological Effects of Electromagnetic Information Imprinted into Water

R. Krašovec, I. Jerman, M. Škarja

Electromagnetic Information Imprinted into Medium Acts as Environmental Signal for *Escherichia coli*

Monday, July 4, 2005

Lecture Hall – Na bojišti 3

Chair: H. Berg, J. Vrba

- 9.00 – 9.30 *H. Berg*
Bioelectrochemical Methods for Cancer Research and Therapy
- 9.30 – 10.00 *J. Vrba*
Medical Applications of Microwaves
- 10.00 – 10.15 *G. Trebbi, L. Betti, L. Lazzarato, E. Solmi, P. Torrigiani, G.L. Calzoni, AS. Pizzuti, M. Brizzi, F. Borghini*
Effects of Weak Magnetic Fields on the Hypersensitive Response of Tobacco to Tobacco Mosaic Virus
- 10.15 – 10.45 *M. Persson, P. Hashemzadeh, A. Fhager, L. Bååth*
Microwave tomography
- 10.45 – 11.00 *D. Krstić, B. Djindjić, V. Marković, S. Radić, D. Petković, D. Sokolović*
Involvement of 50Hz electromagnetic field in oxidative liver injury

11.00 – 11.15 Break

Chair: F. Jelínek, E.Ya. Nikolenko

- 11.15 – 11.30 *S. S. Gorgun*
Treatment of Cancer with Radio Waves (Physio Therapy and Rehabilitation Treatment) without any Side Effects
- 11.30 – 11.45 *P. Peterlin, S. Svetina, B. Žekš*
The Influence of Dielectric Anisotropy of the Phospholipid Bilayer on the Frequency-Dependent Prolate-to-Oblate Shape Transition of Phospholipid Vesicles in an External AC Electric Field
- 11.45 – 12.00 *Yu.Kh. Shogenov, V.A. Vasil'ev, Yu.M. Romanovsky, A.S. Stepanyan*
Electric Activity of Plants and Seeds induced by Visible Light and Millimeter Range Electromagnetic Waves
- 12.00 – 12.15 *T.Yu. Shchegoleva, E.N. Budjanscaja*
The Methodical Approaches to Study of Influence of Electromagnetic Radiation on Biological Objects
- 12.15 – 12.30 *E.N. Budyanskaya, O.N. Chernishova, E.Ya. Nikolenko, M.M. Rezinkina, N.O. Philipenko, L.V. Chepenko*
Change of the Biophysical Properties of Cells of Peripheral Blood of the PC Users upon Influence of EMF

12.30 – 12.45 *M.S. Gaur*
Conducting Polymers in Biomedical Sensors

12.45 – 13.30 Round Table Discussion

Role of Physical Forces in Organization of Living Matter

Chair: *E. Del Giudice, G. Hyland*

Panel: *I. Belyaev, V. Binhi, L.S. Brizhik, H.-P. Dürr, A.R. Liboff,
M. Milani, M. Satarić, G. Vitiello, J. Zon*

13.30 **Closing**

Additional list of papers

- S.G. Ponezha, G.V. Ponezha, V.I. Grygoruk*
About the Possibility of Application the Microwave Reflection in
Medicine Diagnostics
- G.V. Ponezha*
Observation, Properties, and Medical Application of negative Flows of
Microwave Electromagnetic Emission
- A. Zhukavest, E. Zunevich, E. Korobtsova*
The Impact of Direct Current on Walker 256 Carcinosarcoma (W256)
Growth
- S.G. Ponezha, G.V. Ponezha, V.I. Grygoruk*
Investigation of Millimeter Emission Interaction with Fluids by
Holograph Interference
- M. Kosytskyy, O. Nizhelska*
Frequency –Temporal Dependences of Yeast Cells Response to
Nonthermal Electromagnetic Radiation of Millimeter Range
- C.M.B. Pinheiro, P.S.O. Reis, V.C. Rosário, R.R.B.T. Maciel, A. Oliveira, L.C.
Simoës, I. Pepe, P.H.P. Aguiar*
Electro-Magnetic Therapy Influence on Surgical Cutaneous Slashes
Resolution in Random Rats Submitted to Nicotine Treatment
- A. Tamelo, V. Murav'ev, G. Zobnina*
Electromagnetic Waves Treatment of Stroke
- B. Kaduk, Ju. Melnik, A. Chunihin, A. Yanenko*
The Estimation of the Electromagnetic Fields Influence to Functional
State of Human Operator
- S.V. Bitkin*
Physical Model of Electromagnetic Field is One of Important Systems,
which Provides Scientifically Ground Implemetation of Biological-
Hygienic Researches on Influencing on Organism of Electromagnetic
Field
- B. R. Jovanić, M. Ž. Sarvan*
Electromagnetic spectra (Luminescence Spectra) and Information in
Biological System
- Yu. Skripnik, K. Shevchenko, A. Yanenko*
Radiometric Measuring Instrument of the Secondary Microwave
Radiations

S.P. Sit'ko, B.P. Grubnik, E.N. Gorban, S.N. Peregudov, A.F. Yanenko
Perspectives of Use of Radioprotective Properties of Low Intensity
Electromagnetic Radiation of MM-Range

S.I. Aksyonov
Physico-Chemical Mechanism in the Action of Weak Extremely
Low Frequency EMF and Solar Activity on Live Organisms

E.A. Ponezha, V.N. Ermakov
Controlling Effects of Electromagnetic Field on Resonant Tunneling
Process as a Possible Mechanism of Microwave Emission Influence on
Charge Transport Through Cellular Membranes