

**2009 19th International Conference
«Microwave & Telecommunication Technology»
14-18 September 2009
Sevastopol, Crimea, Ukraine
<http://www.crimico.org>
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C O N F E R E N C E P R O G R A M



2009

Organized and Sponsored by:

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Belarus State University of Informatics and Radioelectronics (Minsk)
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Microwave Systems Co. (Moscow, Russia)
Nanoelectronics TD, (Korolyov, Moscow region, Russia)
Tavrida National University after prof. V. I. Vernadsky
(Simferopol, Ukraine)
SRI «Crimean Astrophysical Observatory» (Katsiveli, Ukraine)
Popov Crimean Scientific and Technological Center
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Technical Co-Sponsorship:

IEEE Microwave Theory & Techniques Society
IEEE Electron Devices Society
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IEEE AP Chapter, Russia Section
625 Publishing Co. (Moscow)
Education Portal (Kiev, Ukraine)
«Technology & Designing in Electronic Equipment» Magazine (Odessa,
Ukraine)
«Microwave Devices & Components» Magazine (Kiev, Ukraine)

FOREWORD

418 papers have been submitted for presentation at the 19-th conference. The Program Committee has selected and included 407 claimed papers into the program of the conference at the sessions, which took place in Minsk (Belarus) on 2 June, 2009. During the four working days of this year's conference the papers will be presented by scientists and specialists from 150 universities and companies of Belarus, Canada, Czech Republic, France, Germany, Kazakhstan, Lebanon, Lithuania, Moldova, Poland, Russia, South Africa, UK, Ukraine, USA and Vietnam at the two plenary and 34 technical sessions:

- Session 1/1: Microwave Amplifiers
- Session 1/2: Oscillator and Receive Devices
- Session 1a: Solid State Devices CAD/CAM
- Session 2/1: Physical Fundamentals of Microwave Electronics
- Session 2/2: O-type & DRO Microwave Devices
- Session 2/3: M-type Devices & Gyrodevices
- Session 3/1: Wireless Access Networks
- Session 3/2: Telecommunication Systems
- Session 3/3: Satellite Communication & Digital TV
- Sessions 3/4, 3/5: Information Technologies in Telecommunications
- Session 4/1: Antenna Arrays & Elements
- Session 4/2: Antennas & Antenna Elements Analysis
- Session 5/1: Passive Devices
- Session 5/2: Microstrip Devices
- Session 5/3: SHF-Devices based on New Physical Principles
- Session 5a/1: Semiconductor Materials Technology
- Session 5a/2: Microwave Microscopy
- Session 5a/3: Materials Investigation
- Sessions 5b/1: Nanotechnology & Nanomaterials
- Sessions 5b/2: Nanoelectronics & Quantum Devices Application
- Session 6/1: Physical Phenomena in Very High Power Microwave Electronics
- Session 6/2: Chaotic Oscillations & Chaos Generators
- Session 6a: EM and Radiation Resistance of Materials & Electronic Component Base
- Session 7/1: Measurement of Microwave Devices & Signals
- Session 7/2: Measurement of Materials and Substances
- Session 7/3: Measurement Applications
- Session 8/1: Radar Systems & Applications
- Session 8/2: Technological Processes Control and Non-Destructive Testing
- Session 8a/1, 8a/2: Medical & Ecological Applications
- Session 9/1: Radioastronomy & Atmosphere Research
- Session 9/2: Remote Sensing & Radar Systems Theory
- Session H: History of Radioengineering Research (Readings from Fedotov)

Organizing Committee would like to express its gratitude to all the delegates who deemed it possible to share the practical results of their work with others. We hope that the Crimean autumn season will make for holding of the Conference, as it always was: the sea is warm enough and the weather is not so hot!

Organizing Committee is glad to welcome the delegates whose papers have been included into the program of the Conference, as well as everyone who would be interested in CriMiCo'2009!

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GENERAL INFORMATION

VENUE

The Conference will be held between 14 and 18 September, 2009 at the Sevastopol National Technical University.

CONFERENCE SCHEDULE

(local time)

September 13	7.00 a.m. — 5.00 p.m.	Registration and accommodation
September 14	7.00 a.m. — 8.45 a.m. 9.00 a.m. — 10.30 a.m. 10.30 a.m. — 10.45 a.m. 11.00 a.m. — 6.00 p.m.	Delegates registration Opening Session. 1 st Plenary Session Photographing Technical Sessions
September 15	8.30 a.m. — 6.00 p.m. 7.00 p.m. — 11.00 p.m.	Technical Sessions Banquet
September 16		Excursions
September 17	8.30 a.m. — 10.30 a.m. 11.00 a.m. — 4.00 p.m. 4.00 p.m. — 6.00 p.m.	2 nd Plenary Session Technical Sessions Organizing and Program Committee Session
September 18	2.30 p.m. — 4.00 p.m.	3 rd Plenary Session. Presentation of Organizing Committee Prizes. Closing Session

REGISTRATION

Delegates of the Conference and Workshops will be registered:

- on Sunday, September 7, from 7.00 a.m. to 5.00 p.m. in the vestibule of Sevastopol National Technical University main building (Studgorodok). Organizing Committee offers its services in transporting the delegates from the railway station to SevNTU. Departure from the railway station square at 6.45 a.m., 8.00 a.m., 11.15 a.m., 1.30 p.m. and 4.00 p.m.

- on Monday, September 8, from 7.00 a.m. to 8.45 a.m. in the vestibule of SevNTU main building (Studgorodok).

Delegates are requested to produce papers confirming their registration fee payments.

ARRANGEMENTS & COSTS

Participants

Registration fee includes: Invitation for visa, Conference Proceedings, Interpreter service, Banquet, Excursion related to the subject of the Conference.

Paid before July 31: \$275 (\$220 for IEEE members);

Paid after July 31: \$300 (\$240 for IEEE members).

Accompanying persons

Invitation for visa, Interpreter service, Banquet, Excursion

Paid before July 20: \$100

Paid after July 20: \$110

Please, pay at:

:56: Intermediary Bank: BANK OF NEW YORK
ONE WALL STREET, NEW YORK, N.Y. 10015, USA, SWIFT CODE: IRVT US 3N

:57: Beneficiary Bank: acc\ 890-0057-211
JSC "KREDOBANK"
LVIV, UKRAINE,
CRIMEAN BRANCH, SIMFEROPOL.
SWIFT CODE: WUCBUA2X

:58: Beneficiary: POPOV CRIMEAN SCIENTIFIC AND TECHNOLOGICAL
CENTER № 2600901019275

Please, indicate the purpose of payment:
Registration payment, CriMiCo'2009.

Please, enter the data of payment into applied registration form and send it
via e-mail: crimico.fin@gmail.com.

OBTAINING UKRAINIAN VISA

In most cases, in order to visit Crimea you will need Ukrainian visa. Please, fill in the following Questionnaire for yourself and all accompanying persons and forward it to the Conference Chairman Dr. Pavel P. Yermolov via e-mail: 10.99057@gmail.com. The Organizing Committee will issue and send you the Official Invitation Letter for obtaining Ukrainian Visa via e-mail. In order to get your visa, submit that Letter to the Ukrainian Embassy or Consulate in your country. Please make sure you apply well in advance.

Questionnaire (please fill in a Questionnaire for each of the accompanying persons also):

First name(s)*:	Citizenship:
Middle name*:	Country & town where you'll get visa:
Surname*:	Passport number*:
Date of birth:	Number of accompanying persons:
Country:	Passport is valid until:
Company (full name):	When passport was given:
Position:	By Whom passport was given:
Company address:	Registration fee \$... will be paid by transfer
Male/Female:	to the bank account on ... June (July,
Mobile phone:	August)
Fax:	I need a room that costs: 467/698 grn
E-mail:	From ___ to ___ September

* - transcription here should be identical to the one in the passport!

Official invitation letter for Ukrainian visa will be sent only after receiving your e-mail letter of inquiry before August 15.

TRANSPORTATION

The Organizing Committee offers its services in transporting the delegates on September, 9 from Simferopol Airport (80 km from Sevastopol) to Sevastopol by taxi, as well as return transportation on September, 15. Representatives of the Organizing Committee will

meet you at the airport and accompany to the hotel. Taxi fare is approx. \$100 one way. You should inform the Organizing Committee about your arrival via e-mail, advising of your name and name(s) of the accompanying person(s). It would be better, if you take the flight PS408 Frankfurt — Simferopol on 12 September, which leaves Frankfurt at 11:10 a.m. and arrives to Simferopol at 3:15 p.m. and flight PS409 Simferopol — Frankfurt on 19 September, which leaves Simferopol at 4:35 p.m. and arrives to Frankfurt at 6:50 p.m. In case of necessity, car transportation from hotel to the airport can be provided after the conference.

HOTEL ACCOMMODATION

The Conference delegates are entitled to accommodation in hotel «Delfin». The hotel room categories are from 467 to 698 grivnya (grn) per night. Rate of grivnya exchange is about 7.63 grivnyas (grn) for \$1 and 10.76 grivnyas (grn) for €1 (26.06.2009).

Prices for accommodation (grn per night) in hotel «Delfin»

Room, category	Price per night, grn.
Single — Double, 1 room	467
Single — Double, 2 room	698

SOCIALS

Conference participants will be offered a cultural program. On 13 September (the day of registration) you can take part in the excursion and learn about history, sights and cultural life of the Crimea. The excursion will be conducted by «RAMUT-SEVASTOPOL-TUR» tour agency, whose representative will attend at the registration. 16 September is the day of excursion related to the subject of the Conference. It has become usual for participants of the last year CriMiCo conferences. That's why those people who come at the Conference for the first time show great interest to it. The trip lies through Katsiveli, where Crimean Astrophysical Observatory is situated. There will be an opportunity to see radio-telescope RT-22 and some other equipment. Wine-testing at Massandra Wine Works will close the excursion.

Please, fill in the registration form at www.crimico.org regarding accommodation and send it via e-mail: crimico.accomodation@gmail.com. IT IS OBLIGATORY!

The deadline for CriMiCo'2009 registration forms submission is 25 AUGUST!!!

MONDAY, SEPTEMBER 14

	Aud. 423	Aud. 418	FESTO	Library Aud. 304	Library Aud. 411	Library Aud. 206
9.00-10.30	1st PLENARY SESSION	Welcome address INV.1: St. D. Ilcev (413)				
10.30-10.45	PHOTOGRAPHING					
10.45-11.00	COFFEE BREAK					
11.00-13.00			1/1. Microwave Amplifiers	2/1. Physical Fundamentals of Microwave Electronics	INV.6, INV.7 3/1. Wireless Access Networks	7/1. Measurement of Microwave Devices & Signals
13.00-14.00	LUNCH TIME					
14.00-16.00			1/2. Oscillator and Receive Devices	2/2. O-type & DRO Microwave Devices	INV.8, INV.9 3/2. Telecommunication Systems	7/2. Measurement of Materials and Substances
16.00-16.15	JUICE, ICECREAM					
16.15-18.00			1a. Solid State Devices CAD/CAM	2/3. M-type Devices & Gyro-devices	INV.10, INV.11 3/3. Satellite Communication & Digital TV	7/3. Measurement Applications

TUESDAY, SEPTEMBER 15

	Aud. 423	Aud. 418	FESTO	Library Aud. 304	Library Aud. 411	Library Aud. 206
8.30-10.30			INV.16 4/1. Antenna Arrays & Ele- ments	INV.17 5/1. Passive Devices	5a/1 Semicon- ductor Materials Technology	INV.19 5b/1.Nanotech- nology & Nano- materials
10.30-10.45	COFFEE BREAK					
10.45-12.45			4/2. Antennas & Antenna Elements Analysis	INV.18 5/2. Microstrip Devices	5a/2. Microwave Microscopy	INV.20 5b/2. Nanoelec- tronics & Quan- tum Devices Application
12.45-13.45	LUNCH TIME					
13.45-15.45			INV.12, INV.13 3/4. Inf. Tech- nologies in Telecommuni- cations I		5a/3. Materials Investigation	6/1. Physical Phenomena in Very High Power Microwave Elec- tronics
15.45-16.00	JUICE, ICECREAM					
16.00-18.00			INV.14, INV.15 3/5. Inf. Tech- nologies in Telecommuni- cations II	5/3. SHF- Devices based on New Physical Principles		6/2. Chaotic Oscillations & Chaos Genera- tors

WEDNESDAY, SEPTEMBER 16

EXCURSION DAY

THURSDAY, SEPTEMBER 17

	Aud. 423	Aud. 418	FESTO	Library Aud. 304	Library Aud. 411	Library Aud. 206
8.30-10.30		2nd PLENARY SESSION	INV.2: Ye. A. Shtager (415) INV.3: D. I. Voskresensky and authors (389) INV.4: A. A. Kishchinsky (280) INV.5: N. F. Karushkin and authors (258)			
10.30-11.00	COFFEE BREAK					
11.00-13.00			INV.21, INV.22 6a. EM and Radiation Re- sistance...	8/1. Radar Systems & Applications	8a/1. Medical & Ecological Applications I	9/1. Radio- astronomy & Atmosphere Research
13.00-14.00	LUNCH TIME					
14.00-16.00			H. History of Radioengineer- ing Research (Readings from Fedotov)	8/2. Techno- logical Proc- esses Control and Non- Destr. Testing	8a/2. Medical & Ecological Applications II	9/2. Remote Sensing & Radar Sys- tems Theory
16.00-18.00			Organizing and Program Com- mittee Session			

FRIDAY, SEPTEMBER 18

	Aud. 423	Aud. 418	FESTO	Library Aud. 304	Library Aud. 411	Library Aud. 206
14.30-16.00		3 rd PLENARY SESSION	Presentation of Organizing Committee Prizes. Closing Session			

MONDAY, 14 SEPTEMBER

1st PLENARY SESSION
SevNTU (Studgorodok), aud. 423

MONDAY, 9.00-10.30

WELCOME ADDRESS

*Senior Lecturer of Sevastopol National Technical University,
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*Pro-Rector of Moscow Aviation Institute (Technical University), Russia,
Program Committee Co-Chairman
V. A. SHEVTSOV, Professor*

INV.1	SATELLITE CNS FOR MARI- TIME TRANSPORTATION AUGMENTATION SYSTEM (MTAS)	Ilcev St. D.	Durban University of Technology	Durban	South Africa	413
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SESSION 1/1: MICROWAVE AMPLIFIERS

SevNTU (Studgorodok)
aud. Festo

MONDAY, 11.00-13.00

*Co-Chairmen:
A. A. KISTCHINSKY, C.Sc.
"Microwave systems" Close Corporation, Moscow, Russia
M. I. POYGINA, C.Sc.
Microtek Co., Kiev, Ukraine*

1.1	3 mm LOW-NOISE AMPLIFIER AND RADIOMETRIC MODULE ON ITS BASIS	Kuzmin S. E. Narytnic T. N. Radzikhovsky V. N.	Institute of Electron- ics and Communica- tion	Kiev	Ukraine	073
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1.2	27-31 GHz MMIC LOW NOISE AMPLIFIER WITH FILTERING FUNCTIONS FOR SPACE COMMUNICATION SYSTEM	Armengaud V. Laporte C. Jarry B. Babak L. I. Cherkashin M. V. Lintignat J. Barelaud B.	XLIM, CNES, Tomsk State University of Control Systems and Radioelectronics	Limoges Toulouse Tomsk	France Russia	314
1.3	MICROWAVE MODULES OF LOW NOISE AMPLIFIERS	Osipov A. M. Semyonova L. M.	SPE "Planeta-Argall"	Novgorod the Great	Russia	266
1.4	DESIGN OF L-, S- AND C-BAND LOW NOISE AMPLIFIERS WITH INPUT STAGES PROTECTION	Platonov S. V. Osipov A. M.	Planeta-Argall Co.	Novgorod the Great	Russia	183
1.5	2 WATT X-Ku BAND QUASI-MMIC TRANSISTOR AMPLIFIER	Kistchinsky A. A. Radchenko A. V.	Microwave Systems JSC	Moscow	Russia	281
1.6	WIDEBAND L-S BAND SIC POWER AMPLIFIERS	Baranov V. V. Zimin R. A. Matveev A. D. Kistchinsky A. A. Sukhanov D. A.	Microwave Systems JSC	Moscow	Russia	282
1.7	10 W C-BAND WIDEBAND POWER AMPLIFIER	Garmash S. V. Kistchinsky A. A. Markinov E. G.	Microwave Systems JSC	Moscow	Russia	283
1.8	1 KW POWER AMPLIFIER FOR 30...180 MHZ BANDWIDTH	Laktionov A. I. Gorbanov N. A. Tarasov M. A. Kurochkin L. B. Zazyanchukovsky V. V.	Beta TV com Ltd	Donetsk	Ukraine	329
1.9	UHF POWER AMPLIFIERS WITH WIDE-GAP MESFET	Makarov D. G. Krizhanovski V. G. Kistchinsky A. A.	Donetsk National University Microwave Systems JSC	Donetsk Moscow	Ukraine Russia	308
1.10	UHF DUAL CLASS E POWER AMPLIFIER WITH CAPACITOR IN SERIES TO SWITCH	Baranov A. V.	Limited Liability Company «Eldorado»	Nizhny Novgorod	Russia	013
1.11	UHF DUAL CLASS E POWER AMPLIFIER WITH LOAD NETWORK IN SERIES TO SWITCH	Baranov A. V.	Limited Liability Company «Eldorado»	Nizhny Novgorod	Russia	014
summary reports						
1.12p	LINEARIZATION OF POWER AMPLIFIER WITH BALANCING CASCADES	Korotayev V. M. Shein D. Ya.	MICRAN Co	Tomsk	Russia	219
1.13p	2-4 GHz 50 W and 100 W WIDEBAND GaAs TRANSISTOR POWER AMPLIFIER UNITS	Bochkarev D. V. Kistchinsky A. A. Nikityn D. V. Radchenko A. V.	Microwave Systems JSC	Moscow	Russia	284
1.14p	DESIGN OF SOLID STATE 0.5/1 kW C-BAND TRANSMITTER WITH 1:1 REDUNDANCY AND COMBINING CONFIGURATION	Yushin A. I. Perelstein M. P.	Alga Microwave	Quebec	Canada	408

1.15p	COMPLEX TWO-LEVEL TRANSISTOR FOR MICRO-WAVE POWER AMPLIFIERS	lovdalsky V. A. Pchelin V. A. Lapin V. G.	SSPE «Istok»	Fryazino Moscow reg.	Russia	417
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SESSION 1/2: OSCILLATOR AND RECEIVE DEVICES

**SevNTU (Studgorodok)
aud. Festo**

MONDAY, 14.00-16.00

Co-Chairmen:

N. F. KARUSHKIN, C.Sc.
SRI "Orion", Kiev, Ukraine

M. I. POYGINA, C.Sc.
Microtek Co., Kiev, Ukraine

1.16	RECEIVER MODULE FOR PASSIVE IMAGING SYSTEM IN 3 MM WAVES BAND	Zakamov V. R. Kuzmin Z. E. Radzikovsky V. N. Khaikin V. B.	Institute of Electronics and Communication, Special Astrophysical Observatory of RAS, Instituteburg for Physics of Microstructures of RAS	Kiev St-Petersburg Nizhny Novgorod	Ukraine Russia	080
1.17	TRANSCIEIVING MODULE FOR 60 GHz BANDWIDTH	Sunduchkov I. K.	Scientific production enterprise „Saturn“	Kiev	Ukraine	241
1.18	DIELECTRIC CAVITY ANTENNA-ACTIVE OSCILLATOR	Prudyus I.N. Holynskyy V. D. Storozh V. G.	Institute of Telecommunications, Radio Electronics and Electronic Technics, Lviv Polytechnic National University	Lviv	Ukraine	147
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SESSION 1a: SOLID STATE DEVICES CAD/CAM

**SevNTU (Studgorodok)
aud. Festo**

MONDAY, 16.15-18.00

Co-Chairmen:

B. N. SHELKOVNIKOV, C.Sc.

NTUU "Kiev Polytechnic Institute", Ukraine

A. A. KISTCHINSKY, C.Sc.

"Microwave systems" Close Corporation, Moscow, Russia

1a.1	DARWIN SOLVER – A SYSTEM OF EVOLUTIONARY ANALOG CIRCUIT DESIGN INTEGRATED WITH MICROWAVE OFFICE	Loshchilov I. G.	Tomsk State University of Control System and Radioelectronics (TUCSR)	Tomsk	Russia	217
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**SevNTU (Studgorodok)
aud. 304 (library)**

MONDAY, 11.00-13.00

Co-Chairmen:

A. A. KURAYEV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

V. D. YERYOMKA, C.Sc.

Usikov Institute of Radio-Physics and Electronics at NASU, Kharkov, Ukraine

2.1	EVEN AND ODD SAMPLING FOR SIMULATION OF ELECTRON DEVICES WITH IRREGULAR ELECTRODYNAMIC SYSTEMS	Batura M. P. Popkova T. L. Rak A. O.	BSUIR	Minsk	Belarus	137
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**SevNTU (Studgorodok)
aud. 304 (library)**

MONDAY, 14.00-16.00

Co-Chairmen:

S. V. KOLOSOV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

A. A. SHMATKO, Professor

Karazin Kharkov National University, Ukraine

2.15	CHERENKOV'S RELATIVISTIC HIGH-CURRENT OSCILLATORS WITH IRREGULAR CORRUGATION	Gourinovitch A. B. Kurayev A. A. Sinitsyn A. K.	BSUIR	Minsk	Belarus	026
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SESSION 2/3: M-TYPE DEVICES & GYRODEVICES

**SevNTU (Studgorodok)
aud. 304 (library)**

MONDAY, 16.15-18.00

Co-Chairmen:

V. D. YERYOMKA, C.Sc.

Usikov Institute of Radio-Physics and Electronics at NASU, Kharkov, Ukraine

A. A. KURAYEV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

2.28	A PRINCIPLE OF MILLIMETER-WAVE MAGNETRON DESIGN	Gurko A. A. Yeryomka V. D.	JSC "Pluton" Usikov Institute for Radiophysics and Electronics of NASU	Moscow Kharkov	Russia Ukraine	353
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2.30	COLD STARTING OF A MAGNETRON WITH COLD SECONDARY-EMISSION CATHODE USING EXTERNAL UHF SIGNAL	Avtomonov N. I. Vavriv D. M. Sosnytsky S. V.	Institute of Radio Astronomy of the NAS of Ukraine	Kharkov	Ukraine	050
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SESSION 3/1: WIRELESS ACCESS NETWORKS

**SevNTU (Studgorodok)
aud. 411 (library)**

MONDAY, 11.00-13.00

Co-Chairmen:

M. Ye. ILCHENKO, Corresponding Member of NASU, Professor
National Technical University of Ukraine "KPI", Kiev

K. S. SUNDUCHKOV, Professor
ITS of National Technical University of Ukraine "KPI", Kiev

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SESSION 3/2: TELECOMMUNICATION SYSTEMS

**SevNTU (Studgorodok)
aud. 411 (library)**

MONDAY, 14.00-16.00

Co-Chairmen:

M. Ye. ILCHENKO, Corresponding Member of NASU, Professor
National Technical University of Ukraine "KPI", Kiev
S. G. BUNIN, Professor
SRI of Telecommunications, NTUU "KPI", Kiev, Ukraine

INV.8	MULTIPLE ACCESS AND BROADCASTING IN SELF-ORGANIZING RADIO NETWORKS WITH ULTRA WIDE BAND PULSE SIGNALS	Bunin S. G.	Institute of Telecommunications, NTUU "KPI"	Kiev	Ukraine	094
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SESSION 3/3: SATELLITE COMMUNICATION & DIGITAL TV

**SevNTU (Studgorodok)
aud. 411 (library)**

MONDAY, 16.15-18.00

Co-Chairmen:

B. N. SHELKOVNIKOV, C.Sc.
NTUU "Kiev Polytechnic Institute", Ukraine
T. N. NARYTNIK, Professor
IEC of ASU UANSP, Kiev, Ukraine

INV.10	DIGITAL DVB-T BROADCAST- ING: SUBSCRIBER RECEIV- ERS	Ilchenko M. Ye. Narytnik T. N. Voytenko A. G. Zalevsky A. P. Arshinnikov V. V. Volkov V. V. Maryenko A. V. Protsenko V. O.	NTUU "KPI" IEC of ASU UANSP Regional Broadcast- ing Center JSC "Meridian" n.a. S. P. Korolyov	Kiev	Ukraine	198
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3.42p	SINGLE-FREQUENCY TV NETWORK. BROADCASTING USING "BETA TV COM" EQUIPMENT	Tarasov M. A. Laktionov A. I. Zayanchkovsky V. V. Gorbanov N. A.	Beta TV com Ltd.	Donetsk	Ukraine	370
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3.45p	DIGITAL IMAGES PROCESSING AND TRANSMISSION IN THE UNIVERSITY MICROSATELLITE	Bodyan D. G. Bodyan G. K. Sorokin G. F. Shestakova T. V.	Technical University of Moldova	Kishinau	Moldova	182

SESSION 7/1: MEASUREMENT OF MICROWAVE DEVICES & SIGNALS

**SevNTU (Studgorodok)
aud. 206 (library)**

MONDAY, 11.00-13.00

Co-Chairmen:

Yu. B. GIMPILEVICH, Professor
Sevastopol National Technical University, Ukraine
A. F. YANENKO, Professor
National Technical University of Ukraine "KPI", Kiev

7.1	NEW MEASURING CAPABILITIES OF CK-BELAN 240/280 SPECTRUM ANALYZER	Belchikov S. A. Dzisiak A. B.	ELVIRA Production Co.	Zhelezno-dorozhny, Mos. reg.	Russia	011
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7.2	ULTRA LOW PHASE NOISE IN CK4-BELAN 240 SPECTRUM ANALYZER	Belchikov S. A. Dzisiak A. B.	ELVIRA Production Co.	Zhelezno-Russia dorozhny, Mos. reg.	009
7.3	INCREASING OF PHASE SHIFT MEASURING ACCURACY BY SIGNAL PROCESSING AT HIGH INTERMEDIATE FREQUENCY	Avdeyenko G. L. Veselova A. P. Voytko Y. N. Mazurenko A. V. Yakornov E. A.	NTUU "KPI"	Kiev	Ukraine 060
7.4	MEASURING DEVICE OF COMPLEX VSWR OF MILLIMETER WAVES BY THE EXAMPLE OF 8-PORTS CIRCUIT	Trushkin A. N.	SevNTU	Sevastopol	Ukraine 160
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7.8	TWO-PORT NETWORKS COMPLEX PARAMETERS MEASURER ON THE BASIS OF TRAVELING WAVES RESONATOR	Salamatin V. V. Lemeshko G. V. Lukyanchuk G. A.	SevNTU	Sevastopol	Ukraine 318
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7.11p	FAULTY ELEMENT DETERMINATION IN MICROWAVE PATH OF RADIO SYSTEM	Afonin I. L. Bugayov P. A.	SevNTU		Ukraine 090

SESSION 7/2: MEASUREMENT OF MATERIALS AND SUBSTANCES

**SevNTU (Studgorodok)
aud. 206 (library)**

MONDAY, 14.00-16.00

Co-Chairmen:
Yu. B. GIMPILEVICH, Professor
Sevastopol National Technical University, Ukraine
V. F. MANOYLOV, Professor
Zhitomir State University of Technology, Ukraine

7.12	MICROWAVE COMPLEX FOR THE MEASUREMENT OF ANISOTROPIC DIELECTRICS' PARAMETERS	Strizhachenko A.V. Chizhov V.V. Ivanov A.I. Andreyev V.B. Zvyagintsev A.A.	Kharkov Karazin National University	Na-Kharkov	Ukraine 002
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7.13	MEASUREMENT OF DIELECTRIC FILMS' MICROWAVE PARAMETERS	Pashkov V. M. Bovtun V. P. Prokopenko Y. V. Kempa M. Molchanov V. I. Eremenko A. V. Poplavko Yu. M.	NTUU "KPI" Institut Fiziki AN CR Praga	Kiev	Ukraine	032
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**SevNTU (Studgorodok)
aud. 206 (library)**

MONDAY, 16.15-18.00

Co-Chairmen:

V. F. MANOYLOV, Professor

Zhitomir State University of Technology, Ukraine

A. F. YANENKO, Professor

National Technical University of Ukraine "KPI", Kiev

7.18	MEASUREMENT OF MICRO-WAVE DEVICE NOISE FIGURE	Belchikov S. A. Dzisiak A. B.	ELVIRA Production Co.	Zhelezno-	Russia	007
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TUESDAY, 15 SEPTEMBER

SESSION 4/1: ANTENNA ARRAYS & ELEMENTS

**SevNTU (Studgorodok)
aud. Festo**

TUESDAY, 8.30-10.30

Co-Chairmen:

D. I. VOSKRESENSKY, Professor

Moscow Aviation Institute (Technical University), Russia

A. N. BRATCHIKOV, Professor

Moscow Aviation Institute (Technical University), Russia

INV.16	ANTENNA SYSTEMS FOR MOBILE SATELLITE APPLICATIONS	Ilcev St. D.	Durban University of Durban Technology	South Africa	409
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SESSION 4/2: ANTENNAS & ANTENNA ELEMENTS ANALYSIS

**SevNTU (Studgorodok)
aud. Festo**

TUESDAY, 10.45-12.45

Co-Chairmen:

Ye. Ye. NECHAYEV, Professor

Moscow State Technical University of Civil Aviation, Russia

L. M. LOBKOVA, Professor

Sevastopol National Technical University, Ukraine

4.15	ANTENNA SYNTHESIS ON THE BASIS OF ANT OPTIMIZATION ALGORITHMS	Ermolaev S. Y. Slyusar V. I.	Povolzhskiy state university of telecommunications and informatics Central Research Institute of Weapons and Military Equipment of Ukraine's Armed Forces	Samara Kiev	Russia Ukraine	267
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4.21	DESIGN AND REALIZATION OF PRINTED ANTENNA ARRAYS FOR RADIO LINK POINT-MULTIPOINT X-BAND	Oleik Charif Rammal Mohammad Fadlallah Najib	Moscow Power Engineering Institute Lebanese University	Moscow Liban	Russia 084
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4.30p	FIELD AMPLITUDE DISTRIBUTION IMPACTING THE EXTENSION OF NEAR-FIELD REACTIVE REGION IN APERTURE RADIATORS	Gorobets N. N. Ovsyannikova E. V. Shishkova A. V.	V. N. Karazin Kharkiv National University	Kharkov	Ukraine 277

4.31p	INFLUENCE OF CONDUCTOR CURVATURE UPON ITS DIRECTIONAL CHARACTERISTICS IN THE FAR- AND NEAR-FIELD ZONES	Gorobets N. N. Trivaylo A. V.	V. N. Karazin Kharkiv National University	Kharkov	Ukraine	049
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SESSION 3/4: INFORMATION TECHNOLOGIES IN TELECOMMUNICATIONS I

**SevNTU (Studgorodok)
aud. Festo**

TUESDAY, 13.45-15.45

Co-Chairmen:

L. S. GLOBAL, Professor

National Technical University of Ukraine "KPI", Kiev

A. A. LIPATOV, Professor

Scientific Center at Kiev Military Institute of Communications & Control, Ukraine

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3.46	THE MODEL OF DATA-STREAM MANAGEMENT IN THE NETWORKS WITH PSEUDOWIRE EDGE-TO-EDGE SERVICES (PWE3)	Skulysh M. A. Globa L. S.	Institute of Telecommunication Systems, NTUU "KPI"	Kiev	Ukraine	340
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3.51	SERVICE ORIENTATION IN MIDDLEWARE COMPONENTS FOR SCALABLE SERVICE MARKETPLACES	Spillner J.	Technische Universität Dresden	Dresden	Germany	346

3.52	OVERVIEW OF A MODEL-TO-CODE TRANSFORMATION APPROACH FOR GENERATING SERVICE-BASED INTERACTIVE APPLICATIONS FOR GOOGLE ANDROID	Feldmann M. Oleniuk V. Globa L. Schill A.	Technische Universität Dresden	Dresden	Germany	347
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3.54p	BUSINESS PROCESSES DEVELOPMENT IN DISTRIBUTED SYSTEMS	Iermolchev A. V. Oleniuk V. N.	Institute of Telecommunication Systems, NTUU "KPI"	Kiev	Ukraine	351
3.55p	COMPARATIVE ANALYSIS OF WEB-SITE CONTENT MANAGEMENT SYSTEMS	Alekseev N. A. Bondarenko V. Y.	Institute of Telecommunication Systems, NTUU "KPI"	Kiev	Ukraine	365

SESSION 3/5: INFORMATION TECHNOLOGIES IN TELECOMMUNICATIONS II

**SevNTU (Studgorodok)
aud. Festo**

TUESDAY, 16.00-18.00

Co-Chairmen:

L. S. GLOBA, Professor

National Technical University of Ukraine "KPI", Kiev

A. A. LIPATOV, Professor

Scientific Center at Kiev Military Institute of Communications & Control, Ukraine

INV.14	FUNCTIONALITY OF WIRELESS NETWORK DESIGN TOOLS	Luntovskyy A. Schill A.	Dresden Un-ty of Cooperative Education, Dresden Un-ty of Technology	Dresden	Germany	075
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3.56	AN ANNOTATION TOOL FOR ENHANCING THE USER INTERFACE GENERATION PROCESS FOR SERVICES	Izquierdo P. Janeiro J. Hübsch G. Springer T. Schill A.	Technische Universität Dresden	Dresden	Germany	348
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SESSION 5/1: PASSIVE DEVICES

**SevNTU (Studgorodok)
aud. 304 (library)**

TUESDAY, 8.30-10.30

Co-Chairmen:

Yu. M. POPLAVKO, Professor

National Technical University of Ukraine "KPI", Kiev

A. V. CHECHETIN

Scientific Research Company "Faza", Rostov-on-Don, Russia

INV.17	MULTI-OCTAVE DEVICES FOR INCIDENT AND REFLECTED MICROWAVES SEPARATION	Andronov E. V. Goshin G. G. Morozov O. J. Fateev A. V.	Tomsk State University of Control Systems and Radioelectronics, R&P Company "Micran"	Tomsk	Russia	191
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SESSION 5/2: MICROSTRIP DEVICES

**SevNTU (Studgorodok)
aud. 304 (library)**

TUESDAY, 10.45-12.45

Co-Chairmen:

Yu. M. POPLAVKO, Professor

National Technical University of Ukraine "KPI", Kiev

B. N. SHELKOVNIKOV, C.Sc.

NTUU "Kiev Polytechnic Institute", Ukraine

INV.18	NEW DESIGNS OF MICRO-WAVE BSF STRUCTURE	Babushkina O. A. Golovkov A. A. Pipovarov I. U.	St.-Petersburg State St.-Electrotechnical University (LETI)	St.-Petersburg	Russia	294
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**SevNTU (Studgorodok)
aud. 304 (library)**

TUESDAY, 16.00-18.00

Co-Chairmen:

Yu. M. POPLAVKO, Professor

National Technical University of Ukraine "KPI", Kiev

B. N. SHELKOVNIKOV, C.Sc.

NTUU "Kiev Polytechnic Institute", Ukraine

5.21	MICROWAVE PHOTONIC CRYSTALS WITH TRANSMITTANCE CONTROLLED BY PIN-DIODES	Usanov D. A. Skripal A. V. Abramov A. V. Bogolubov A. S. Skvortsov V. S. Merdanov M. K.	Saratov State University	Saratov	Russia	338
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5.22	TUNABLE MICROWAVE FILTERS WITH UNCOUPLED DIELECTRIC RESONATORS	Pratsiuk B. B. Prokopenko Y. V. Poplavko Yu. M.	National Technical University of Ukraine «KPI»	Kiev	Ukraine	054
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5.25	ELECTRICALLY-TUNABLE MICROWAVE ATTENUATOR ON THE BASIS OF FERRITE-PIEZOELECTRIC LAYERED STRUCTURE	Tatarenko A. S. Srinivasan G. Bichurin M. I.	Oakland University, Novgorod State University	Rochester Veliky Novgorod	USA Russia	022
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SESSION 5a/1: SEMICONDUCTOR MATERIALS TECHNOLOGY

**SevNTU (Studgorodok)
aud. 411 (library)**

TUESDAY, 8.30-10.30

Co-Chairmen:

Yu. Ye. GORDIYENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

N. I. SLIPCHENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

5a.1	INVESTIGATION OF CIRCUIT DIAGRAM IN METAL-SEMICONDUCTOR CONTACTS WITH SCHOTTKI BARRIER USING THE METHOD OF ATOMIC FORCE	Bozhkov V. G. Torkhov N. A. Novikov V. A. Ivonin I. V.	Scientific-Research Institute of semiconductors Tomsk State University	Tomsk	Russia	328
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5a.3	INFLUENCE OF SEMICONDUCTOR SURFACE POTENTIAL ON THE EFFICIENCY OF CONDUCTING CAPACITY IN ME/N-GaAs CONTACTS WITH SHOTTKY BARRIER	Torkhov N. A. Bozhkov V. G.	Scientific-Research Institute of semiconductors	Tomsk	Russia	295

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SESSION 5a/2: MICROWAVE MICROSCOPY

**SevNTU (Studgorodok)
aud. 411 (library)**

TUESDAY, 10.45-12.45

Co-Chairmen:

Yu. Ye. GORDIYENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

N. I. SLIPCHENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

5a.11	SCANNERS FOR NEAR-FIELD MICROWAVE MICROSCOPY	Derkach V. N. Golovashchenko R. V. Goroshko O. V. Korz V. G. Anbinderis T. Laurinavicius A.	Institute of Radio-physics and Electronics of NASU ELMIKA Co. Semiconductor Physics Institute	Kharkov Vilnius	Ukraine Lithuania	378
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SESSION 5a/3: MATERIALS INVESTIGATION

**SevNTU (Studgorodok)
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TUESDAY, 13.45-15.45

Co-Chairmen:

Yu. Ye. GORDIYENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

N. I. SLIPCHENKO, Professor

Kharkov National University of Radioelectronics, Ukraine

5a.16	ALUMINUM OXIDE TECHNOLOGY FOR CREATION OF MM-BAND DEVICES ON THE BASIS OF NANOPOROUS OXIDE	Sokol V. A. Parkun V. M. Tamelov A. A. Molodkin D. F.	BSUIR	Minsk	Belarus	397
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SESSION 5b/1: NANOTECHNOLOGY & NANOMATERIALS

**SevNTU (Studgorodok)
aud. 206 (library)**

TUESDAY, 8.30-10.30

Co-Chairmen:

I. A. OBUKHOV, C.Sc.

Nanoelectronics TD, Korolyov, Moscow region, Russia

I. I. ABRAMOV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

INV.19	MATRIXES OF FIELD EMISSION CATHODES BASED ON CARBON NANOTUBES IN POROUS ANODIC ALUMINA	Solovei D. V. Sakharuk V. N. Navitski A. M. Gorokh G. G. Mueller G.	BSUIR University of Wuppertal	Minsk Wuppertal	Belarus Germany	153
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SESSION 5b/2: NANOELECTRONICS & QUANTUM DEVICES APPLICATION

**SevNTU (Studgorodok)
aud. 206 (library)**

TUESDAY, 10.45-12.45

Co-Chairmen:

I. I. ABRAMOV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

I. A. OBUKHOV, C.Sc.

Nanoelectronics TD, Korolyov, Moscow region, Russia

INV.20	NONEQUILIBRIUM BOUNDARY EFFECTS IN QUANTUM DEVICES	Obukhov I. A. Kvjatkevich I. I.	Nanoelectronics TD	Korolev, Moscow region	Russia 089
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5b.16	THE INFLUENCE OF X-VALLEY BARRIER HEIGHT AT CALCULATION OF IV-CHARACTERISTICS OF GaAs/AlAs BASED RTD	Abramov I. I. Goncharenko I. A. Kolomejtseva N. V. Bely Y. L.	BSUIR	Minsk	Belarus	337
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5b.27p	PARTICLES DELOCALIZATION IN NANOSTRUCTURES WITH COMPLEX ENERGY PROFILE UNDER THE ACTION OF EXTERNAL PERTURBATION	Pashchenko A.G.	KhNURE	Kharkov	Ukraine	082
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5b.29p	NUMERICAL INVESTIGATION OF DIPOLE-EXCHANGE SPIN EXCITATIONS IN NICKEL NANOWIRES	Zavislyak I. V. Popov M. A.	National Taras Shevchenko University of Kyiv	Kiev	Ukraine	190
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SESSION 6/1: PHYSICAL PHENOMENA IN VERY HIGH POWER MICROWAVE ELECTRONICS

SevNTU (Studgorodok)
aud. 206 (library)

TUESDAY, 13.45-15.45

Co-Chairmen:

I. I. MAGDA, Professor

National Scientific Center "KhIPT", Kharkov, Ukraine

V. V. STAROSTENKO, D.Sc.

Tavria National University, Simferopol, Ukraine

6.1	PARAMETRIC INSTABILITY OSCILLATOR WITH DELAYED LOAD REFLECTION	Novozhilova Yu. V. Sergeev A. S.	Institute of Applied Physics RAS	Nizhny Novgorod	Russia	268
6.2	THE THEORY OF PLASMA-BEAM SUPERHETERODYNE FREE ELECTRON LASER WITH H-UBITRON PUMPING	Kulish V. V. Lysenko A. V. Koval V. V.	National Aviation University Sumy State University	Kiev Sumy	Ukraine	155
6.3	PULSE POWER SOURCES FOR SUBRELATIVISTIC MAGNETRON	Berdin S. A. Zagvozdkin B. V. Karelin S. Yu. Mukhin V. S. Magda I. I. Naboka A. M. Soshenko V. A.	Institute of Plasma Electronics and New Acceleration Methods of NSC KhIPT NASU Institute of electrophysics and radiation technologies NASU	Kharkov	Ukraine	356
6.4	TERAHERTZ BAND FEL WITH ADVANCED BRAGG REFLECTORS	Gimzburg N. S. Zaslavsky V. Yu. Zotova I. V. Malkin A. M. Peskov N. Yu. Sergeev A. S.	Institute for Applied Physics RAS	Nizhny Novgorod	Russia	185

6.5	DISTRIBUTED COMPUTATION OF SPACE CHARGE FIELD OF RELATIVISTIC ELECTRON BEAM	Zaharchenko S. V. Shein A. G.	Volgograd State Technical University	Volgograd	Russia	205
6.6	LEADER DISCHARGE AS AN INITIATOR OF LONG-LIVING PLASMA FORMATION	Khorunzhiy M. O. Yefimov B. P. Kuleshov A. N.	Institute for Radiophysics and Electronics of NASU	Kharkov	Ukraine	229
6.7	TRANSITION RADIATION SPECTRA CONTROL	Bolotov V. N.	Karazin National University	Kharkov	Ukraine	076

SESSION 6/2: CHAOTIC OSCILLATIONS & CHAOS GENERATORS

**SevNTU (Studgorodok)
aud. 206 (library)**

TUESDAY, 16.00-18.00

Co-Chairmen:

SHEIN A. G., Professor

Volgograd State Technical University, Russia

HRAMOV A. E., Professor

Saratov State University, Russia

6.8	DIAGNOSTICS OF GENERALIZED SYNCHRONIZATION IN MICROWAVE RANGE	Koronovskii A. A. Hramov A. E. Starodubov A. V.	Saratov State University	Saratov	Russia	005
6.9	TIME-DELAYED GENERATORS APPLICATION FOR SECURE INFORMATION TRANSMISSION ON THE BASIS OF GENERALIZED SYNCHRONIZATION	Koronovskii A. A. Moskalenko O. I. Ponomarenko V. I. Prokhorov M. D. Hramov A. E.	Saratov State University	Saratov	Russia	006
6.10	INFLUENCE OF ELECTRON TEMPERATURE VELOCITY DISTRIBUTION ON CHAOTIC DYNAMICS OF ELECTRON BEAM WITH VIRTUAL CATHODE	Kurkin S. A. Koronovskii A. A. Hramov A. E. Lyovin Yu. I.	Saratov State University	Saratov	Russia	034
6.11	WIDE-BAND CHAOTIC OSCILLATIONS CONTROL IN ELECTRON BEAM WITH VIRTUAL CATHODE IN NON-UNIFORM MAGNETIC FIELD	Kurkin S. A. Koronovskii A. A. Magda I. I. Hramov A. E.	Saratov State University, NNTS «Kharkov physical and technical institute»	Saratov Kharkov	Russia Ukraine	053
6.12	INITIATION AND SUPPRESSION OF CHAOTIC GENERATION IN THE CHAIN OF GYRO-BACKWARD WAVE TUBE	Hanenko M. V. Koronovskii A. A. Hramov A. E.	Saratov State University	Saratov	Russia	086
6.13	THEORETICAL AND NUMERICAL INVESTIGATION OF EXTERNAL NOISES INFLUENCING BACKWARD WAVE TUBE DYNAMICS	Hanenko M. V. Hramov A. E. Koronovskii A. A.	Saratov State University	Saratov	Russia	087

6.14	INVESTIGATION OF ULTRA BROADBAND CHAOTIC SIGNALS GENERATED BY MICROWAVE OSCILLATOR BASED ON VIRTUAL CATHODE WITH ELECTRONIC FEEDBACK	Kalinin Yu. A. Starodubov A. V.	Saratov State University	Saratov	Russia	255
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6.17	CHAOTIC MW PULSE GENERATOR ON THE BASIS OF AMPLIFIER KLYSTRON AND NONLINEAR MAGNETOSTATIC WAVE DELAY LINE	Grishin S. V. Dmitriev B. S. Zharkov Yu. D. Skorokhodov V. N. Sharaevsky Yu. P.	Saratov State University	Saratov	Russia	140

THURSDAY, 17 SEPTEMBER

2nd PLENARY SESSION
SevNTU, aud. 418

THURSDAY, 8.30-10.30

Co-Chairmen:

A. N. BRATCHIKOV, Professor

Moscow Aviation Institute (Technical University), Russia

A. A. KURAYEV, Professor

Belarus State University of Informatics and Radioelectronics, Minsk

K. S. SUNDUCHKOV, Professor

ITS of National Technical University of Ukraine "KPI", Kiev

INV.2	SCATTERING CROSS-SECTION OF SEA TARGETS IN NONHOMOGENEOUS INCIDENT FIELD	Shtager Ye. A.	Krylov Shipbuilding Research Institute	St.-Petersburg	Russia	415
INV.3	ANENNAS OF 3G BASE STATION	Voskresenskiy D. I. Ovchinnikova E.V. Tay Zar Oo	Moscow State Aviation Institute (technical university)	Moscow	Russia	389
INV.4	GAN SOLID-STATE MICROWAVE POWER AMPLIFIERS – STATE-OF-THE-ART AND FUTURE TRENDS	Kistchinsky A. A.	Microwave Systems JSC	Moscow	Russia	280
INV.5	SOLID STATE TRANSCEIVER MODULES FOR ADVANCED MILLIMETER-WAVE RADAR TECHNOLOGY	Karushkin N. F. Maltsev S. B. Mozhar M. K. Rukin V. P. Khitrovski V. A.	Research Institute "Orion"	Kiev	Ukraine	310

SESSION 6a: EM AND RADIATION RESISTANCE OF MATERIALS & ELECTRONIC COMPONENT BASE

SevNTU (Studgorodok)
aud. Festo

THURSDAY, 11.00-13.00

Co-Chairmen:

D. V. GROMOV, D.Sc.

Specialized Electronic Systems Co., Moscow, Russia

Yu. V. BOGATYREV, D.Sc.

Scientific-Practical Materials Research Centre NAS of Belarus, Minsk

INV.21	HARDWARE METHODS FOR INCREASING RADIATION STABILITY OF CMOS LARGE-SCALE ICs	Belous A. I. Syakersky V. S. Shvedov S. V.	SPC "Integral" STC "Belmikrosistemy"	Minsk	Belarus	396
INV.22	HARDNESS OF MICROWAVE AMPLIFIERS BASED ON SILICON - GERMANIUM HETEROSTRUCTURES	Gromov D. V. Elesin V. V. Chukov G. V. Repin V. V.	Specialized Electronic Systems MPEI Microelectronic Research Institute «PROGRESS»	Moscow	Russia	168

6a.1	PREDICTION OF RADIATION RESISTANCE OF CMOS INTEGRATED MICROCIRCUITS	Korshunov F. P. Bogatyrev Yu. V. Belous A. I. Shvedov S. V. Lastovsky S. B. Karas V. I. Kulgachev V. I.	Scientific-Practical Materials Research Centre NAS of Belarus, SPC "Integral"	Minsk	Belarus	033
6a.2	INFLUENCE OF DESIGN AND TECHNOLOGICAL FACTORS ON RADIATION STABILITY OF BIPOLAR AND MDS INTEGRATION CHIPS	Alekseyev V. F. Piskun G. A.	BSUIR	Minsk	Belarus	306
6a.3	RADIATION EFFECTS IN BIPOLAR TRANSISTORS BASED ON SILICON-GERMANIUM HETEROSTRUCTURES	Gromov D. V. Elesin V. V. Chukov G. V. Repin V. V.	Specialized Electronic Systems Moscow State Engineering Physics Institute Microelectronic Research Institute «PROGRESS»	Moscow	Russia	098
6a.4	INVESTIGATION OF RADIATION-STABLE ELEMENTS OF CMOS VLSI ON SOI SUBSTRATES	Demchenko A. I. Syakersky V. S. Shvedov S. V. Bondarenko V. P. Dolgyi L. N. Bogatyrev Yu. V.	Integral RPC, BSUIR, Institute of Physics and Semiconductors NAS of Belarus	Minsk	Belarus	398
6a.5	TEST AND MEASUREMENT SYSTEM FOR MICROWAVE SEMICONDUCTOR DEVICES AND IC INVESTIGATION ON RADIATION HARDNESS	Gromov D. V. Polevich S. A. Elesin V. V.	Specialized Electronic Systems Moscow State Engineering Physics Institute	Moscow	Russia	171
6a.6	ESTIMATION OF SYNCHRONIZATION INFLUENCE ON VHF OSCILLATORS SUSCEPTIBILITY TO EXTERNAL EFFECTS	Ashames A. O. Brigidin A. M.	BSUIR	Minsk	Belarus	127
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6a.8	FORECASTING IC STABILITY AT THE EFFECT OF POWER PULSE ELECTROMAGNETIC FIELD	Glumova M. V. Gribskij M. P. Grigorev E. V. Starostenko V. V. Taran E. P. Unzhakov D. A.	V. I. Vernadsky Tavrda National University	Simferopol	Ukraine	244

**SESSION H: HISTORY OF RADIOENGINEERING RESEARCH
(READINGS FROM FEDOTOV)**

**SevNTU (Studgorodok)
aud. Festo**

THURSDAY, 11.00-13.00

Co-Chairmen:

V. M. PESTRIKOV, Professor

State University of Service and Economics, Saint-Petersburg, Russia

P. P. YERMOLOV, C.Sc.

SevNTU, Popov Crimean Scientific and Technology Center, Sevastopol, Ukraine

H.1	HISTORICAL SOURCES DESCRIBING A.S. POPOV'S ACTIVITY ON THE BLACK SEA FLEET AND IN SEVASTOPOL	Yermolov P. P. Vorobyov V. V.	SevNTU, Popov Crimean Scientific and Technological Center	Sevasto-pol	Ukraine	259
H.2	SCIENTOMETRIC ANALYSIS OF ARTICLES SUBMITTED TO INTERNATIONAL CRIMEAN CONFERENCE "MICROWAVE AND TELECOMMUNICATION TECHNOLOGY" IN GLOBAL ELECTRONIC DATABASES	Gryshchenko T. B. Nikitenko O. M.	KhNURE	Kharkov	Ukraine	115
H.3	THE ROLE OF BELARUS IN CriMiCo ORGANIZATION (1992—2008)	Yermolov P. P. Rzhevtseva N. L.	SevNTU, Popov CrSTC	Sevasto-pol	Ukraine	030
H.4	SEVASTOPOL RANGE FOR MEASURING RADAR, THERMAL AND LASER PROPERTIES OF SURFACE SHIPS (1979-1991)	Yermolov P. P. Pustovoytenko V. V.	SevNTU, Popov Crimean Scientific and Technological Center, Marine Hydrophysical Institute of NASU	Sevasto-pol	Ukraine	042
H.5	HISTORY OF SPECIAL DESIGN BUREAU OF TV FACILITIES AT SIMFEROPOL PC "FOTON" (1976-1990)	Yermolov P. P. Voychenko V. G.	SevNTU, Popov Crimean Scientific and Technological Center	Sevasto-pol	Ukraine	289

SESSION 8/1: RADAR SYSTEMS & APPLICATIONS

**SevNTU (Studgorodok)
aud. 304 (library)**

THURSDAY, 11.00-13.00

Co-Chairmen:

S. V. PLAKSIN, C.Sc.

Institute of Transport Systems and Technology, NASU, Dnepropetrovsk, Ukraine

I. B. SHIROKOV, C.Sc.

Sevastopol National Technical University, Ukraine

8.1	THERMAL PROCESSES EFFECTING UPON WAVEFORM SHAPING IN AUTODYNE GUNN DIODE OSCILLATORS	Noskov V. Ya. Smolskiy S. M.	USTU MPEI	Yekaterinburg Moscow	Russia	036
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8.2	DEVICES FOR AUTODYNE SIGNALS REGISTRATION IN GUNN DIODE OSCILLATORS	Noskov V. Ya. Smolskiy S. M.	USTU MPEI	Yekaterinburg Moscow	Russia	037
8.3	OPERATION PRINCIPLE OF INTRAPULSE AUTODYNE FM SRR	Noskov V. Ya. Smolskiy S. M.	USTU MPEI	Yekaterinburg Moscow	Russia	038
8.4	DIODUBLE-CHANNEL RADIO-PULSE SHORT-RANGE RADAR ON GUNN DIODE	Ivanov V. A. Noskov V. Ya. Smolskiy S. M.	USTU MPEI	Yekaterinburg Moscow	Russia	095
8.5	MILLIMETER BAND SURVEILLANCE AUTODYNE RADAR	Ermak G. P. Varavin A. V. Vasilev A. S. Popov I. V. Usov L. S. Evdokimov A. P. Kryzanovsky V. V.	Usikov Institute for Radiophysics and Electronics NAS of Ukraine	Kharkov	Ukraine	150
8.6	RADAR SENSOR FOR REMOTE CONTROL OF TRACK OCCUPANCY AND RAILWAY CARS SPEED	Ermak G. P. Popov I. V. Varavin A. V. Vasilev A. S.	Usikov Institute for Radiophysics and Electronics NAS of Ukraine	Kharkov	Ukraine	124
8.7	TRANSCIEIVING MODULES WITH LUNEBERG LENS FOR RADAR SYSTEMS	Yrchenko V. I. Solovyov Y. L. Rudakov A. V.	Research Institute of Tomsk Semiconductor Devices		Russia	357
8.8	USING RADIOCOMMUNICATION IN ORDER TO INCREASE EFFICIENCY OF SEARCH AND RESCUE OPERATIONS AT SEA	Afonin I. L. Bokov G. V.	SevNTU	Sevastopol	Ukraine	161
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8.10	SIMULATION OF PHASE NOISE INFLUENCE ON OSCILLATORS SYNCHRONIZATION SYSTEM OPERATION	Shirokov I. B. Serdyuk I. V.	SevNTU	Sevastopol	Ukraine	375

SESSION 8/2: TECHNOLOGICAL PROCESSES CONTROL AND NON-DESTRUCTIVE TESTING

**SevNTU (Studgorodok)
aud. 304 (library)**

THURSDAY, 16.00-18.00

A. S. SOVLUKOV, Professor
V. A. Trapeznikov Institute of Control Sciences of RAS, Moscow, Russia
I. B. SHIROKOV, C.Sc.
Sevastopol National Technical University, Ukraine

8.11	TWO-AERIAL MODULATION RADIOMETER	Kutsenko V. P. Skripnik U. A. Tregubov N. F. Shevchenko K. L.	State research-and-production enterprise "Kvartsit", Kiev National University of Technologies and Design	Konstantinovka, Don. reg., Kiev	Ukraine	021
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8.12	INVESTIGATION OF WINE AND WORT PERMITTIVITY IN THE MICROWAVE RANGE	Belyaev V. I. Golubnichaya G. V. Gorobchenko O. A. Zhylyakova T. A. Kirichenko A. Ya. Nikolov O. T. Psuturi D. I.	Usikov Institute of Radiophysics and Electronics NASU, V. N. Karazin Kharkov National University, National Institute of Vine and Wine "Magarach", JSC "S. Perovskoy"	Kharkov Yalta Sevasto-pol	Ukraine	106
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8.14	MICROWAVE SENSOR APPLICATION FOR DEFINITION OF LEATHER MATERIALS' PROPERTIES	Kazakova T. A. Ilyuschenko A. V. Smelkov D. V.	Vitebsk State Technological University	Vitebsk	Belarus	235
8.15	CORRELATION OF COMPLEX PERMITTIVITY AND PHYSICO-CHEMICAL PARAMETERS OF TABLE WINES	Eremenko Z. E. Scresanov V. N. Gerzhikova V. G. Zhilyakova T. A. Anikina N. S.	Usikov Institute for Radiophysics and Electronics of NASU National Institute of Vine and Wine "Magarach" of Ukrainian Academy of Agricultural Sciences	Kharkov Yalta	Ukraine	320
8.16	MICROSTRIP PHOTONIC CRYSTALS AND THEIR APPLICATION FOR POLAR LIQUIDS MEASUREMENT	Usanov D. A. Skripal A. V. Abramov A. V. Bogolubov A. S. Kulikov M. YU. Ponomarev D. V.	N. G. Chernyshevsky Saratov State University	Saratov	Russia	339
8.17	HOMODYNE MICROWAVE GAUGE FOR MEASUREMENT OF MULTICOMPONENT MIXTURE HUMIDITY	Shirokov I. B. Polivkin S. N. Isachenko M.	SevNTU	Sevasto-pol	Ukraine	374
8.18	SIMULATION OF MICROWAVE DRYING IN PYRAMIDAL CHAMBER	Kiglay I. N. Sinitsyn A. K.	BSUIR	Minsk	Belarus	056
8.19	THE INFLUENCE OF MICROWAVE PROCESSING ON SOWING PROPERTIES OF PICEA EXCELSA SEEDS	Vojnov G. M. Golovach A. A.	Institute of System Research for the Agroindustrial business of the NAS of Belarus	Minsk	Belarus	062
8.20p	MICROWAVE DISCHARGE IN ARGON-SULPHUR MIXTURE IN HIGHLY EFFECTIVE LIGHT SOURCE WITH LOW FEEDING POWER	Didenko A. N. Prokopenko A. V. Shchukin A. Ju.	Moscow Engineering Physics Institute (State University)	Moscow	Russia	148
8.21	KIMBERLITE FRACTURE BY PROMPT MICROWAVE HEATING	Didenko A. N. Prokopenko A. V. Smirnov K. D.	Moscow Engineering Physics Institute (State University)	Moscow	Russia	149
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8.22p	NUMERICAL SIMULATION OF MICROWAVE HEATING OF OIL STRATUM	Sysoev S. M. Zavodovsky A. G. Kislitsin A. A.	Surgut State University, Tyumen State University	Surgut Tyumen	Russia	177

8.23p	EXPERIMENTAL INVESTIGATION OF MICROWAVE RADIATION IMPACTING WATER-OIL EMULSIONS	Kalinin Yu. A. Starodubov A. V. Berezin S. I.	Saratov State University	Saratov	Russia	256
8.24p	REGULATION OF MOMENTARY OUTPUT POWER OF MAGNETRON OPERATING IN CONTINUOUS MODE (M-105, M-112 TYPE) BEING A PART OF TECHNOLOGICAL PLASMA UNIT	Bordusov S. V. Madveyko C. I.	BSUIR	Minsk	Belarus	406
8.25p	INTELLIGENT SYSTEM FOR ANALYZING INFORMATION PATTERNS OF GASEOUS, LIQUID AND HETEROGENEOUS MATTERS	Koleshko V. M. Gulay A. V. Varabei Y. A. Polynkova E. V.	Belarusian National Technical University	Minsk	Belarus	058

SESSION 8a/1: MEDICAL & ECOLOGICAL APPLICATIONS I

**SevNTU (Studgorodok)
aud. 411 (library)**

THURSDAY, 11.00-13.00

Co-Chairmen:

A. F. YANENKO, Professor
National Technical University of Ukraine "KPI", Kiev
V. F. MANOYLOV, Professor
Zhitomir State University of Technology, Ukraine

8a.1	NON-FARADAIC IMPEDANCE SENSORS FOR BACTERIES DETECTION	Drapeza A. I. Loban V. A. Sudnik Y. M. Labunov V. A. Orechovskaya T. I. Parkun M. V.	Belarusian State University, BSUIR, Academy of Management under the President of the Republic of Belarus	Minsk	Belarus	366
8a.2	POSSIBILITY OF USING TESLA'S TRANSFORMER IN GAS-DISCHARGE VISUALIZATION DEVICES	Kolomiyets R. A.	Zhytomyr State Technological University	Zhytomyr	Ukraine	327
8a.3	HATCHING OF EGGS OF ARTEMIA AND CHANGE OF CHROMATIN STATE UNDER THE INFLUENCE OF ELECTROMAGNETIC FIELDS	Shckorbatov Y. G. Rudneva I. I. Pasiuga V. N. Kolchigin N. N. Grabina V. A. Ivanchenko D. D. Kazanskiy O. V. Shaيدا V. G.	V. N. Karazin Kharkov National University Institute of Biology of Southern Seas NAN of Ukraine	Kharkov Sevastopol	Ukraine	311
8a.4	CONTROL ACTION OF MM-WAVES ON SPACE STATI-ONS INDEMNIFICATION	Lykholat Y. V. Vinnichenko A. N. Drobakhin O. O. Pyrshen B. L. Pokataev V. N. Shirokopoyas L. L. Fateev D. N. Elanskij Y. A.	Dnepropetrovsk National University, Yuzhnoe SDO	Dnepropetrovsk	Ukraine	249

8a.5	REACTION OF BLOOD-VASCULAR SYSTEM AND HORMONE LEVEL IN BLOOD SERUM OF RATS SUBJECTED TO ELECTROMAGNETIC FIELD OF CELL PHONE (900 MHz)	Konoplya E. F. Vereschhako G. G. Goroch G. A. Andronova E. V. Gunkova N. V. Yakuhev D. L.	Institute of Radiobiology, National Academy of Sciences	Gomel	Belarus	239
8a.6	SOME QUESTIONS OF DOSIMETRY IN STUDYING BIOLOGICAL EFFECTS OF EHF ELECTROMAGNETIC RADIATION	Gapeyev A. B. Chemeris N. K.	Institute of Cell Biophysics of RAS	Pushchino	Russia	236
8a.7	COMFORT ESTIMATION FOR TEXTILE MATERIALS APPLIED AT MEDICAL UNIFORM PRODUCTION USING RADIOMETRIC METHOD	Suprn N. P. Skripnik Yu. A. Ostrovetskaya Yu. I. Shevchenko K. L. Yanenko A. Ph.	Kiev National University of Technologies and Design NTUU «KPI»	Kiev	Ukraine	232
8a.8	SOME APPROACHES TO ESTIMATION OF FUNCTIONAL CONDITION OF VISUAL TYPE OPERATORS USING HARDWARE-SOFTWARE COMPLEX	Kochina M. L. Kalimanov V. G. Saikovskaya L. F. Firsov A. G. Shelest O. N.	KhNURE	Kharkov	Ukraine	215
8a.9	POSSIBILITY OF BIOACTIVE SUBSTANCE STERILIZATION USING LOW POWER ELECTROMAGNETIC FIELDS	Ivanyuta A. N. Prokopenko A. V.	National Taras Shevchenko University	Kiev	Ukraine	210
8a.10	THE EFFECT OF LOW-INTENSITY MICROWAVE RADIATION ON GERMINATING AND GROWTH INTENSITY OF WHEAT GRAINS. EXPERIMENTAL RESEARCH	Nikulin R. N. Kovalev I. A. Lyu Huen Chang	Volgograd State Technical University	Volgograd	Russia	206
8a.11	COHERENT ELECTROMAGNETIC FIELDS HAVING THERAPEUTIC INFLUENCE ON BIOLOGICAL STRUCTURES	Klotchko T. R.	National Technical University of Ukraine "KPI"	Kiev	Ukraine	385

SESSION 8a/2: MEDICAL & ECOLOGICAL APPLICATIONS II

**SevNTU (Studgorodok)
aud. 411 (library)**

THURSDAY, 14.00-16.00

Co-Chairmen:

A. F. YANENKO, Professor

National Technical University of Ukraine "KPI", Kiev

V. F. MANOYLOV, Professor

Zhitomir State University of Technology, Ukraine

8a.12	SIMULATION OF RESULTS OF TERAHERTZ WAVE-BIOOBJECT INTERACTION	Stoyanov Yu. N. Yavorsky B. I.	Ternopil State Technical University named after Ivan Pului	Ternopil	Ukraine	203
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8a.14	FEASIBLE APPLICATION OF EHF DIELECTROMETRY IN BIOLOGICAL AND MEDICAL INVESTIGATIONS	Arhipova E. A. Krasov P. S. Fisun A. I.	A. Ya. Usikov Institute of Radio Physics and Electronics, NAS of Ukraine	Kharkov	Ukraine	142
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8a.16	LASER DIFFRACTION DIAGNOSTICS OF LIQUID BIOLOGICAL ENVIRONMENTS (FRAUNGOFFER'S LIGHT DIFFRACTION ON THE PARTICLE OF BLOOD)	Moskvin P. P. Chukhov V. Manojlov V. F. Olchowik G. Olchowik J.	Zhitomir state technological university, Lublin Medical University, Lublin Polytechnical University	Zhitomir Lublin	Ukraine Poland	103
8a.17	USING OF HILBERT TRANSFORM FOR ANALYZING NONSTATIONARY PROCESSES OF ELECTROENCEPHALOGRAPHM TYPE	Kharchenko O. I. Chumakov V. I.	KhNURE	Kharkov	Ukraine	099
8a.18	INVESTIGATION OF 2-CHLOROVINYLDI-CHLOROARSINE DECOMPOSITION PRODUCTS BY METHODS OF NONSTATIONARY SPECTROSCOPY OF SUBTHZ FREQUENCY RANGE	Vaks V. L. Domracheva E. G. Sobakinskaya E. A. Chernyaeva M. B.	Institute for Physics of Microstructures RAS	Nizhny Novgorod	Russia	092
8a.19	TRANSFORMED OPTICAL AND ELECTRONIC EQUIPMENT KIT FOR NEW-BORN BABIES AND SUCKLING INFANTS	Bezyazychnaya A. V. Demchenko A. I. Emelyanov V. A. Kirilov A. V. Sayan N. I. Shishko G. A. Artsyishevskaya M. V. Kachan S. E. Sapatnitski A. V.	Research and Production Corporation «Integral» Belarussian Medical Academy of Post Graduate Education	Minsk	Belarus	023
8a.20	WIDE-BAND ANTENNA FOR ON-BODY RFID APPLICATION	Lvova L. A.	All-Russia Zhabakhin Research Institute of Technical Physics	Snezhinsk, Chelyabinsk reg.	Russia	019
8a.21	LONG-TERM CONSEQUENCES OF BIOINFORMATICS EFFECTS OF EMP EHF ON MAMMALS REPRODUCTION	Lennikov R. V. Subbotina T. I. Yashin S. A.	SRI of New Medical Technologies	Tula	Russia	012

SESSION 9/1: RADIOASTRONOMY & ATMOSPHERE RESEARCH

**SevNTU (Studgorodok)
aud. 206 (library)**

THURSDAY, 11.00-13.00

Co-Chairmen:

L. I. TSVETKOV, D.Sc.

Crimean Astrophysical Observatory, Katsiveli, Ukraine

Yu. F. YUROVSKY, D.Sc.

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THURSDAY, 14.00-16.00

Co-Chairmen:

V. V. PUSTOVOYTENKO, C.Sc.

Marine Hydrophysical Institute, NASU, Sevastopol, Ukraine

O. F. TYRNOV, Professor

V. N. Karazin Kharkov National University, Ukraine

9.14	SPACE RESEARCH IN KHARKIV RADIOPHYSICAL OBSERVATORY OF V. N. KARAZIN NATIONAL UNIVERSITY	Garmash K. P. Gritchin A. I. Martynenko S. I. Podnos V. A. Rozumenko V. T. Tyrnov O. F. Fedorenko V. N. Fedorenko Yu. P. Tsymbal A. M. Chernogor L. F.	V. N. Karazin Kharkiv National University	Kharkov	Ukraine 247
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FRIDAY, 18 SEPTEMBER

**3rd CLOSING SESSION
PLENARY SESSION
aud. 418**

FRIDAY, 14.30-16.00

Co-Chairmen:

M. Ye. ILCHENKO, Corresponding Member of NASU, Professor
National Technical University of Ukraine "KPI", Kiev

P. P. YERMOLOV, C.Sc.

SevNTU, Popov Crimean Scientific and Technology Center, Sevastopol, Ukraine

Change of views, Conference decree.
Presentation of Organizing Committee Prizes

NOTES

