

## CONTACT INFORMATION

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## Curriculum Vitae

Andrey Smirnov was born in Moscow, Russia, 9.01.1956.

He is an interdisciplinary artist, composer, engineer, researcher and developer, author, curator, educator.

He is a founder of the Theremin Center for Electroacoustic Music and Multimedia at Moscow Tchaikovsky Conservatoire where he gives lectures and workshops on the basics of Electroacoustic Music, recent Computer Music technologies and Physical Computing.

He has conducted numerous workshops and master classes in the U.S., Europe and Russia, attended various festivals and conferences.

Since 1976 he is conducting research and developments in electronic music techniques, physical computing, gestural interfaces, hardware and software sensor technology with particular interest in design of the HCI systems with complex relationships between the performer's actions and the interpretation of this information in non-linear methods using custom software.

He is collecting and keeping unique archives on the history of Audio Computing and Music Technology in the early 20-th century Russia as well as a collection of original historical electronic musical instruments, combining deep research into the history of music technology with extensive experience of interactive composition and performance.

## GRADUATE EDUCATION

**1973-1979** – Moscow Institute for Physics and Technology. MS. 1979.

## CURRENT EMPLOYER

**Since 2008** - Senior Lecturer at the Contemporary Music Department, Moscow Tchaikovsky Conservatoire. B.Nikitskaya 13, Moscow, 125009 Russia. Annual lecture course *Introduction to Electroacoustic Music Composition* including practical *Acousmatic Studies* for composers.

**Since 2005** - Chief of the Sector for Multimedia Projects of the Center for Electroacoustic Music at Moscow Tchaikovsky Conservatoire.

**Since 1992** – Founding Director, lecturer and workshops instructor at the Theremin Center for Electroacoustic Music at Moscow Tchaikovsky Conservatoire. Annual courses and tutorials:

- *History and Aesthetics of Electroacoustic Music and Multimedia;*
- *Sound Design and Composition;*
- *New Musical Interfaces and Sensor Technology;*
- *Introductory Digital Audio Signal Processing and Sound Synthesis;*
- *Physical Computing Workshops. HCI and special hardware and software design.*

## OTHER TEACHING, ACADEMIC AND ADMINISTRATIVE ACTIVITIES

**Since 2006** - Founder and Artistic Director of the Moscow Laptop Cyber-Orchestra (CybOrk). <http://cyberorchestra.com>

**2006-2009** - Lecturer at the IT Department, Moscow University for Psychology and Education. The course “*Sound Design of Multimedia Programs*” including practical *Acousmatic Studies*.  
**2003-2005** - Invited Lecturer at the Pro Arte Institute, St. Petersburg. The lecture course “*Acousmatics and Interaction*”. Monthly lectures, workshops, presentations, concerts.  
**1995-1997** - Chief of the Cross-Media Studio founded in cooperation with the Soros Center for Contemporary Arts (Moscow) to provoke and develop cross-disciplinary projects between musicians, technologists, visual artists and dancers.

### **EMPLOYMENT HISTORY**

**1988-2000** - Executive Director and Music Director of the Chet-Nechet Theatre, Moscow  
**1987-1992** - The Head of the Sound Engineering Department at the Theatre Workshops Association, Moscow.  
**1982-1987** - Developer of the computer-controlled sound synthesizer for the Emosaurus Project (brainwave biofeedback system, based on interactive audio-visual environment). Institute for Psychology of the Russian Academy of Sciences.  
**1982-1987** - The senior engineer at the Laboratory for Differential Psycho-Physiology at the Institute for Psychology of the Russian Academy of Sciences.  
**1980-1982** - The senior engineer and developer of the multichannel digital sound spatializing systems at the Audio-Visual Group of the Astronautics Memorial Museum, Moscow.  
**1980-1991** - The founder and the Head of the first underground private company in Russia, manufacturing electronic music equipment (legalized in 1988 after official legalization of private business activities during Perestroika).  
**1979-1980** - Engineer at the Laboratory of Vibrations at the Physical Institute of Russian Academy of Sciences, Moscow.  
**1976-1982** - The 2<sup>nd</sup> oboist of the Symphony Orchestra at the Central House of Scientists, Moscow.  
**1978-1981** - Engineer at the Laboratory for Musical Acoustics at Moscow Tchaikovsky Conservatoire under the leadership of the professor Andrei Volodin (development of the experimental sound synthesizer).  
**1973-1979** - Student at the Department for Physical and Quantum Electronics at the Moscow Institute for Physics and Technology.

### **SELECTED EDITORIAL AND JURYING ACTIVITIES**

**2008** - Scientific editorial board, SPECTROPIA – Illuminating investigations in the electromagnetic spectrum. *Acoustic Space*, #7, RIXC, Riga.  
**2007** - Digital Musics jury member, PRIX ARS ELECTRONICA 2007, Linz, Austria.  
**2002** - Jury member of the International competition «Nam June Paik Award», Dusseldorf, Germany  
**2001** - Jury member of the experimental films competition “Super-Amateur Cinema”, Moscow

### **SELECTED GRANTS AND AWARDS**

**October 2009** – Exhibition GENERATION\_Z was included in the shortlist of five best special projects of the 3-rd Moscow Biennale for Contemporary Arts.  
**2003-2008** - Exchange program between the Theremin Center, Moscow and Diapason Gallery, New York. Grant by the Trust for Mutual Understanding.  
**1999** - Grant by the Open Society Institute (Soros Foundation) to develop the Theremin Center.  
**1998** - Grant by the Open Society Institute (Soros Foundation) to equip the Chet-Nechet Theatre.  
**1998** - Grant by the Open Society Institute (Soros Foundation) to equip the Theremin Center.  
**1998** - Da-Da-Net prize for the best Internet art resource - the Open Library at the Theremin Center web site (now located at <http://asmir.info/lib/>)

**1997** - Grant by the Open Society Institute (Soros Foundation) to produce an experimental spectacle "Iordano Bruno" by I.Terentiev. In collaboration with Alexander Ponomarev and Chet-Nechet Theatre.

**1997** - Grant by the Open Society Institute (Soros Foundation) to develop the Theremin Center.

**1995-1997** - X-Media Project supported by the Soros Center for Contemporary Arts, Moscow.

**1994** - Grant by the IREX, Moscow (International Research & Exchanges Board). Joint project with Dartmouth College (USA), coordinated by Andre Smirnov and Jon Appleton.

**1994** - Ostankino Prize-94. Award for the best mini-drama for the text-sound composition "Госпожа Ленин" (Madam Lenin) based on Velimir Khlebnikov's poem. In collaboration with the Chet-Nechet Theatre, Moscow.

**1994** - Gran-Prix at MACROFON-94 (Poland) for the spectacle "Zangezi" based on Velimir Khlebnikov's poetry. In collaboration with the Chet-Nechet Theatre, Moscow.

**1993** - Grant by the Rockefeller Foundation. Joint project with Dartmouth College (USA,) coordinated by Andre Smirnov and Jon Appleton.

**1981-1986** - Prizes at several radio-electronics exhibitions in Moscow for the series of analog synthesizers and digital sound processing tools.

**1982** - The Prize at the Radio-electronic Exhibition, Moscow, 1982 for VC-17 Vocoder.

**1981** - The Silver Medal at the Exhibition of National Achievements, Moscow for the Studio-1 Sound Synthesizer.

### **SELECTED OTHER TEACHING, INVITED LECTURES, WORKSHOPS AND PRESENTATIONS**

**2009, October** - Lecture by Andrei Smirnov: *Sound out of Paper. "Forgotten experiments in sound art in early 20th century Russia"* at the Festiwal Ad Libitum: 4, Warsaw, Centrum Sztuki Wspolczesnej, Zamek Ujazdowski w Warszawie. Polish Music Council Foundation.

**2009, June** - *Gestural interfaces: live interaction in Computer Music*. Workshop in the frame of Masters program in Sonic Arts and Technologies at Ionian University. Department of Music Studies, Old Fortress, Corfu Greece

**2009, May** - *Gestural Interfaces: Voice and Movement*. Workshop and presentation in the frame of the Voice Works II workshops related to the voice, sound and movement, curated by Christine De Smedt and Myriam Van Imschoot. Les Ballets C de la B, Ghent, Belgium

**2009, May** - *Russian proto-electronic music from 1930-s and beyond*. Presentation at eNka, Berlin.

**2009, May** - *THEREMIN SENSORS WORKSHOP* at eNka, Berlin, Germany

**2009, March** – Keynote lecture "Graphical Sound: technology, music and science" at the Future of Sound Symposium, Goldsmiths, University of London, UK.

**2009, March** - Lecture: *The Archaeology of Graphical Sound. Russia 1929-1939 and beyond*.

Conference "Klangmaschinen zwischen Experiment und Medientechnik" at Kulturfabrik/Hainburg a. d. Donau. IMA Institute of Media Archeology, Austria

**2008, November** - *Sound out of Paper, Music from out of Nowhere*. The concert-presentation of Russian synthesized tape music from 1930-s. Centre for Music & Technology, Sibelius Academy, Helsinki, Finland

**2008, November** - *Theremin Sensors Workshop*. CM&T at Sibelius Academy, Helsinki, Finland.

**2008, October** - *GRAPHICAL SOUND in 1930-s. New media-archeological discoveries*.

Presentation at Palais de Tokyo, Paris, France.

**2008, July** - *Theremin Sensors Workshop* during "Human-Information Workspace", Computer and new music research group CNMRG, Media Lab at Globus Gallery, St. Petersburg.

**2008, June** - *Theremin Sensors Workshop*. The National Centre for Contemporary Arts, Kaliningrad.

**2008, May** – *Experimental Music. Live after Death* workshop. Center for Contemporary Arts, Bryansk.

**2008, January** - *Digital Theremin Workshop* at Club Transmediale, Berlin.

**2007, November** - *Andrey Smirnov & Guy van Belle: Theremin-Sensors\_Networked Orchestra Workshop*, Munich. Hosted and supported by Department of Arts and Culture of Munich, Organized by A=V /Munich/

**2007, August** - *Theremin Sensors Workshop* at IMAutomaat #1 artist-in-residency festival at IMA :: Institut für Medienarchäologie, Heinburg, Austria

**2007, June** - *Theremin-Sensor Construction Workshop* at Riereta, Barcelona. Organized by A=V (Munich). Hosted by Riereta & Telenoika (Barcelona) in collaboration with the Hangar (Barcelona)

**2007, June** - *Theremin Sensors Workshop* at TESLA, Berlin

**2007** - *Musical applications of eavesdropping techniques workshop and Laser Bugging* performance at the 9th International Festival for New Media Culture ART+COMMUNICATION 2007: SPECTRAL ECOLOGY, Riga, Liepajas Karosta and Aizpute in Latvia.

**2007** - Report on the conference "*Espionage Technologies and Art*".

**2007** - Lecture at the University of Applied Sciences Hagenberg: *Digital Theremin-Sensors: new approaches and applications for human-machine interaction*. Linz, Austria.

**2007** - *Theremin Sensors Workshop* at the Theremin Center, Moscow

**2006** - Presentation: *Digital Theremin-Sensors: New Approaches and Applications* at STEIM Micro Jamboree, Amsterdam

**2006** - A=V annual FESTIVAL=WORKLAB. *Theremin Sensors Workshop. Sound out of your body motion; Touchless control; Sensing airflow; Playing with water drops*. München, Germany.

**2006** - Lecture at OKNO vzw.: *Forgotten Future: Selected archeologies of art and technology in Russia*. Windowpane Theremin Installation, Laser Bugging Performance. Brussels, Belgium.

**2006** - *Good Vibrations Workshops*. Theremin Center, Moscow.

**2006** - *Good Vibrations Workshops*. Pro Arte Institute, St.Petersburg.

**2005** - Special sound workshop. *Leon Theremin's Good Vibrations. Musical applications of eavesdropping techniques and selected archeologies of music technology*. CM&T at Sibelius Academy. Helsinki, Finland.

**2005** - *Good Vibrations Workshop* at the DOM IM BERG, Graz, Austria.

**2005** - *Masterclass di Tecnologia del Suono Musica Elettronica in Russia: la situazione attuale*. Conservatorio di Musica "Giuseppe Verdi", Milano, Italy.

**2005** - Pro Arte Institute, St.Petersburg. *Acousmatica & Interaction*. Festival and workshops

**2005** - V:NM Festival - Discussion with Andre Smirnov and Daniel Ashwanden from bilderwerfer, moderation Elisabeth Schimana. ESC Gallery, Graz, Austria.

**2005** - Lectures and workshops in the frame of International Contemporary Arts Festival, named for Roslavets and Gabo, Bryansk, Russia.

**2005** - Workshop *Art of Sound and Creativity Workshop + Acousmatic Studies* at the Media Laboratory of the University of Art and Design, Helsinki, Finland.

**2004** - Report «*Proto - Digital Tools in Post - Digital Culture*» in the frame of seminar «Digital 3. International Sound Art Event». Artists' Association Muu, Helsinki, Finland.

**2003** - Workshop at Bregman Electroacoustic Music Studio at Dartmouth College, USA.

**2002** - Workshop: *Music and Gesture: sensors, hardware and software interfaces*. STEIM, Amsterdam.

**2001** - Report at V:NM Festival, Graz, Austria

**2000** - Report «*Music and Gesture: Sensor Technologies in Interactive Music and the Theremin based Space Control Systems*» at ICMC-2000, Berlin, Germany.

**2000** - Lecture: *Music and Gesture: Theremin based Space Control Systems*. Report *Physics - Music - Gesture* at Physics in Action - joint with Physics of Musical Instruments. Electronics and Music. Creating the Future Physical Congress. Brighton, England.

**1999** - *Realta' Musicali in Russia*. Master Class in forma di Seminario. Conservatorio di Musica "Giuseppe Verdi" Milano.

**1999** - *Music and Gesture: theremin based interactive systems*. Workshop at Musical Academy in Basel, Switzerland

**1998** - Presentation of the Theremin Center. Lectures "*Russian Futurism and early ideas of Sonic Art*" and "*Leon Theremin and history of his inventions*". C3 Center for Culture and Communication, Budapest, Hungary.

**1998** - INVENTIONEN 98 Festival, Berlin. SFB -- Haus des Rundfunks, Berlin. Lecture "*Proto Musique concrete: Russian Futurism in the 10s and 20s and early ideas of Sonic Art and Art of Noises*".

**1998** - Workshop "*Music and Gesture: theremin sensor technology*" in the frame of Berlin-Paris-Moscow project. PODEWIL, Berlin, Germany.

**1998** - Report "*Russian Futurism and early ideas of Sonic Art*". Union of Composers, Moscow. Association for Electroacoustic Music, Russia. Conference for 50-th Anniversary of Musique Concrete.

**1998** - *Theremin Workshop*. Institut fur Elektronische Musik. Hochschule fur Musik und Darstellende Kunst, Graz, Austria.

**1998** - Workshop "*Music and Technology*" at Ural State Conservatory, Ekaterinburg, Russia.

**1998** - Lecture "*Das Theremin, erstes industriell produziertes elektronisches Instrument*". Institut fuer Elektroakustik, Experimentelle und Angewandte Musik an der Hochschule fuer Musik und Darstellende Kunst in Wien, Austria.

**1997** - Presentation of works from the Theremin Centre. DIGITALE '97, Crossing Borders. Art, Computer and Culture. Cinemathek, Cologne, Germany.

**1997** - Workshop "*Music and Technology*" at the Ural State Conservatory, Ekaterinburg, Russia.

**1996** - Lectures and presentations at the University of Central Oklahoma, Edmond, OK, USA.

**1996** - Lectures and presentations at the Oberlin Conservatory, Oberlin, OH, USA.

**1996** - Lectures and presentations at the University of Illinois, Urbana Champaign, IL, USA.

**1996** - Lectures and presentations at the Ithaca College of Music, Ithaca, NY, USA.

**1996** - Lectures and presentations at the Dartmouth College, Hanover, NH, USA.

**1996** - Lectures and presentations at Princeton University, Princeton, NJ, USA.

**1996** - Participation in the SEAMUS Conference, Birmingham, USA.

**1996** - Lectures and presentations at Berklee College of Music, Boston, MA, USA.

**1995** - "*Moskau - Berlin / Elektroakustische Musik aus Moskau*". Report and concert at Berlin Academy of Arts within the framework of the international festival "Moscow-Berlin", Germany.

**1995** - Report and concert of interactive computer music. International conference Artificial intelligence in XXI century in Kaliningrad.

**1995** - Report *Biomusic of Cyberspace. New interactive technologies in music*. Concert of interactive music with demonstration of installation *Virtual Sonic Painting*. The Third Reality Forum, St.-Petersburg, Russia.

**1995** - Production of the International workshop *Music and Technology* with participation of Max Mathews (USA, CCRMA, Stanford Univ.); Jon Appleton (Dartmouth College, USA); Richard Boulanger (USA, Berklee College, Boston); Gary Lee Nelson (USA, Conservatory Oberlin); Sam Magrill (USA, The University of Central Oklahoma); Peter Rothbart (USA, Ithaca College); Ko Umezaki (Japan); Lidia Kavina (Russia); John Puterbaugh (USA, Princeton Univ.); Andrei Smirnov (Theremin Center, Moscow); Vladimir Volkov (Ekaterinburg, Russia); Tatiana Komarova (Ural State Conservatory, Ekaterinburg, Russia).

**1995** - Report at the International conference "Music in the Year 2002. Where are we? And where do we want to go?" Royal Swedish Academy of Music, Stockholm, Sweden

**1994** - The lecture on the history of Russian electroacoustic music and the concert of Russian electroacoustic music at CCRMA, Stanford University, California

**1994** - Organization and coordination of the conference "*Music Technology and Post Modernism in Russia Europe and the Americas*". International Conference at Bellagio Study and Conference Center (Rokefeller Foundation), Italy

**1994** - Visiting scholar at CCRMA, Stanford University, California.

**1993** - Visiting Professor at Bregman Studio, Dartmouth College, Hanover, New Hampshire, USA

## SELECTED EXHIBITIONS

**2010, February-April.** *GENERATION\_Z* exhibition (extended) in the Petropavlovskaya Castle, St.Petersburg (in preparation). Organized by Pro Arte Institute, St.Petersburg.

[http://asmir.info/genz\\_e.htm](http://asmir.info/genz_e.htm)

**2010, January.** *GENERATION\_Z* exhibition at the Central House of Painters, Moscow.

**2009, September-October.** *GENERATION\_Z* exhibition at the 3-rd Moscow Biennale of Contemporary Art. Investment in Art Club, Leontievsky per. 2a/2, Moscow.

**2008, September – 2009, January** - *SOUND\_in\_Z* exhibition in the framework of the project "From a Revolution to Another" curated by Jeremy Deller (UK) organized by the Palais de Tokyo, Paris, France. <http://asmir.info/soundz.htm>

**2008, September – 2009, April** - Historical instruments from A. Smirnov's collection are exhibited at the exhibition "Forgotten Future#1, Magical Sound Machines" at the Kulturfabrik, Hainburg. <http://www.ima.or.at/klangmaschinen/db/?lang=en>. IMA Institute, Austria.

**2006** - *Shadows II Installation* at Klangturm St. Pölten, NÖ Landesmuseum, Austria.

**2005** - *GRAZ MOCKBA GRAZ Exhibition & Workshop* at DOM IM BERG, Graz, Austria. Kunst und wissenschaft zwischen freiheit und terror. Mit Theremin Center Moskau, Informationsdesign FH Joanneum, Institut für Elektronische-Musik und Akustik Graz. Andrei Smirnov's Workshop: *Lev Termen - inventor, artist, spy: on the track of a visionary.*

**2002** - Center for Contemporary Arts, Moscow. *The Shadows* interactive installation by Elisabeth Schimana and Andrei Smirnov.

**2002** - *Theremin Park Exposition*. In collaboration with Elisabeth Schimana. Central House of Painters, Moscow.

**1998** - *THEREMIN (c)HA(o)US(e)*. Musical Installation, based on 11 theremins and acoustical feedbacks at the Krasnoyarsk Museum for Contemporary Arts in cooperation with the ART-Blia Group. Krasnoyarsk, Siberia, Russia.

## FESTIVALS PRODUCED BY A. SMIRNOV SINCE 1993

**2005** - *Acousmatica & Interaction* Festival and workshops. Pro Arte Institute, St.Petersburg.

**2004** - *AlterMedium04* in the framework of ALTERNATIVA 04 Festival.

**2004** - *Acousmatica Festival*. Pro Arte Institute, St.Petersburg.

**2003** - *AlterMedium 03 Festival "Invisible Cities"*. Ural State Conservatory, Ekaterinburg.

**2003** - *AlterMedium 03 Festival "Invisible Cities"*. Cultrural Center DOM, Moscow.

**2002** - *AlterMedium 02 International Festival "Well Tempered Noise"*. AlterMedium, Ekaterinburg.

**2002** - *AlterMedium 02 International Festival "Well Tempered Noise"*. With participation of Jon Appleton, Dave Philips & Ohne, Seppo Gruendler, Elisabeth Schimana, Alien Productions, Andrei Smirnov, Yuri Spitsin, Vera Ivanova, Netochka Nezvanova, Ailet Harpas, Daniel Shorno, Hans Christian Gillie, Rob Mullender, Cultrural Center DOM, Moscow.

**2001** - *AlterMedium 01 International Festival "The Cinema for Ears"*.

**2001** - International Festival "Actions/Interactions'2001". Theremin Center presents the program of electroacoustic music, video-art and musical performance from Russia, France, Holland, New Zealand.

**2001** - The Theremin Center and LIGYS Studio, Paris presented "Actions/Interactions" *Electroacoustic Music Program* in the frame of the Moscow Autumn 2001 Festival.

**2000** - International Contemporary Music Festival Moscow Autumn' 2000. The Theremin Center and Moscow Contemporary Music Ensemble presented the program of Electroacoustic Music "Sound Substance Cognition".

**2000** - *Alternativa Alt2K* International New Music Festival. The Theremin Center presented the international program of Electronic & Computer Music, Videoart & Musical Performance from Russia, Italy, Austria.

**1999** - Theremin Center presented the program of Electroacoustic Music at the *MIDI Alternativa'999* - International New Music Festival

**1998** - Alternativa' 98 International New Music Festival. "*Electronic Atlantida*". Theremin Center presented the program of Electronic & Computer Music, Videoart & Musical Performance.

### **SOFTWARE DEVELOPMENT (in cooperation with Sergey Smirnov)**

**2009** – Programming for the new generation of multichannel fully digital *theremin-sensors*.

**2005-2009** - Programming of Atmega based USB interfaces for the theremin sensors (*t-sensors*).

**2008-2009** - *Digital Theremin* and *USB-Theremin* development and programming.

**2005** – *USB Theremin-Sensor* libraries for MAX/MSP and PD, oriented on motion tracking and development of interactive installations and performances.

**2004** - *autoscale* library for MAX/MSP and PD to solve the problem of scaling and tuning of long term installations based of theremin-sensors.

**2003** - *t-sensor* library for MAX/MSP and PD to process and utilize the theremin-sensors control data.

### **HARDWARE DEVELOPMENT**

**2009** – New generation of multichannel digital *theremin-sensors*.

**2005-2009** - Digital *USB theremin-sensors* and related instruments and installations.

**1999-2005** - The series of analog *theremin-sensors*, based on classical theremin heterodyning principle with a newly developed circuitry to produce super sensitive control.

**2004** - *Laser monitoring system*, based on the same principle as the famous "Buran" eavesdropping system, developed by Leon Theremin in 1945. Being used as a musical tool, this method gives us unique opportunity to listen to inaudible vibrations in all kinds of reflecting media: membranes, liquids, solid objects, water surfaces, bubbles, plastic bags, piano decks, wine glasses etc. to produce unusual feedbacks, cross-media interferences and interactions.

**1998-2004** - Small series of analog *THEREMINS*.

**1985/2000** - *Brain wave biofeedback system* based on specially developed bio-amplifiers and MAX/MSP algorithms, created for the *Brain Jazz* performance, where performer controls the development of the musical material by means of mental and emotional state as well as the movement of eyes and mimic of the face.

**1991-1992** - 16-bit digital multi-effects processor MEGAVERB. ROSTEX Company, Moscow

**1989-1990** - Sampling digital delay lines with MIDI synchronization. Private Studio, Moscow

**1990** - Wireless microphones for Stage. Chet-Nechet Theatre, Moscow

**1988** - Percussion - sampler. ROSTEX Company, Moscow.

**1987** - MIDI - sampler. Private Studio, Moscow

**1986** - Percussion Synthesizer (Underground Company, Moscow).

**1983-1986** - Special computer music peripherals for PDP, IBM-compatibles, MSX, Atari ST Computers.

- Multichannel D/A Converter for Computer-based Analog Sound Synthesizer for PDP-11 Computer.

- Noise Sound Synthesizer for Biofeedback System including the software for PDP-11 Computer.

- Low noise portable 4-channel bio-amplifier for EEG biofeedback system.

- Low noise portable bio-amplifier for skin resistance biofeedback system.

- Institute of Psychology, Academy of Sciences, USSR, 1985

**1982-1983** - Experimental sound spatializing system (Audio-Visual Group at Astronautics Memorial Museum, Moscow).

**1982-1989** - Series of digital delay lines. (Underground Company. Since 1989 - MIDITON Company).

**1982** - Series of analog vocoders.

**1982** - Series of analog Synthesizers (Underground Company).

**1980** - Analog studio Sound Synthesizer "System1".

## SELECTED WORKS

**2008-2009** – Series of 3D-THEREMIN performances.

**2006-2009** – Series of the CybOrk performances.

**2006** - *SHADOWS II interactive installation*. In collaboration with Elisabeth Schimana at Klangturn, St.Poelten, Austria, 2006

**2005** - *WINDOWPANE THEREMIN INSTALLATION* for laser monitoring system. Premiere: Dom im Berg, Graz, 2005.

**2005** - *LASER BUGGING* performance for laser monitoring system. Premiere: Dom im Berg, Graz, 2005.

**2005** - *VETRO - TOUCHLESS*. Interactive installation and performance for theremin sensors and Elena Golovasheva (dance). Premiere: ESC Gallery, Graz, Austria, 2005

**2003** - *THE TRUTH ABOUT DON KIHOT AND SANCHO*. Live computer music and sound design for theatre performance directed by Alexander Ponomarev. OKOLO Theatre, Moscow, 2003.

**2003** - *XYZ for Cordula Boezsce* (flute), theremin sensors and MAX/MSP based interactive system. Premiere: AlterMedium Festival, Ekaterinburg, Russia, 2003.

**2002** - *XOX* - Interactive performance for two composers and two programmers.

In collaboration with Sergey Smirnov (C++ programming). Premiere: Moscow, AlterMedium Festival, 2002.

**2002** - *SHADOWS*. Interactive installation. In collaboration with Elisabeth Schimana. Center for Contemporary Arts, Moscow, 2002.

**2001** - *SITTING IN MY CHAIR*. Interactive performance. MAX/MSP/NATO programming and instrumental design in collaboration with Elisabeth Schimana and Yuri Spitsin. Premiere: MUSIKPROTOKOLL Festival, Graz, Austria, 2001.

**2002** - *CORRELATIONS*. Interactive performance for two dancers, two theremin-sensors and MAX/MSP based interactive system. In collaboration with Sergey Smirnov (C++ programming). Premiere: AlterMedium 02 Festival, Moscow, 2002.

**2001** - *SONOGRAMS*. Computer-generated tape. Premiere: Moscow Forum Festival, 2001.

**2001** - *BRAIN GAIME*. Interactive installation for one soloist, one programmer, two assistants, brain-wave biofeedback system, MAX/MSP based interactive computer system. Premiere: Malevitch Festival, Cultural Center DOM, Moscow, 2001.

**2001** - *BRAIN JAZZ*. The series of interactive performances for the soloist, programmer, two assistants, brain-wave biofeedback system and MAX/MSP based interactive computer system. Premiere: Alternativa Festival, Union of Composers, Moscow, 2001.

**2000** - *SONOCHRONOTOP*. Series of Interactive performances for Dmitry Kalinin (schakuhachi flute), theremin-sensors and MAX/MSP based interactive system. In collaboration with Sergey Smirnov. Premiere: Alternativa Alt2K Festival, Union of Composers, Moscow, 2000.

**1999** - *SHAMAN AND SNOWMAIDEN*. Live electronic music and sound design for theatre performances directed by Alexander Ponomarev, based on "Snow-maiden" by N.Ostrovsky and "Snezhimochka" by V.Khlebnikov. Premiere: RAMT Theatre & Chet-Nechet Theatre, Moscow, 1999.

**1998** - *THEREMIN (c)HA(o)US(e)* Installation for 11 theremins at The Museum of Contemporary Arts, Krasnoyarsk. In collaboration with Michael Lobazov and Art-Blia Group. Krasnoyarsk, Siberia, 1998.

**1997** - *CURVED MIRRORS*. The cycle of interactive music and improvisations. Together with Yuri Spitsin (power glove, MAX programming) and Konstantin Adjer (klarinet, sax, trumpet). Premiere: Alternativa Festival, Union of Composers, Moscow, 1997.

**1996** - *SLEEPER*. Sound design and music for radio drama, based on stories by Ray Bradbury. Artistic Director - Alexander Ponomarev. Premiere: Radio Russia, 1996.

**1995** - *VIRTUAL SONIC SCULPTURES*. Interactive Music and Installations in collaboration with Yuri Spitsin in the frame of international symposium Sculpture in the Park, Pereslavl Zalesky City, August-September, 1995.

**1995** - *VIRTUAL SONIC PAINTING*. Multimedia performance in collaboration with Yuri Spitsin, Andrey Demidenko, painter Nikolay Shirokov, Premiere: The 3<sup>rd</sup> Reality Forum, St.Petersburg, 1995

**1993** - *MADAM LENIN* by Velimir Khlebnikov. Sound design for electroacoustic version. Premiere: Moscow, 1993. Published on CD in 1995.

**1993** - *ZANGEZI* - Radio Version, Premiere: Radio Russia, Moscow, 1993.

**1992** - *ZANGEZI* by Velimir Khlebnikov. Music and sound design for theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1992.

**1991** - *ETUALE SCHOOL* by Nikolai Evreinov. Music and sound design theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1991.

**1991** - *GOD PERHAPS AROUND* by A.Vedensky. Music and sound design for the theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1991.

**1990** - *DON JUAN* by Vladimir Kazakov. Music and sound design for the theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1990.

**1989** - *KUPRIANOV AND NATASHA* by Alexander Vedensky. Music and sound design for the theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1989.

**1989** - *ELISABETHA BAM* by Daniel Charms. Music and sound design for the theatre performances directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1989.

**1987** - *NASTOJASHEYE* (The Present) by Velimir Khlebnikov. Music and sound design for theatre performances, directed by Alexander Ponomarev. Chet-Nechet Theatre, Moscow, 1987.

**1987** - *MIRIAM* by V.Volkov. Music for theatre performances directed by Alexander Gorban. Theatre Workshops, Moscow, 1987.

**1982** - Electronic metronomes part for the 1-st performance of "Lebenslauf" fur 4 Metronome, 3 Schiagzeuger und Klavier by Alfred Schnittke. Premiere: House of Painters, Moscow, 1982.

**1980-1985** - Early electronic music works. Private studio

### **SELECTED RECORDINGS**

1. *Moscow Laptop Cyber Orchestra Live At NCCA*: mikroton recordings :: mikroton digital, 2009
2. *Ex Eu*. Label: Salon Elise, 2001
3. *Touchless*. International Theremin Orchestra. Kunstradio Edition, LC 566, 1998
4. *Madam Lenin*. Electroacoustic Music from the Theremin Center. Label: Solyd Records, 1995

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1. A.Smirnov. The book "*SOUND in Z. Forgotten experiments in sound art and electronic music in early 20th century Russia*". Walther Konig, Cologne. In preparation for publication. (in English)
2. A.Smirnov. The article "*Boris Yankovsky. Graphical Sound and Audio Computing in 1930-s*" in the collection "Klangmaschinen zwischen Experiment und Medientechnik". Austria. (In English and German). In preparation for publication.
3. A.Smirnov. The article "*Notation and Visual Music. Dialogue with Tim Boykett*" in the collection "Klangmaschinen zwischen Experiment und Medientechnik". Austria. (In English and German). In preparation for publication.
4. A.Smirnov. "*GENERATION Z. Forgotten experiments in sound art and electronic music in early 20<sup>th</sup> century Russia*." The article in the catalogue of the 3-rd Moscow Biennale of contemporary art. Moscow, 2009 (in both Russian and English).

5. The book *“Zauberhafte Klangmaschinen. Von der Sprechmaschine bis zur Soundkarte”*. Schott Music GmbH & Co. KG, Mainz, 2008 (in both English and German).

The series of chapters:

*Touchless Music. Theremin*. (pp. 134-136);

*Dancing in Tune. Terpsitone*. (pp. 137-139);

*Switch on, Bob. Moog Modular Synthesizer*. (pp. 176-178);

*In the Beginning was the Lunch Break. Minimoog D*. (pp. 179-181);

*Rhythm' n' Light. Rhythmicon*. (pp. 188-190).

6. A.Smirnov, L. Pchelkina. *1917-1939. Son Z / Sound in Z*. PALAIS / Palais de Tokyo Magazine, Paris, 2008, №7. pp. 66-77 (in both English and French).

7. A.Smirnov. *Eavesdropping the Universe*. SPECTROPIA. Illuminating investigations in the electromagnetic spectrum. Acoustic Space. Collection of scientific writings and artistic research. RIXC. Riga & MPLab of Liepaja University. 2008. pp. 89-94 (English); pp. 94-99. (Latvian).

8. A.Smirnov. *Lev Theremin: Alien in a Sandbox*. CONSPIRE. Transmediale parcours 1. Berlin 2008. pp. 108-122 (German); pp. 124-133. (English).

9. A.Smirnov. *Поэзия чисел и резонансов. Электроакустическая музыка в США*. (The Poetry of Digits and Resonances. Electroacoustic Music in USA). The collection “Музыка США. Вопросы истории”. The Publishing Center “Moscow Conservatory”, 2008. pp. 153-171 (Russian).

10. M.Voinova, A.Smirnov. *Theremin Center at Moscow Conservatory*. Contemporary Music Tribune, 2005, #2, p.33-37 (Russian).

11. A.Smirnov, I.Kefalidis, V.Tsenova. *Electronic Music?* Contemporary Music Tribune, 2005, #2, p. 20-31 (Russian).

12. A.Smirnov, V.Tsenova. *Электроакустическая музыка* (Electroacoustic Music). A chapter for the textbook “The Theory of Contemporary Composition”, Moscow. Music 2005, pp.505-547. (Russian).

13. A.Smirnov. *Proto-Digital Tools in Post-Digital Culture*. «Digital3» seminar proceedings, Association. Muu, Helsinki, 2004 (English).

14. A.Smirnov. *Sound Art – from Russian Futurists to Spectral Music*. CD from Contemporary Art Festival, named for N.Roslavets and N.Gabo, RAGD Foundation, Briansk , 2003 (Russian).

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21. A.Smirnov. *Bio-Music of Cyber-Space*. "Virtual Worlds" magazine, 1995, # 1(2), p.44-49 (Russian).
22. A.Smirnov. *Vocoder*. "Radio" Magazine, 1984, # 8, p.61, # 9, p.50 (in Russian).
23. *High speed stroboscope apparatus for research and analysis of dynamic properties of cylindrical magnetic bubbles and magnetic-bubble driver circuitry*. Article in the collection "Physical properties and applications of Magnetic Bubbles in electronic industry", Moscow, 1979, p.39-40 (in Russian).