

Forwards to the Past

It is not a secret that the official history of Soviet culture in general and musical technology in particular is a surrogate based on officially preselected facts and artificially invented cultural trends. Much information was suppressed for political reasons, forgotten or simply not published for one reason or another, and there are large sections of history that have disappeared, remained hidden or that have been ignored. The real culture comes from numerous representatives of the trends that came

to a halt in Stalin's era in the 1930s, even though they were not really accepted by the official history.

Materials and papers which are collected in the Theremin Center's archive date back to the late 19th Century. We keep documents relating to the whole history of Russian musical technology. Most of these documents were written off, discarded and thrown out of the official Conservatory's archive in the 1960-80s. Many documents have been

The workshop on modular synthesizers, conducted by Dmitry Morozov (::vtol::) and Alexander Pleninger at the Theremin Center, Moscow, 3.04.2010.



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discovered in private archives. The entire collection changes our view on the history of Russian musical technology in the past century.

Many forgotten facts and technological ideas are still valid and urgent. It is not surprising that we use them as an illustration for many most recent trends and technical concepts during our lectures. At the moment when an idea is born, it always appears in the most terse and clear form. It shows the most distinct vector of the inventor's intention directed towards the future development. Forwards to the past, backwards to the future – this is our favorite motto.

Acousmatic Studies and Workshops

Our theoretical courses are accompanied by workshops involving an aural-based analysis, improvisation, and structured performance, providing students with a practical basis in musical composition. The series of practical acousmatic studies on sound transformations and composition are primarily focused on the development of the spectromorphological approach to musical composition, exploring in detail the view of musical form as an organic structure. As Jonty Harrison observed in his lecture at the SEAMUS Y2K conference: 'Architectonic structure is built on the quantifiable distances between musical events (in all parameters), whereas organic structure explores the qualitative

evolution, the spectromorphology of the events themselves. [...] I should like to challenge this view of music, offering instead organic, qualitative criteria for musical construction, based on the perceptual realities to be found in sound material itself – and this is the precise basis of *musique concrète*’.

Special attention is paid to the analysis of the spectral morphology of different sounds by means of analysis of sonograms as well as special studies on sound synthesis and transformations by means of graphic editing of the sonograms in Photoshop and similar graphical editors.

The recommended cross-platform free and/or open-source software for studies:

Audacity – sound wave editing and multitrack editing.
Reaper – multitrack editing and automation.
BW (win) – (Bitmap/waves) – spectral analysis and resynthesis.
ARSS – The Analysis & Resynthesis Sound Spectrograph.
Soundhack (mac) – classical sound processing program.
 Convolutions, spectral mutations, phase vocoder etc.
Hog (win) – convolutions, vocoder etc. Similar to soundhack.
Paulstretch – extreme time stretching.
Pure Data – real-time graphical programming environment.
 Interaction.
Spear – Sinusoidal Partial Editing Analysis and Resynthesis.
 Various free plugins by Chris Penrose, Michael Norris etc.

Building the camera while making the film

The workshops on creative technologies in music are oriented towards sound and media artists as well as composers and musicians involved in contemporary music, particularly – those interested in sound art and interactive systems, musical technology in general and unknown history. We conduct various DIY and Circuit Bending workshops, encouraging the interaction between creativity and the development of technology throughout all phases of project development.

The Theremin Sensors Workshop offers a hands-on introduction to interactive systems based on the sensor technology for measuring and monitoring human motion, air and water flows, variations in electrical and mechanical features of different objects, etc. During the workshop participants develop and realize their ideas regarding different sorts of pickups, antennas and conductive media (like metal objects, foil, water, human body, plants, metal threads, thin plastic films with metallization, all sorts of Christmas stuff etc.) which could be useful in the production of different sorts of interactive audiovisual installations and motion capturing systems.

The theoretical introduction accompanying a workshop gives a detailed technical overview of sensor technology and construction, as well as their artistic and musical applications – forgotten, but very useful concepts and ideas, condensed historical content, mostly related to almost forgotten historical facts.

Good Vibrations Workshop offers a hands-on introduction to laser monitoring systems, based on the same principle as the famous “Buran” eavesdropping system, developed by Leon Theremin in 1947 for KGB, in which he used a directed microwave radiation for monitoring the hidden acoustical vibrations of the windowpane. The same principle can be realized by means of laser technology. One can monitor and listen to inaudible vibrations in all kinds of reflecting media: membranes, liquids, solid objects, the water surface, bubbles, plastic bags, piano decks, wine glasses etc., in order to produce unusual feedback, cross-media interferences and interactions.

The theoretical introduction accompanying a workshop gives an overview of different researches into small scale vibrations using laser monitoring systems, thermo-delays, interferometers, and other tools for measuring and monitoring vibrations of sound waves, light beams, temperature, air flows, etc.

The subjects to learn:

- the physical nature of processes which could carry useful vibrations;
- how to detect and measure them;
- what information can we get and how to deal with it;
- a historical overview of different approaches and applications;
- basic principles of operation and construction of laser monitoring systems;
- artistic and musical applications of laser monitoring systems;
- ways to integrate them in musical performance, dance, video, sound and art installations.

Laptop Cyber Orchestra

One of the most successful educational projects held as part of the workshops on creative technologies in music, which were developed at the Theremin Center, is the Moscow Laptop Cyber Orchestra <CybOrk>, which was founded in May, 2006 as a sort of “playground” for sound artists and programmers. It is an ‘open-source’, improvised and highly integrated sonic environment, a large net of spatially separated mobile workstations, integrated into the wireless network. It explores all sorts of interaction between players, algorithms, sensors, environments and audiences. Although Cybork programs may contain pre-composed and structured music, the core esthetics is based on the idea of Cyber-Jam – a free improvised session, depending on the exploration of some predetermined



Moscow Laptop Cyber Orchestra. Abrakadabra Festival, Moscow, 2007.

common algorithms, when no other formal sonic, compositional or genre boundaries are fixed, and no rules of action are applied. There is only an entry point that triggers the adventurous search for constantly changing identity evolving in common time and place, resulting in self-generative and self-organizing sounding and visual textures folding and unfolding, waning and reappearing, producing a rich palette of clippings, raw digits, dense overdriven noises, deep drones or skipping solos. The CyberJam sessions taking place at the Theremin Center are free and open to any musician and artist interested in collaboration.

Andrei Smirnov

Marek Chołoniowski

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The Electro-acoustic Music Studio of the Academy of Music in Kraków

The Electro-acoustic Music Studio of the Academy of Music in Kraków was opened in 1973 as Poland's first educational electronic music studio and the second (after Warsaw's Experimental Studio of the Polish Radio) centre for electro-acoustic music in Poland. The studio was originally equipped mostly with analogue systems by the British company EMS. The classes in the Studio were initiated and designed by the Studio's founder and first director, Józef Patkowski, in 1974: a two-year course in electronic music for students of composition, conducting and music theory. In the mid-1990s, the syllabus was extended so as to include an advanced course of computer music and computer solfeggio. The studio frequently produced music for films, theatre, radio, and television.



In 1976 the Studio initiated a concert series entitled “Electronic Music”, which presented the greatest works of electro-acoustic music from all over the world.

1989 was a breakthrough for the Studio, as the American Fulbright Foundation launched its programme in Kraków’s Academy of Music. Within the next eight years, a complete Macintosh system was installed by five eminent computer music experts. In 1991 the Studio together with Warsaw’s Academy of Music, initiated and co-organised Courses of Computer Music. In 1995, the Studio launched a cycle of lectures and seminars on “Audio Art”, and in 2000 – a concert and lecture series entitled “Education and Performance”, presenting the most important artistic projects based on modern technology.

In 2000, the Studio moved to its new seat in the new building of the Academy. The new Studio consists of three integrated rooms and fulfils many of the functions of a modern computer studio. An important part of the Studio’s equipment has been donated by Berklee College of Music in Boston.

In 2000, the Studio co-organised the Parisian IRCAM’s workshops “Acanthes 2000” – the joint project of three European Capitals of

Culture: Kraków, Helsinki and Avignon. In 2001, a Multimedia Studio was added for the purpose of conducting research, educational and artistic work making use of the new media: video, the Internet, and multimedia. Since 2008, the Academy of Music in Kraków also has its own Recording Studio which specialises in recordings of classical music.

The Electro-acoustic Music Studio co-operates with numerous centres of computer music and multimedia art worldwide. The Studio’s team consists of:

Marek Chołoniowski: studiomch@wp.pl (Director),
 Magdalena Długosz: zbdlugos@cyf-kr.edu.pl,
 Barbara Zawadzka: zbzawadz@cyf-kr.edu.pl,
 Mateusz Bień: domnie@ceti.pl,
 Michał Pawełek,
 Krzysztof Knittel,
 Marcin Pączkowski,
 Marcin Strzelecki.

The Studio co-operates with the Polish Society for Electroacoustic Music PSeME (Polish section of the International Confederation of Electroacoustic Music CIME/ISEM with seat in Bourges) founded in 2005 by Marek Chołoniewski. Among the important projects PSeME projects we should list the installation *IterEter*, commissioned and presented during the Warsaw Autumn Festival in September 2009 in EMPIK Salon, Marszałkowska St. in Warsaw and during the Audio Art Festival in Kraków in November 2009. The installation is now available at the Society's website www.pseme.com, which contains more than 500 Polish electro-acoustic compositions and video projects. The installation is a special educational project available to the general public, similarly to the installation *qub* presented in 2010.

An important example of net art is the series of urban installations *GPS-Art*, presented during the last 10 years. The most recent project in this series, consisting of a performance-concert and an audiovisual installation, was presented on 10th December 2010 at Pecs University in Hungary during the conference Music in a Global Village.

Since 1993, the Kraków-based Art Association Muzyka Centrum – www.muzykacentrum.krakow.pl – has conducted the International Workshops for Contemporary Music Kraków/Stuttgart, which include courses for composers, instrumental workshops and intensive courses of computer music. Since 2005, this Association is a partner in international artistic projects, including such important educational projects as:

- the European Course for Musical Technologies, initiated by IRCAM in Paris,
- Integra coordinated by Birmingham University.

At present, a two-year programme of postgraduate studies for a master's degree (European Masters for Musical Composition and Technologies) is being launched. The programme is coordinated by Birmingham University, and the Polish partners include the academies of music in Kraków and Wrocław.

Marek Chołoniewski



SCHEDULE OF ALL EVENTS

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Wednesday, 22 September 2010

09.00 - 18.00 **Corridor** Registration Desk open
 09.30 - 10.00 **"Gama" Club** *WakeUp-Coffee*

10.00 - 22.00 **Courtyard** Installation: *qub*

10.00 - 18.00 **Corridor** Building Up & Opening ArtMusFair Exhibition
 10.00 - 13.30 **Senate Hall** IAMIC Board Meeting [closed session]
 13.30 - 15.30 **"Gama" Club** Official Opening of ArtMusFair 2010 & Live Music
 15.30 - 18.00 **Melcer Hall** "Creators Network": Conference & Inauguration

16.00 - 17.00 **Moniuszko Hall** Concert I: "Norwegian Electroacoustic Music"
 18.00 - 19.00 **Szymanowski Auditorium** Concert II: "Electroacoustic Free Improv"
 19.30 - 21.30 **Concert Hall** Concert III: "Electronics Meets Challenges of the 21st Century"
 21.30 - 22.30 **Courtyard** Vernissage of Installation & Reception

22.30 - 24.00 **"Skwer" Club**
Krakowskie Przedmieście 60a ArtMusFair Club & Late Night Music: Concert IV: "Chopin Mix"

Thursday, 23 September 2010

09.00 - 18.00 **Corridor** Registration Desk open
 09.30 - 10.00 **"Gama" Club** *WakeUp-Coffee*

10.00 - 22.00 **Courtyard** Installation: *qub*

10.00 - 18.00 **Corridor** ArtMusFair Exhibition
 10.00 - 13.30 **Senate Hall** ECF Board Meeting [closed session]
 10.00 - 13.30 **room 301** FFACE Board Meeting [closed session]
 10.00 - 13.30 **room 303** APCOE Board Meeting [closed session]

10.00 - 11.30 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century"
 Composers' Panel 1

11.30 - 12.00 **"Gama" Club** *Coffee Break*
 12.00 - 13.00 **Concert Hall** Re:New Music: Open Rehearsal, Meeting with Composer
 Kwartludium+, Gilles Gobert

12.00 - 13.30 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century":
 Composers' Panel 2

13.30 - 14.30 *Lunch Break*
 14.30 - 16.00 **Melcer Hall** "Authors Rights: Between EU Directive
 & Cultural Flatrate"
 Panel

14.30 - 16.00 **Szymanowski Auditorium** "New Music for New Players – Contemporary Works for
 Beginners" Discussion

15.00 - 16.00 **Concert Hall** Re:New Music: Open Rehearsal, Meeting with Composer
 Kwartludium+, Jean-Pierre Deleuze

16.00 - 16.30 **"Gama" Club** *Coffee Break*
 16.00 - 19.00 **Senate Hall** ECSA General Assembly [closed session]

16.30 - 18.00 **Melcer Hall** Project Stage 1: Contemporary Music
 Theatre; Presentation

19.30 - 21.30 **Concert Hall** Concert V: "Re:New Music Presents Kwartludium+"

Friday, 24 September 2010

09.00 - 18.00 **Corridor** Registration Desk open
 09.30 - 10.00 **"Gama" Club** *WakeUp-Coffee*

10.00 - 22.00 **Courtyard** Installation: *qub*

10.00 - 18.00 **Corridor** ArtMusFair Exhibition

10.00 - 12.30 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century"
Conference session 1: Listening & Relating to Electronic Music

10.00 - 12.30 **Melcer Hall** "Radio&Media: Off-Wire for Contemporary Music?"
Panel

11.00 - 11.30 **"Gama" Club** *Coffee Break*

12.00 - 13.00 **Concert Hall** Re:New Music: Open Rehearsal and Meeting with Composer
Orkiestra Muzyki Nowej,
Osmo Tapio Räihälä

13.00 - 14.00 **Foyer** Live Stage 2

13.00 - 14.00 *Lunch Break*

14.00 - 16.00 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century"
Conference session 2:
Technological Innovations

14.00 - 16.00 **Senate Hall** ArtMusFair Workshop: Pushing Contemporary Music Forward

15.00 - 16.00 **Concert Hall** Re:New Music: Open Rehearsal, Meeting with Composer
Orkiestra Muzyki Nowej, Berislav Šipuš

16.00 - 16.30 **"Gama" Club** *Coffee Break*

16.30 - 18.00 **Melcer Hall** Project Stage 2:
Presentation of ECCO

18.00 - 19.00 **Melcer Hall** Live Stage 3: Zoran Šćekić,
Microtonal Concert & Presentation
of GSS Scale System

19.30 - 21.30 **Concert Hall** Concert VI: "Re:New Music Presents
Orkiestra Muzyki Nowej"

22.30 - 24.00 **"Skwer" Club**

Krakowskie Przedmieście 60a ArtMusFair Club & Late Night
Music: Concert VII: "Norwegian
Noise"

Saturday, 25 September 2010

09.00 - 16.00 **Corridor** Registration Desk open

09.30 - 10.00 **"Gama" Club** *WakeUp-Coffee*

10.00 - 16.00 **Courtyard** Installation: *qub*

10.00 - 16.00 **Corridor** ArtMusFair Exhibition

10.00 - 12.30 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century"
Conference session 3: Musical
Innovation and the Changing
Role of Studios and Festivals

11.00 - 11.30 **"Gama" Club** *Coffee Break*

12.00 - 13.00 **Foyer** Live Stage 4: Máté Hollos,
Presentation of Hungaroton

13.00 - 14.00 *Lunch Break*

14.00 - 16.00 **Szymanowski Auditorium** "Electronics Meets Challenges of the 21st Century"
Conference session 4: Electronics
in Music Education

16.00 - 17.00 **Concert Hall** ArtMusFair Warsaw 2010 Closing
Ceremony

17.00 - .00 **"Gama" Club** ArtMusFair Milan 2011 Preview
Closing Reception

19.30 - 21.00 **National Philharmonic** Concert VIII: "Warsaw Autumn"
Festival Final Concert
by special invitation only

22.00 - 01.00 **National Philharmonic** "Warsaw Autumn" Farewell Party
by special invitation only

Sunday, 26 September 2010

09.30 - 10.00 **"Gama" Club** *WakeUp-Coffee*

11.00 - 13.00 **Melcer Hall** ECF General Assembly
[closed session]





OFFICIAL OPENING









MEETINGS & DISCUSSIONS



















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