



## **Program**

**of the IEEE International Conference**

**«Video and Audio Signal Processing in the Context of  
Neurotechnologies»**

**SPCN-2017**

**June 26 – June 30  
2017**

**St. Petersburg, Russia**

# Organizing committee

## General Chairs

**Konstantin Glasman**, *IEEE Consumer Electronics Society Video/Multimedia Chair; St. Petersburg State Institute of Film and Television, Russia*

**Yuri Shelepin**, *Pavlov Institute of Physiology, St. Petersburg, IEEE Brain Initiative, Russia*

## Organizing committee

**Elena Yakimova**, *Pavlov Institute of Physiology, Russian Academy of Sciences, IEEE Brain Initiative, Russia*

**Evgeny Shelepin**, *Pavlov Institute of Physiology, Russian Academy of Sciences, IEEE Brain Initiative, Russia*

**Evgenia Grinenko**, *St. Petersburg State Institute of Film and Television, IEEE Brain Initiative, Russia*

**Konstantin Shelepin**, *Neuroiconics-Neuromechanics Co. Ltd., St. Petersburg, IEEE Brain Initiative, Russia*

**Sin Kuen Hawkins**, *Project Manager, IEEE Brain Initiative, USA*

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**Konstantin Glasman**, *IEEE Consumer Electronics Society Video/Multimedia Chair; St. Petersburg State Institute of Film and Television, Russia*

**Narisa Nan Chu**, *CE Soc Representative to IEEE Brain Initiative & Sensors Council, USA*

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**Olga Vakhrameeva**, *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg, Russia*

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**Nikolay Krasilnikov**, *St-Petersburg State University of Aerospace Instrumentation, St. Petersburg, Russia*

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**Sebastian Moritz**, *Chairman of the Board of Trustees, St. Petersburg State Institute of Film and Television, Russia*

**Martin Salter**, *Educational Foundation of the International Association of Broadcasting Manufacturers (IABM), UK*

**Stefan Mozar**, *Elected Adcom Member of IEEE Broadcast Technology Society Administrative Committee (IEEE BTS AdCom), Australia*

Working languages: Russian, English

## Invited Speakers



***Narisa Nan Chu***

*CE Soc Representative to IEEE Brain Initiative & Sensors Council, USA*

**From neutrons, electrons, to Neurons**



***Alexander Shepovnikov***

*Professor, Honored Worker of Science of the Russian Federation, Sechenov institute of evolutionary physiology and biochemistry Russian academy of sciences, St. Petersburg, Russia*

**Visualization of interregional relationships  
spatiotemporal organization in EEG-study**



***Nikolay Rosanov***

*Professor, Corresponding Member of Russian academy of sciences, Vavilov State Optical Institute, St. Petersburg, Russia*

**Topological 3D-dissipative optical solitons**

**Monday, June 26, 2017**

**IEEE Brain Data Bank Challenge 2017  
Brain Signal – Visualization & Analytics**

**Day 1**

Location: Pravda Street, 13, St. Petersburg State University of Film and Television

IEEE Brain Initiative moderators: **Narisa Nan Chu (Chair), Malakhova Katerina, Shelepin Evgenii**

- 10.00-10.30 **Registration for Challenge participants**  
10.30-11.00 **Introduction and Team Positioning**  
11.00-13.00 **Tutorials on brain signal database access**  
13.00-14.00 **Lunch**  
13.00-14.00 **BCI headset loans for on-site data collection** (Individual teams can bring their own equipment. Please manage your time limitation)  
15:00 – late **Working**  
night and  
next day 2

**Day 2**

**Tuesday, June 27, 2017**

Location: Makarova emb. 6, Conference hall, Pavlov Institute of Physiology

- 09.00-10.00 **Discussion and preparation for presentations**  
10.00-11.30 **Presentation of the results**  
13.30-15.00 **Judging decision**  
15.00-15.30 **The awards presentation. Winner's reward ceremony**

**Tuesday, June 27, 2017**

**IEEE International Symposium «Video and audio signal processing in  
the context of Neurotechnologies», SPCN-2017**

Location: Makarova emb. 6, Conference hall, Pavlov Institute of Physiology

- 11:30-12:00 **Registration for Symposium participants**  
12:00-12:15 **Symposium Official opening ceremony**  
**Welcome word from organizers**  
**Konstantin Glasman**, Chair, Video/Multimedia Committee, IEEE Consumer Electronics Society, Member of IEEE.tv Advisory Committee,  
**Yuri Shelepin**, Head of the laboratory of vision physiology, Pavlov Institute of Physiology, Russian Academy of Sciences, *IEEE Brain Initiative*  
12:15-12:45 **From neutrons, electrons, to Neurons**  
Narisa Nan Chu, CE Soc Representative to IEEE Brain Initiative & Sensors Council, USA  
12:45-13:30 **Visualization of interregional relationships spatiotemporal organization in EEG-study**  
Alexander Shepovalnikov, professor, Sechenov institute of evolutionary physiology and biochemistry Russian academy of sciences, St. Petersburg

- 13:30-15:00 **Coffee break & Lunch time**
- 15:00-15:30 **The awards presentation. IEEE Brain Data Bank Challenge 2017 Winner's reward ceremony**
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|-------------|--|
| 15.30-19.00 | Talk session 1<br><b>Signal Processing</b><br>Moderators: Harauzov Alexey, Yakimova Elena <i>IEEE Brain Initiative</i> |
|-------------|--|
- 15:30-15:50 **Extracting the characteristics of event-related EEG dynamics in the visual GO/NOGO task using Parallel Factor Analysis.**  
Ponomarev V.A., Kropotov Yu.D., N.P. Bechtereva Institute of the Human Brain Russian Academy of Sciences, St. Petersburg
- 15:50-16:10 **Measurement and computer animation of phase shifts in EEG**  
Belov D., St. Petersburg State University, Department of psychophysiology, St. Petersburg
- 16:10-16:30 **Justification of the use of empirical mode decomposition for the processing of bioelectrical signals in the time-frequency domain: ECG, EEG, EMG**  
Altay Yeldos, Kremlev Artem, ITMO University, St. Petersburg
- 16:10-16:30 **Coffee break**
- 16:30-16:50 **Latent components of ERPs in Go/NoGo tests**  
Pronina M.V., Ponomarev V.A., Kropotov J.D., N.P. Bechtereva Institute of the Human Brain Russian Academy of Sciences, St. Petersburg
- 16:50-17:10 **Transcallosal neural networks: development and pathologies**  
Krasnoschekova E.I., St. Petersburg State University, St. Petersburg
- 17:10-17:30 **Power and shift invariant detection of dynamically coupled networks (PSIICOS) from non-invasive MEG data**  
Altukhov D, Ossadtchii A, Higher School of Economics, faculty of computer science; center for cognition and decision making; MSUPE, MEG-Center, Moscow
- 17:30-17:50 **Development of the technology of microwave encephalography (MVEG) for the diagnosis of nervous diseases and mental disorders of the human brain, the study of human activity in the norm and the organization of a new type of neuro-computer interface**  
Brusilovsky L, The radio-relay association APORRS, Moscow
- 17:50-18:10 **Development of a method for increasing noise immunity in the filtration of phonocardiograms**  
Aimukhanbetov E., Koishybaev D., Abdulkhairov M., ITMO University, St. Petersburg
- 18:10-18:30 **Peculiarities of understanding texts by students of the third and ninth grades with different levels of intelligence**  
Shvetsova A, St. Petersburg State University, St. Petersburg
- 18.30-18.50 **Noise robust processing of a speech signal in robot control tasks**  
Abdulkhairov M., Aimukhanbetov E., Koishybaev D., Serikkazhieva R., Koishybaev D., ITMO University, St. Petersburg

**Wednesday, June 28, 2017**

**IEEE International Symposium «Video and audio signal processing in the context of Neurotechnologies», SPCN-2017**

Location: Makarova emb. 6, Conference hall

10.30-11.00 **Registration for Symposium participants**

11.00-12.00 **Topological 3D-dissipative optical solitons**

Nikolai Rozanov, Professor, Corresponding Member of Russian Academy of Sciences, Vavilov State Optical Institute, St. Petersburg, Russia

12.00-12.00 Talk session 2

**Artificial neural networks**

Moderators: Bondarko Valeria, Malashin Roman *IEEE Brain Initiative*

12.00-12.20 **Neural networks as a tool for forecasting innovation activity**

Korableva O.<sup>1</sup>, Erofeeva K.<sup>2</sup>, <sup>1</sup>ITMO University, <sup>2</sup>St. Petersburg State University, St. Petersburg

12.20-12.40 **Representation of high-level visual information in biological and artificial neural networks**

Malakhova K., Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

12.40-13.00 **Regularities of animate and inanimate objects in artificial Neural Networks**

Malashin Roman, Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

13.00-13.20 **Modelling of the psychophysical experiments results by neural networks**

Bondarko V.M., Bondarko D.V., Solnushkin S.D., Chikhman V.N., Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

13.30-15.00 **POSTER SESSION PRESENTATION !!!**

TED presentation (in 1 min) of posters

**Coffee break**

15.00-18.00 Talk session 3

**Biological neural networks**

Moderators: Malakhova Katerina, *IEEE Brain Initiative*; Zhukova Olga *IEEE Brain Initiative*

15.00-15.20 **The neural basis for absolute disparity coding in the primary visual cortex**

Alekseenko S., Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

15.20-15.40 **Influence of the foveola size on the characteristics of the evoked potentials in image recognition tasks**

Moiseenko<sup>1</sup> G.A., Vahrameeva<sup>1</sup> O.A., Maltsev<sup>2</sup> D.S., Koskin<sup>2</sup> S.A., Shelepin<sup>1</sup> Y.E., <sup>1</sup>Pavlov Institute of Physiology, Russian Academy of Sciences. <sup>2</sup>Department of ophthalmology; S. M. Kirov Military Medical Academy, St. Petersburg

15.40-16.00 **EEG of rhesus monkeys in resting-state conditions and under photic stimulation**

- Harauzov A., Ivanova L., Varovin I.. Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg
- 16.00-16.20 **Cryptogenic epilepsy. Resting-state functional MRI study**  
Sokolov A.V.<sup>1,2</sup>, Efimtcev A.Yu.<sup>1,2</sup>, Semibratov N.N.<sup>2</sup>, Zhukova O.V.<sup>3</sup>, Vasilyev P.P.<sup>3</sup>, Shelepin Yu.E.<sup>3</sup>, Fokin V.A.<sup>1,2</sup>, Trufanov G.E.<sup>1,2</sup> 1 - Federal North-West Medical Research Centre. 2 - Military Medical Academy n.a. S.M. Kirov. 3- Pavlov Institute of Physiology, Russian Academy of Sciences
- 16.20-16.40 **Fractal analysis in post-processing of tomographic images**  
Marusina M.Ya., ITMO University, St. Petersburg
- 16.40-17.00 **The neural substrates of the auditory biological motion analysis are multimodal areas of cortex**  
Orlov V.A.<sup>1</sup>, Ushakov V.L.<sup>1</sup>, Kartashov S.I.<sup>1</sup>, Gvozdeva A.P.<sup>2</sup>, Andreeva I.G.<sup>2</sup>, <sup>1</sup>NRC "Kurchatov Institute", Moscow, Russia. <sup>2</sup>Sechenov Institute of evolutionary physiology and biochemistry of the Russian Academy of Sciences, St. Petersburg, Russia
- 17.00-17.20 **Algorithms and software for detecting neurons in images of the cat's spinal cord slices**  
Bakhshiev A.V., Mikhailov V.V., Merkulyeva N.S., Veshchitskii A.A., Musienko P.E. The Russian State Scientific Center for Robotics and Technical Cybernetics, St. Petersburg
- 17.20-17.40 **Analysis of the microcirculatory pathway of the macular area of the retina using optical coherence tomography-angiography**  
Maltsev<sup>1</sup> D.S., Kulikov<sup>1</sup> A.N., Vakhrameeva<sup>2</sup> O.A., Burnasheva<sup>1</sup> M.A., <sup>1</sup> Department of ophthalmology; S. M. Kirov Military Medical Academy. <sup>2</sup> Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg
- 17.40-18.00 **Foveola and foveolar avascular zone diameter measurement and comparison using enface images of the fundus and line scans obtained with spectral domain optical coherent tomography**  
Vakhrameeva<sup>1</sup> O.A., Maltsev<sup>2</sup> D.S., Kovalskaya<sup>2</sup> A. A., Sukhinin<sup>2</sup> M.V., Koskin<sup>2</sup> S.A., Shelepin<sup>1</sup> Y.E. <sup>1</sup>Pavlov Institute of Physiology, Russian Academy of Sciences. <sup>2</sup>Department of ophthalmology; S. M. Kirov Military Medical Academy, St. Petersburg

## Poster session

**Wednesday, June 28, 2017**

**14.00 – 15.30**

Location: Makarova emb. 6, Entrance hall, 2<sup>nd</sup> floor

Moderators: Petropavlovskaja E., Vakhrameeva O., *IEEE Brain Initiative*

- Agaeva M. **Echo thresholds in horizontal plane for stationary and moving lagging signals.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
- Aleksandrov A.A., Uplisova K.O., Ivanova V.Yu. **Visually evoked emotional reaction recognition based on physiological tremor acquisition.** *St. Petersburg State University, St. Petersburg*
- Cherenkova L.V., Sokolova L.V. **Features of visual processing in children with atypical development.** *St. Petersburg State University, St. Petersburg*
- Dagaev N., Ossadtchi A.. **Local linearity approach for extracting physiologically plausible interpretations of non-linear decision rules in EEG classification.** *Higher School of Economics, Moscow*
- Gundelakh F., Nagornova Zh., Sonkin K., Chevykalova A., Khomenko Y., Stankevich L.,

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- Shemyakina N. **Application of scalable heterogeneous classifier of EEG patterns of fine motor imaginary decoding for Brain-computer interfaces (BCI).** *SPbSTU, IEPHB RAS, IHB RAS, , St. Petersburg*
- Koshkin Roman, Ossadtchi Alex, Shtyrov Yuri. **Working memory load in simultaneous language interpretation: an erp study.** *Higher School of Economics, Moscow*
  - Kuznetsova Aleksandra, Koshkin Roman, Ossadtchi Alexei. **Localizing hidden regularities with known temporal structure in the EEG evoked response data.** *Higher School of Economics, Moscow*
  - Lamminpiya Aino. **Dependence of the characteristics of eye movements on the spatial-frequency properties of the stimulus.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
  - Lomtadidze O.V., Alekseeva A.S. **Some aspects of emotional response during social advertising's perception by higher-educated students.** *Ural Federal University, Ekaterinburg*
  - Marshev V., Chetverikov A., Kuvaldina M. **Visual statistics in spatially organized sets.** *Department of Psychology, St. Petersburg State University, St. Petersburg*
  - Minkov Vasilii, Smetanin Nikolay, Markina Nastya, Dybushkin Ignat, Ossadtchi Alexei. **Neurophysiological correlates of efficient learning in the neurofeedback paradigm.** *Higher School of Economics, Moscow*
  - Nikitin N.I., Agaeva M.Yu. **Auditory masking of moving sound.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
  - Petropavlovskaja E.A., Shestopalova L.B., Semenova V.V., Nikitin N.I. **Effects of attention and sound motion on the event-related rhythmic activity.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
  - Reshetnikova V.V. (1), Bobrova E.V. (2), Frolov A.A. (3, 4, 5). **The role of psycho-emotional status in the control of BCI systems.** 1 - *St-Petersburg State University (St. Petersburg, Russia)*; 2 - *Pavlov Institute of Physiology (St. Petersburg, Russia)*; 3 - *Institute of Higher Nervous Activity of Russian Academy of Sciences (Moscow, Russia)*; 4 - *Institute of Translational Medicine of Pirogov of Russian National Research Medical University (Moscow, Russia)*; 5 - *Technical University of Ostrava (Ostrava Poruba, Czech Republic)*
  - Semenova V.V., Shestopalova L.B., Petropavlovskaja E.A., Nikitin N.I. **Detection of rising and falling intensity sounds: mismatch negativity and perceptual measures.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
  - Shelepin E., Nemiroskaya K., Zashchirinskaia O. **Understanding of texts with various level of visual complexity among school students with learning difficulties.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg State University, St. Petersburg*
  - Shelepin K.<sup>1</sup>, Sokolov A. <sup>2</sup>, Zhukova O.<sup>3</sup>, Vasilyev P.<sup>3</sup>, Fokin V.<sup>2</sup> Trufanov G.<sup>2</sup> Pronin S. <sup>3</sup>, **Neurophysiology of insight.**, 1 – *Neuroiconics-Neuromechanics Co. Ltd., St. Petersburg, Russia*, 2- *Federal North-West Medical Research Centre*. 3- *Pavlov Institute of Physiology, Russian Academy of Sciences. St. Petersburg*
  - Smetanin Nikolai, Minkov Vasilii, Markina Nastya and Ossadtchi Alexei. **Software for flexible EEG and MEG neurofeedback experiments design, real-time processing and data analysis.** *Higher School of Economics, Moscow*
  - Yakimova Elena, Shelepin Evgeny, Pronin Sergey, Muravyova Svetlana, Shelepin Yuri. **Innovative developments in the field of rehabilitation of patients with schizophrenia.** *Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg*
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**Thursday, June 29, 2017**

**IEEE International Symposium «Video and audio signal processing in the context of Neurotechnologies», SPCN-2017**

Location: Makarova emb. 6, Conference hall

10.30-11.00 **Registration for Symposium participants**

11.00-11.20 Talk session 4

**Cognitive Science and Neurotechnologies**

Moderators: Zashchirinskaia Oksana, Ogorodnikova Elena

11.00-11.20 **Quantative analysys of cognitive and emotional processing in schizopfhrenia active brain**

Murav'eva S.V., Moiseenko G.A., Shelepin Yu.E., Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

11.20-11.40 **Auditory training as a rehabilitation method for patients with hearing and speech impairments**

Ogorodnikova<sup>1</sup> E.A., Baliakova<sup>1</sup> A.A., Zhilinskaia<sup>2</sup> E.V., Pak<sup>1</sup> S.P., Boboshko<sup>2</sup> M.Yu. <sup>1</sup>Pavlov Institute of Physiology, Russian Academy of Sciences, <sup>2</sup>Academician I.P. Pavlov First St. Petersburg State Medical University, St. Petersburg

11.40-12.00 **Peculiarities of perception by first-graders of texts with different formats of visualization**

Koroleva E., St. Petersburg State University, St. Petersburg

12.00-12.20 **Psychophysiological basis of nonverbal communication**

Zashchirinskaia O.V., Nikolaeva E.I., St. Petersburg State University, Herzen State Pedagogical University. St. Petersburg

12.20-12.40 **Decision making about facial expressions in the threshold observation conditions**

Zhukova O.V., Shelepin Y.E., Vasiljev P.P., Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

12.40-13.00 **Investigation of cognitive abilities of rhesus monkeys**

Ivanova L., Podvigina D., Varovin I., Harauzov A.. Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg

13.00-14.00 **Coffee break & Lunch time**

14.00-14.20 **Improving effectiveness of target recognition by human-computer convergence**

Malyshev I. A., Ponomarev S.V. Vavilov State Optical Institute, St. Petersburg

14.20-14.40 **Comparison of objects brightness threshold for naked eye adapted to the dark and the eye, equipped EMCCD camera.**

Tibilov A.S., Vavilov State Optical Institute, St. Petersburg

14.40-15.00 **Metamaterials for magnetic resonance imaging**

Zubkov M., ITMO University, Laboratory of Applied Radioengineering, St. Petersburg

15.00-15.20 **Combining utterance-level and frame-level feature representations for emotion classification from speech**

Verkholyak Oksana, Karpov Alexey, ITMO University, St. Petersburg

15.20 -15.40 **To the question of constructing color palettes with predefined properties in an isotropic color space**

Sauta O.I., Rummyantsev P.A., Kaziev I.A., Kurylev M.B., Kryukovsky E.S., Fazleyev A.Yu.  
VNIIRA-Navigator Company, St. Petersburg

15.40-16.00 **Interaction of magno and parvocellular visual systems functioning as marker of brain functional state in extreme conditions**

Shoshina I.<sup>1</sup>, Zavjalova E.<sup>2</sup>, Shelepin Yu<sup>1</sup>, <sup>1</sup>Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg, <sup>2</sup>Siberian Federal University, Krasnojarsk

**Wednesday, June 28, 2017**

**Topical Technologies: IP in TV 2017»: Technical Workshop**

Location: Pravda Street, 13, St.Petersburg State University of Film and Television

- 09.30-10.00 **Check in. Welcome coffee**
- 10.00-10.30 **IP technologies application in the construction of a modern telecentre**  
Alexey Piskunov, DNK Corporation, Lead Engineer
- 10.30-11.00 **Hardware platforms for future TV technologies**  
Igor Podukov, Hewlett Packard Enterprise
- 11.00-11.30 **“Connected Live”. DYVI switcher demonstration**  
Laurent Petit, EVS (Belgium), Vice President of production
- 11.30-12.00 **NDI technology. New industrial mixers IP Series and TriCaster TC1**  
Zoltan Matula, Newtek (USA)
- 12.00-12.30 **SDI must DIE**  
Tatiana Zolotuskaya, Cinegy GmbH (Germany), Sales Manager
- 12.30-12.50 **Coffee break**
- 12.50-13.20 **Imagine Communications IP solutions for modern broadcasting complexes**  
Konstantin Vanag, Imagine Communications, Regional Sales Manager
- 13.20-13.50 **Telecasting: migration to IP and cloud solutions**  
Viatcheslav Sadilov, Harmonic, Leading Specialist
- 13.50-14.20 **BCE Project. IP based telecentre**  
Sergey Arkhitektsev, Snell Advanced Media, Technical Sales Engineer
- 14.20-14.50 **Panasonic. IP practical application review**  
Alexey Yegorov, Panasonic, Broadcast Equipment Engineer
- 14.50-15.20 **RTR synchronization. Prism IP / SDI platform demonstration**  
Andery Resenchuk, Tektronix, Application Consultant
- 15.20-15.40 **Coffee break**
- 15.40-16.10 **New LiveUs equipment**  
Anastasiya Hort, LiveU, Director of Sales in Russia and the Baltic States
- 16.10-16.40 **Sony: IP Live systems and equipment**  
Sergey Bobnev, Sony, Marketing Manager
- 16.40-17.10 **Huawei solutions for IP networks of TV companies**  
Vladimir Gorenyshev, Huawei
- 17.10-17.40 **Successful Grass Valley IP projects in broadcasting centers**  
Alexander Bogatkin, Grass Valley Russia&CIS, CEO
- 17.40-18.10 **Guramex measuring equipment**  
Guram Shakhdinarov, Guramex, Director

**Thursday, June 29 - Friday, June 30, 2017**  
**XV INTERNATIONAL SCIENTIFIC AND TECHNICAL CONFERENCE**  
**and STUDENT COMPETITION**  
**«DIGITAL AND INFORMATION TECHNOLOGIES**  
**IN ELECTRONIC MEDIA INDUSTRIES – 2017»**

Location: Pravda Street, 13, St.Petersburg State University of Film and Television

Day 1 **Presentations of the participants**

Day 2 **Brief messages of the applicants for the victory**

**Discussion of the issues under consideration in the framework of the general discussion**

- Aleksei Bukhalov, student. **Eyetracking and perspective of applying**
- Yegor Grigoryev, student. **Exploring VR technologies and their use in the present and future media**
- Anastasiya Kuvayeva, Antonina Yevdokimova, students. **Dependence of the perception of stereo space from the distance between the camera (Panasonic AG-3DA1E) and anchorperson**
- Mariya Zhitina, student. **Possibilities and development prospects of chat bots in instant messengers and social networks**
- Daria Merzliakova, student. **High frame rate in television and cinema**
- Anastasiya Novak, student. **A social experience for online TV**
- Anton Stratonnikov, student. **The use of antenna arrays in modern satellite television**
- Galina Syrodоеva, student. **Stereo content for virtual reality**
- Anna Terekhova, student. **Effect of microphone non-identity on the microphone array characteristics**
- Alena Udovenko, student. **Application and developing modern technologies in sport**
- Andrey Shmorgunov, student. **Upgrade of an Anamorphic LOMO attachment lens "LOMO 35-NAP2-3M" for shooting with the modern digital camera**
- Alexei Shchekochikhin, postgraduate student. **On VR and AR technologies in sound production**
- Mariya Galushkina, student. **The Second Screen is shaping the future of television technology**

## Organizers



**PAVLOV INSTITUTE OF PHYSIOLOGY  
RUSSIAN ACADEMY OF SCIENCES**

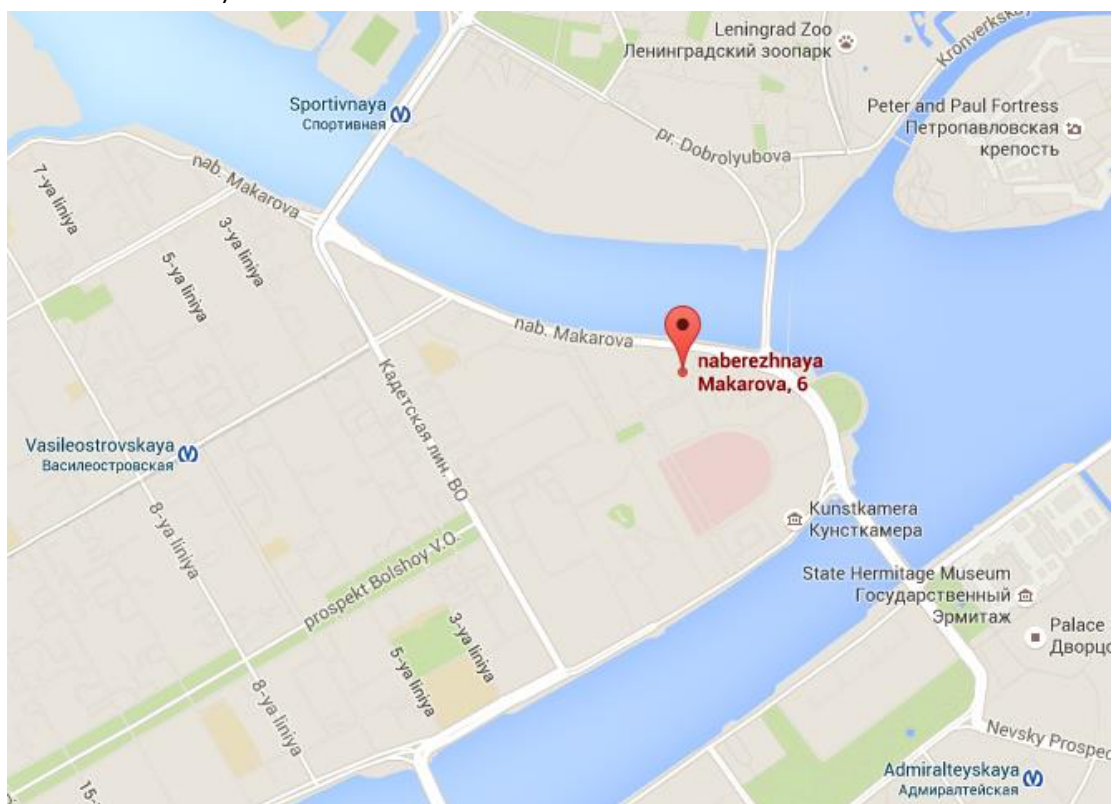


**Нейроиконика  
Нейромеханика**

Website: <https://spcn.co/>

## Maps

Closest metro stations to main SPCN 2016 locations: **Admiralteyskaya**, **Vasileostrovskaya**, **Sportivnaya** (there is 300 meter travolator in the tunnel under Neva River, between Sportivnaya metro station and Makarova embankment).



Location: Pravda Street, 13, metro station Zvenigorodskaya

