

Program

of the IEEE International Conference

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

SPCN-2019

**May 27 – May 31
2019**

St. Petersburg, Russia

ORGANIZERS

**Institute of Electrical and Electronics Engineers (IEEE)
I.P.Pavlov Institute of Physiology Russian Academy of Sciences
I.P.Pavlov Physiological Society
Russian Foundation for Basic Research (RFBR)
Neuroiconics Assistive Co. Ltd.
St.-Petersburg State University of Film and Television
St.-Petersburg Electrotechnical University "LETI"**

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Prof. Yuri Shelepin, I.P. Pavlov Institute of Physiology, St. Petersburg, Russia

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

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- Ogorodnikova Elena**, *I.P.Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg, IEEE Brain Initiative, Russia*
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- Yakimova Elena**, *I.P.Pavlov Institute of Physiology, Russian Academy of Sciences, IEEE Brain Initiative, St. Petersburg, Russia*
- Zashchirinskaia Oksana**, *St-Petersburg State University, St. Petersburg, Russia*

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- Ogorodnikova Elena**, *I.P.Pavlov Institute of Physiology, Russian Academy of Sciences, St. Petersburg, IEEE Brain Initiative, Russia*

Working languages: Russian, English
Website: www.infran.ru; <https://spcn.co/>

Monday, May 27, 2019

Day 1

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

14.00-15.00 **Registration**

15.00-16.00 **Poster session**

16.00-16.30 **Official opening ceremony**

Welcome word from organizers

Ludmila Filaretova

Corresponding member of the Russian Academy of Science, Director of the I.P.Pavlov Institute of Physiology, St.-Petersburg, Russia

Narisa Nan Chu

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

Konstantin Glasman

Co-Chair of the SPCN is on the CE Soc Board of Governors, the Head of St. Petersburg State University of Television and Films, IEEE Television Committee member and authority in creating lecture and conference videos for IEEE TV

Talk session 1:

16.30-19.30

Moderators: Elena Kozhevnikova, Yuri Shelepin

*I.P.Pavlov Institute of Physiology, St. Petersburg, Russia
IEEE Brain Initiative*

16.30-17.00 **Valeria Bondarko**

*Development of spatial frequency filters in ontogenesis
I.P. Pavlov Institute of Physiology,
Russian Academy of Sciences, St.-Petersburg, Russia*

17.00-17.30	<p>Elena Kozhevnikova New approaches and neurotechnologies in the context of early intervention <i>I.P. Pavlov Institute of Physiology, Russian Academy of Sciences, St.-Petersburg, Russia</i></p>
17.30-18.00	<p>Miriam Reiner Enhancing motor learning: A brain-computer interface for motor error detection, correction and memory consolidation <i>Technion, Haifa, Israel</i></p>
18.00-18.30	<p>Inna Koroleva Modern achievements in cochlear and brainstem auditory implantation <i>St-Petersburg Institute ENT&Speech, St.-Petersburg, Russia</i></p>
18.30-19.00	<p>Konstantin Shelepin, Vladimir Fokin, Peter Vasiljiev, Elena Ogorodnikova Neurophysiological investigation and neurological applications of vision to speech information converter <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i></p>
19.00-19.30	<p>General discussion <i>in context of crowding and cocktail-party effects</i></p>

Tuesday, May 28, 2019

Day 2

HAKATON

Brain Signal – Visualization & Analytics

Location: St.-Petersburg Electrotechnical University "LETI"

<https://etu.ru/ru/studentam/hakaton>

IEEE Brain Initiative moderators:

Narisa Nan Chu (Chair), Malashin Roman, Vasiljev Peter

IEEE Russia Nord-West Section moderators:

Dmitry Kaplun, Georgy Efimenko

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**

BCI headset loans for on-site data collection
13.00-14.00 (Individual teams can bring their own equipment. Please manage your time limitation)

15.00-night **Working**

Wednesday, May 29, 2019

Day 3

10.00 -13.00

Location: Makarova emb. 6, Conference hall

Talk session 2

Sensory physiology

Moderators: **Svetlana Alekseenko,**

I.P.Pavlov Institute of Physiology, St. Petersburg, Russia

Oksana Zashchirinskaia,

St. Petersburg State University, St. Petersburg, Russia

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|-------------|---|
| 10.00-10.30 | Alexander Alexandrov, Veronika Knyazeva, Elena Dmitrieva, Ludmila Stankevich
Effects of trace amine-associated receptors (TAARs) agonists on the mismatch negativity (MMN) and sensory gating
<i>St. Petersburg State University, St. Petersburg, Russia</i> |
| 10.30-11.00 | Marina Zueva
Non-drug approaches to neuroprotection and neurorehabilitation
<i>Helmholtz Institute of Eye Diseases Research. Moscow</i> |
| 11.00-11.15 | Valeria Bondarko, Sergei Solnushkin, Valery Chikhman
Can image statistics explain anomalous perception of length?
<i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i> |
| 11.15-11.30 | Nikolai I. Nikitin, Maria Yu. Agaeva
Localization of moving sound in the vertical domain in masking
<i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i> |
| 11.30-11.45 | Ekaterina A. Petropavlovskaja, Lidia B. Shestopalova, Varvara V. Semenova, Nikolai I. Nikitin
Effect of masker position on moving sound trajectory
<i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i> |

11.45-12.00	<p>Aleksandr Mikhalkin, Natalia Merkulyeva The postnatal development of the SMI-32 labeling in the perigeniculate nucleus of the cat <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i></p>
12.00-12.15	<p>Polina Shkorbatova, Vsevolod Lyakhovetskii, Natalia Merkulyeva, Aleksandr Mikhalkin, Svetlana Alexeenko The analysis of distribution of SMI-32 immunopositive neurons in LGN layers in kittens with binocular vision impairment <i>I.P.Pavlov Institute of Physiology RAS, Russian Research Center of Radiology and Surgical Technologies named by A.M. Granov, St. Petersburg, Russia</i></p>
12.15-12.30	<p>Oksana Zashchirinskaia, Ksenia Skuratova, Evgeni Shelepin Specific features of oculomotor activity of primary school students with dyslexia while reading texts <i>St. Petersburg State University, Russia, I.P.Pavlov Institute of Physiology, St.Petersburg, Russia</i></p>
12.30-12.45	<p>Elena Ogorodnikova, Valery Erkudov, Ivan Sergeev, Andrey Pugovkin, Sergey Pak, Maria Palamarchuk Testing of speech perception and reading in school (primary data) <i>I.P.Pavlov Institute of Physiology, St. Petersburg State Pediatric Medical University, Secondary School № 225 of the Admiralteisky District, St. Petersburg, Russia</i></p>
12.45-13.00	<p>Karl-Eric Spens Inclusion of hearing disabled children and adults <i>The Royal Institute of Technology, Stockholm, Sweden</i></p>

Wednesday, May 29, 2019 Coffee break & Lunch time 13.00-14.00

<p>Wednesday, May 29, 2019 Day 3 14.00-17.30 Location: Makarova emb. 6, Conference hall</p>	
<p>Talk session 3 Sensory systems and neuronal networks Moderators: Alexey Harauzov, Valery Chikhman, <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i></p>	
14.00-14.30	<p>Nikolai Krasil'nikov Bayesian approach and match filtration <i>State University of Aerospace Instrumentation, St. Petersburg, Russia</i></p>
14.30-15.00	<p>Irina Andreeva Auditory adaptation to signals of biological value <i>I.M. Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Russia</i></p>
15.00-15.15	<p>Alisa Gvozdeva The role of non-simultaneous masking in auditory perception of continuous and discontinuous sound images <i>I.M. Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences, Russia</i></p>
15.15-15.30	<p>Anna Balyakova, Konstantin Shelepin, Evgenii Shelepin Alternative communication and new assistive technologies <i>I.P.Pavlov Institute of Physiology, St. Petersburg; Neuroiconics Assistive Co. Ltd., St. Petersburg, Russia</i></p>
15.30-15.45	<p>Irina Shepeleva Comparative analysis of the camera eyes of gastropod mollusks and humans <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i></p>
15.45-16.00	<p>Marina Danilova, John Mollon Discrimination of speed within and between hemifields <i>I.P. Pavlov Institute of Physiology, St. Petersburg, Russia Cambridge University, Cambridge, UK</i></p>
16.00-16.15	<p>Baingio Pinna, Visual illusions <i>Sassari University, Sardinia, Italy</i></p>

16.15-16.30	Victoria Ivanova Electrophysiological markers of unconscious perception <i>St. Petersburg State University, St. Petersburg, Russia</i>
16.30-16.45	Anton Chizhov Contribution of on-off mechanism to directional selectivity: the model study <i>Ioffe Institute, Russian Academy of Sciences, Russia</i>
16.45-17.00	Liuba Ivanova, Darya Podvigina, Ivan Varovin, Alexey Harauzov Electrophysiological indices of emotional arousal in monkeys <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>
17.00-17.15	Alexey Harauzov, Ivan Varovin, Liuba Ivanova, Darya Podvigina Comparative analysis of event related potentials in monkeys and humans <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>
17.15-17.30	Ivan Varovin, Liuba Ivanova, Darya Podvigina, Alexey Harauzov Development of non-invasive methods of primates' head fixation based on computed tomography data <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>

Thursday, May 30, 2019

Day 3

10.00-13.00

Location: Makarova emb. 6, Conference hall

Talk session 4:

Artificial Neural Networks

Moderators: **Vadim Luciv, Roman Malashin,**

ITMO University, St.Petersburg, Russia

I.P.Pavlov Institute of Physiology, St. Petersburg, Russia

10.00-10.30	Malashin D., Malashin R. Efficient hardware implementation of artificial neural network <i>I.P.Pavlov Institute of Physiology RAS, Production and Association "Ural Optical and Mechanical Plant named after Mr. E.S. Yalamov", Russia</i>
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10.30-10.45	<p>Boiko A., Malashin R. Learning Videosequence Enhancement with Synthetic and Real Data <i>I.P.Pavlov Institute of Physiology RAS and National Research University of Information technology, mechanics and optics, Russia</i></p>
10.45-11.00	<p>Olga Zhukova, Vladimir Fokin, Sergey Pronin, Yuri Shelepin Smile - from psychophysics to human neuronal net <i>I.P.Pavlov Institute of Physiology, V.A.Almazov National Medical Research Centre, St. Petersburg, Russia</i></p>
11.00-11.15	<p>Katerina Malakhova, Olga Zhukova Convolution neuronal net modeling of face recognition at the threshold <i>I.P.Pavlov Institute of Physiology, St.-Petersburg, Russia</i></p>
11.15-11.30	<p>Svyatoslav Ponomarev Recognition of objects in a three-dimensional images using a global structural descriptor <i>I.P.Pavlov Institute of Physiology, St.-Petersburg, ITMO University, St. Petersburg, Russia</i></p>
11.30-11.45	<p>Nedoshivina L., Lensu L. Active learning of the ground truth for retinal image segmentation based on the U-Net neural network <i>I.P.Pavlov Institute of Physiology RAS and Lapeenranta University of Technology, School of Engineering Science</i></p>
11.45-12.00	<p>Titarenko M., Malashin R. Image enhancement with the use of object features <i>I.P.Pavlov Institute of Physiology RAS and National Research University of Information technology, mechanics and optics, Russia</i></p>
12.00-12.15	<p>Maria Marusina, Elisabeth Karaseva Fractal analysis application for human brain neural networks activity research during image recognition <i>ITMO University, St.-Petersburg, Russia</i> <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i></p>

12.15-12.30	Denis Yavna, Vitaly Babenko, Kristina Ikonopistseva Neural network models of second order visual filters <i>Southern Federal University, Rostov-on-Don, Russia</i>
12.30-12.45	Galina Moiseenko, Roman Malashin, Svyatoslav Ponomarev, Mikhail Titarenko Recognition visual stimuli based on automatic EEG processing <i>I.P.Pavlov Institute of Physiology, ITMO University, St. Petersburg, Russia</i>
12.45-13.00	Margarita Stefanovich Model of organization in the memory the simple geometrical figures description in human visual system <i>St.-Petersburg, Russia, marg.stefanovich@yandex.ru</i>

Thursday, May 30, 2019 Coffee break & Lunch time 13.00-14.00

<p>Thursday, May 30, 2019 Day 3 14.00-18.00 Location: Makarova emb. 6, Conference hall</p>	
<p>Talk session 5 Free choice: from neurophysiology to education Moderators: Nikita Solovyev, Gennady Novikov, <i>St. Petersburg State Institute of Psychology and Social Work, Russia</i> <i>St. Petersburg Association of scientists and scholars, Russia</i></p>	
14.00-14.30	Valery Monahov Technologies of the fourth industrial revolution and problems of human education <i>Herzen State Pedagogical University of Russia, St. Petersburg, Russia</i>
14.30-15.00	Inga Nichanian Education and free choice <i>UNESCO, Paris, France</i>

15.00-15.30	Nikita Solovyev Quantum neurophilosophy and the problem of freedom of choice <i>St. Petersburg State Institute of Psychology and Social Work, St. Petersburg, Russia</i>
15.30-16.00	Dmitry Gorbatov, Nikita Solovyev, Leonid Soms Social induction and the problem of choice in the conditions of uncertainty <i>St. Petersburg State Institute of Psychology and Social Work, Vavilov State Optical Institute, St. Petersburg, Russia</i>
16.00-16.15	Alexander Pavlov Neural network mechanisms of the quantum-like phenomenon “Linda” <i>ITMO University, St. Petersburg, Russia</i>
16.30-16.45	Alexander Tibilov «Plants vision» and quantum efficiency of plant leaves <i>ITMO University, St. Petersburg, Russia</i>
16.45-17.00	Alexey Dobrov, Nikolai Soms Superpositional Model for Natural Language Understanding for Ambiguous Texts by Means of Ontological Semantics <i>St. Petersburg State University, LLC "AIIRE" St. Petersburg, Russia</i>
17.00-17.15	Olga Shchemeleva, Olga Zhukova, Peter Vasiljev, Vladislav Lebedev The interlocutors brains hyperscanning by EEG simultaneous recording <i>I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>
17.15-18.00	Gennady Novikov Holographic Models of Vision <i>St. Petersburg Association of scientists and scholars, St. Petersburg, Russia</i>

Friday, May 31, 2019

10.00-13.00

Location: Makarova emb. 6, Conference hall

Talk session 6:

Neural networks and clinical research

Moderators:

Vladimir Fokin, *Almazov National Medical Research Centre,
St. Petersburg, Russia*

Sergey Koskin, *Medical Military Academy, St. Petersburg, Russia*

10.00-10.30	Sergey Koskin Problems of visual acuity investigation in medical expertise practice <i>Military Medical Academy, St-Petersburg, Russia</i>
10.30-10.45	Katerina Malakhova, Alexei Kulikov, Dmitrii Maltsev Machine learning for optical coherence tomography-based diagnosis in central serous chorioretinopathy <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of ophthalmology, St-Petersburg, Russia, I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>
10.45-11.00	Sergey Danilichev, Olga Manko, Sergey Pronin, Yuri Shelepin The cosmonauts and pilots visual system status after gravitational loads <i>Institute of Biomedical Problems of the Russian Academy of Sciences, Moscow, Russia; I.P.Pavlov Institute of Physiology, St. Petersburg, Russia</i>
11.00-11.15	Anastasia Kovalskaya, Sergey Koskin, Valery Lesnikov New optometric chart for visual acuity detection in malingering <i>Military Medical Academy, St. Petersburg, Russia</i>

11.15-11.30	<p>Svetlana Manankova Telemedicine - problems, development and cooperation <i>University Hospital of North Norway,</i> <i>Norway</i></p>
11.30-11.45	<p>Sergey Levin Methods of distant tuning of cochlear implant processors in the context of telemedicine development <i>St-Petersburg Institute ENT&Speech,</i> <i>St. Petersburg, Russia</i></p>
11.45-12.00	<p>Dmitry Klyachko, Vladislav Kusovkov, Alexander Pashkov The electrically evoked compound action potential of the auditory nerve in investigations and in practice of cochlear implantation <i>St-Petersburg Institute ENT&Speech,</i> <i>St. Petersburg, Russia</i></p>
12.00-12.15	<p>Larisa Golovanova, Maria Boboshko, Elena Ogorodnikova Objective and subjective assessment of the experience of cochlear implants using in geriatric practice <i>I.I. Mechnikov North-Western State Medical University,</i> <i>Academician I.P. Pavlov First St. Petersburg State</i> <i>Medical University, I.P. Pavlov Institute of Physiology,</i> <i>St. Petersburg, Russia</i></p>
12.15-12.45	<p>Po Lei Lee EEG emotional correlates (Lecture and demonstration) <i>Taiwan China</i></p>
12.45-13.00	<p>Alexandra Zamaro Stem cells perineural migration as novel brain damage reparation approach <i>Brain Center, Institute of Physiology,</i> <i>Natl Acad Sci, Belarus, Minsk</i></p>

Friday, May 31, 2019 Coffee break & Lunch time 13.00-14.00

Friday, May 31, 2019

14.00-19.00

Location: Makarova emb. 6, Conference hall

Talk session 7:

Neural networks and clinical research

Moderators:

Vladimir Kulchitsky, *Brain Center, Institute of Physiology,
National Academy of Sciences Belarus, Minsk*

Konstantin Naumov

Medical Military Academy, St. Petersburg, Russia

14.00-15.00	Mariusz Ratajczak Clinical use of stem cells from postnatal tissues (VSELs) <i>Program «The Food and Drug Administration», Federal Agency of the United States Department of Health and Human Services, Department of Cancer Biology named after Henry M. and Stella M. Hoenig, the Stem Cell Program at the James Graham Brown Cancer Center, USA</i>
15.00-15.30	Vladimir Kulchitsky Focus on central mechanism of obstructive sleep apnea <i>Brain Center, Institute of Physiology, Natl Acad Sci, Belarus, Minsk</i>
15.30-15.45	Dmitry Krivenchuk Neural tissue bioprinting: principles and applications <i>Brain Center, Institute of Physiology, Natl Acad Sci, Belarus, Minsk</i>
15.45-16.00	Vladimir Fokin, Aleksandr Efimtcev, Andey Sokolov, Gennady Trufanov Clinical application of fMRI <i>Almazov National Medical Research Centre, St. Petersburg, Russia</i>

16.00-16.15	<p>Svetlana Murav'eva, Yuri Shelepin Violations of the processing of visual information in patients with depression and schizophrenia and their correction with the help of a cognitive task in an interactive virtual environment <i>I.P.Pavlov Institute of Physiology, Russian Academy of Sciences, St.-Petersburg, Russia</i></p>
16.15-16.30	<p>Kilivaeva G.A., Lobzin V.U., Maltzev D.S., Dynin P.S., Emelin A.U. Evaluation of the visual analyzer in Alzheimer's patients <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of neurology, Department of ophthalmology, St-Petersburg, Russia</i></p>
16.30-16.45	<p>Andreeva G.O., Naumov K.M., Pechenikhin D.V., Sukhoroslov M.V. Acupuncture as regulation method of neural network <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of neurology, Saint Petersburg, Russia</i></p>
16.45-17.00	<p>Simarev A.N., Naumov K.M., Markin K.V., Lobzin V.U., Emelin A.U. Mechanisms of visual agnosia in patients with Alzheimer's disease <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of neurology, Department of radiology, St Petersburg, Russia</i></p>
17.00-17.15	<p>Tarumov D.A., Shamrey V.K., Zhelezniak I.S., Trufanov A.G., Markin K.V., Temniy A.V., Puchkov N.A. Neural network characteristics of the brain in the syndrome of dependence on opioids and alcohol <i>FSMEI HPE «Military Medical» of Ministry of Defense of Russia, Department of radiology, Department of psychiatry, St-Petersburg, Russia</i></p>

17.15-17.30	<p>Dynin P.S., Naumov K.M., Litvinenko I.V., Lobzin V.U., Kilivaeva G.A. Visio-spatial disorders in Parkinson's disease <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of neurology, Saint-Petersburg, Russia</i></p>
17.30-17.45	<p>Markin K.V., Tarumov D.A., Naumov K.M., Lobzin V.U., Temniy A.V., Puchkov N.A. Some aspects of changes in functional connectivity among patients with Alzheimer's disease <i>FSMEI HPE «Military Medical Academy» of Ministry of Defense of Russia, Department of radiology, Department of neurology, St Petersburg, Russia</i></p>
17.45-18.00	<p>Gerasimov A.P., Shalygin D.Yu. Genetics of visual perception: clinical aspects <i>Almazov National Medical Research Centre, I.I. Mechnikov North-Western State Medical University, Academician I.P. Pavlov First St. Petersburg State Medical University, St. Petersburg, Russia</i></p>
18.00-19.00	<p>General discussion: <i>in context of crowding and cocktail-party effects</i></p>

Poster session NEUROTECHNOLOGY

May 29, 30, 31 2019

From 10.00 – 16.00

Location: Makarova emb. 6, Entrance hall and Foyer hall

Moderators: **Vasiljev Petr, Drozdov Sergey**

I.P.Pavlov Institute of Physiology, St. Petersburg, Russia

IEEE Brain Initiative

Oksana Zashchirinskaia

St. Petersburg State University, St. Petersburg, Russia

- 1 Abylgazy A., Kurbanova T., Maslova V., Kim E., Grachev G. **Development and testing of usability interface.** *ITMO University, St. Petersburg, Russia*
- 2 Abylgazy A., Kurbanova T., Kim E., Grachev G., Maslova V. **On forecasting of the gender and age structure of the population.** *ITMO University, St. Petersburg, Russia*
- 3 Agaeva M. **Effects of masker on localization of signal in vertical and horizontal planes in the precedence effect paradigm.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 4 Efimenko G., Gnezdilov D., Kaplun D., Boboshko M., Ogorodnikova E. **Software and sound database for auditory training of speech hearing and memory in audiology and gerontology practice.** *St.-Petersburg Electrotechnical University "LETI", Academician I.P. Pavlov First St. Petersburg State Medical University, I.P. Pavlov Institute of Physiology, St. Petersburg, Russia*
- 5 Karpinskaia V., Lyakhovetskii V., Sosnina I., Zelenskiy K., Ivanov M., Tumova M., Yanushko M. **The role of dorsal visual stream at the sensorimotor estimation of Ponzo illusion.** *St-Petersburg State University, National Research University Higher School of Economics, Pavlov institute of Physiology RAS, Institute for Bio-Medical Problems RAS, Bekhterev' National medical research center of psychiatry and neurology, St. Petersburg, Russia*
- 6 Kaziev I., Lebedev V. **Pseudoisochromatic threshold plates.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*

- 7 Kozub K. **Structural and functional features of the macula organization in schizophrenia.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 8 Moiseenko G.A., Pronin S.V., Shelepin Y.E. **Neurophysiological mechanisms of images classification invariant to their size.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 9 Moiseenko G., Solovyev N., Shelepin Yu. **The state of inner silence as a conscious choice (neurophysiology of voluntary purposeful suppression of mental activity).** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 10 Ogorodnikova E.A., Pak S.P., Lesova E.M. **Effect of hypoxia on dichotic speech perception.** *I.P.Pavlov Institute of Physiology, Military Medical Academy named after S.M. Kirov, Saint-Petersburg, Russia*
- 11 Pronin S., Shelepin E., Drozdov S., Shelepin Yu. **The human eye movement's during the state of uncertainty.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 12 Shestopalova L.B., Petropavlovskaja E.A., Semenova V.V. **Topography of the human brain rhythms activated by auditory motion.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 13 Smirnova V., Labutina O., Gvozdeva A. **Speech detection in spatially distributed speech-like noise.** *I.M. Sechenov Institute of Evolutionary Physiology and Biochemistry, Russian Academy of Sciences; I.P.Pavlov Institute of Physiology Russian Academy of Sciences, St. Petersburg, Russia*
- 14 Stolyarova E., Shamro E., Ogorodnikova E., von Tetzchner S. **The experience of longitude assessment of motor and communicative skills in young children with Down syndrome.** *I.P.Pavlov Institute of Physiology, St. Petersburg, Russia*
- 15 Yakimova E.G., Vasiljev P.P. **New data about thresholds of McCollough effect in healthy volunteers and patients with schizophrenia.** *I.P.Pavlov Institute of Physiology, Russia*

Student Posters

St. Petersburg State University, St. Petersburg, Russia

ITMO University, St. Petersburg, Russia

Map

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).

