CURRICULUM VITAE

Name: Pavel Zelenin.
Date of birth: 1973.11.09.
Country of birth: Belarus
Nationality: Sweden

Telephone: (+46) 72 184 77 34
E-mail: Pavel.V.Zelenin@gmail.com

Education:

PhD. Physics and mathematics (specialization – biophysics). Defended at the Department of Physics, Moscow State University, Moscow, Russia (1999).

Full Stack Software Development, Code Institute, Dublin, Ireland. Started: December 2019. To be finished: February-April 2020.

IT skills:

Now: HTML, CSS, Bootstrap, Git, User Experience Design, MATLAB, Spike2.

By April 2020: Python, Flask / Django frameworks, MongoDB, Full Stack Frameworks, Cloud Deployment, JavaScript, Working with Relational Data, Version Control, Test driven Development, Application Programming Interfaces, Cloud Based Editing.

Work history:

Senior researcher (senior forskare) at Department of Neuroscience, Karolinska Institutet, Stockholm, Sweden (2009 – present).

Junior research position (forskarassistent) at Department of Neuroscience, Karolinska Institutet, Stockholm, Sweden (2003-2008).

Post-doctoral research fellow at Department of Neuroscience, Karolinska Institutet, Stockholm, Sweden (1999-2002).

Scienctific publications:

49 full-length articles in international referred journals, 8 reviews, 64 abstracts.

Languages:

Russian (native), English (fluent), Belorussian (advanced), Swedish (basic).

Interests:

Natural sciences, technology, IT, robotics, AI, neuroscience, BMI.

Pavel Zelenin - LIST OF PUBLICATIONS

Original papers in international refereed journals

1. Panchin Y. V., Popova L. B., Pavlova G. A., **Zelenin P. V.**, Arshavsky Y. I. Formation of connections between cultured neurons from pleural ganglion of the pteropodal mollusc *Clione limacina*, *Brain Res*., 669: 315-319, 1995.
2. Panchin Y. V., **Zelenin P. V.**, Popova L. B. Regeneration of central and peripheral synaptic connections in the locomotor system of the pteropod mollusc *Clione limacina*. *Invert. Neurosci*., 3: 27-40, 1997.
3. **Zelenin P. V.**, Panchin Y.V. Selective regeneration of the neuromuscular connections in the pteropod mollusc *Clione limacina*. *Eur. J. Neurosci.*, 11: 1800-1808, 1999.
4. Popova L. B., **Zelenin P. V.**, Panchin Y. V. Axotomized neurons of the pteropod mollusk *Clione limacina* develop novel sites of transmitter release in the absence of their normal muscle target. *Comp. Biochem. Physiol. C: Pharmacol Toxicol Endocrinol.*, 123: 185-191, 1999.
5. **Zelenin P. V.**, Panchin Y. V. Projection pattern and target selection of *Clione limacina* motoneurons sprouting within an intact environment. *J. Comp. Neurol.*, 423: 220-226, 2000.
6. Deliagina T. G., **Zelenin P. V.**, Fagerstedt P., Grillner S., Orlovsky G. N. Activity of reticulospinal neurons during locomotion in the freely behaving lamprey. *J. Neurophysiol*., 83: 853-863, 2000.
7. Kozlov A. K., Aurell E., Orlovsky G. N., Deliagina T. G., **Zelenin P. V.**, Hellgren-Kotaleski J., Grillner S. Modelling control of roll-plane body orientation in lamprey. *Neurocomputing*, 32: 871-877, 2000.
8. Fagerstedt P., **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N., Grillner S. Crossed reciprocal inhibition evoked by electrical stimulation of the lamprey spinal cord. *Exp. Brain Res.*, 134: 147-154, 2000.
9. **Zelenin P. V.**, Deliagina T. G., Grillner S., Orlovsky G. N. Postural control in the lamprey – a study with a neuro-mechanical model. *J. Neurophysiol*., 84: 2880-2887, 2000.
10. Kozlov A. K., Aurell E., Orlovsky G. N., Deliagina T. G., **Zelenin P. V.**, Hellgren-Kotaleski J., Grillner S. Modeling postural control in the lamprey. *Biol. Cybern*., 84: 323-330, 2001.
11. **Zelenin P. V.**, Grillner S., Orlovsky G. N., Deliagina T. G. Heterogeneity of the population of command neurons in the lamprey. *J. Neurosci*., 21: 7793-7803, 2001.
12. **Zelenin P. V.**, Grillner S., Orlovsky G. N., Deliagina T. G. The pattern of motor coordination underlying the roll in the lamprey. *J. Exp. Biol.*, 206: 2557-2566, 2003.
13. **Zelenin P. V.**, Pavlova E. L., Grillner S., Orlovsky G. N., Deliagina T. G. Comparison of the motor effects of individual vestibulo- and reticulospinal neurons on dorsal and ventral myotomes in lamprey. *J. Neurophysiol*., 90: 3161-3167, 2003.
14. Beloozerova I. N., **Zelenin P. V.**, Popova L. B., Orlovsky G. N., Grillner S., Deliagina T. G. Postural control in the rabbit maintaining balance on the tilting platform. *J. Neurophysiol*., 90: 3783-3793, 2003.
15. **Zelenin P. V.** Activity of individual reticulospinal neurons during different forms of locomotion in the lamprey. *Eur. J. Neurosci*., 22: 2271-2282, 2005.
16. Lyalka V. F., **Zelenin P. V.**, Karayannidou A., Orlovsky G. N., Grillner S., Deliagina T. G. Impairment and recovery of postural control in rabbits with spinal cord lesions. *J. Neurophysiol*., 94: 3677-3690, 2005.
17. Deliagina T. G., Sirota M. G., **Zelenin P. V.**, Orlovsky G. N., Beloozerova I. N. Interlimb postural coordination in the standing cat. *J. Physiol.*, 573: 211-224, 2006.
18. Islam S. S., **Zelenin P. V.**, Orlovsky G. N., Grillner S., Deliagina T. G. The pattern of motor coordination underlying backward swimming in the lamprey. *J. Neurophysiol*., 96: 451-460, 2006.
19. Karayannidou A., Orlovsky G. N., **Zelenin P. V.**, Deliagina T. G. Responses of reticulospinal neurons in the lamprey to lateral turns. *J. Neurophysiol*., 97: 512-521, 2007.
20. **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Sensory-motor transformation by individual command neurons. *J. Neurosci*., 27: 1024-1032, 2007.
21. Islam S. S., **Zelenin P. V.** Modifications of locomotor pattern underlying escape behavior in the lamprey. *J. Neurophysiol*., 99: 297-307, 2008.
22. Karayannidou A., Deliagina T. G., Tamarova Z. A., Sirota M. G., **Zelenin P. V.**, Orlovsky G. N., Beloozerova I. N. Influences of sensory input from the limbs on feline corticospinal neurons during postural responses. *J. Physiol.*, 586: 247-263, 2008.
23. Musienko P. E., **Zelenin P. V.**, Lyalka V .F., Orlovsky G. N., Deliagina T. G. Postural performance in decerebrated rabbit. *Behav. Brain Res*., 190: 124-134, 2008.
24. Karayannidou A., **Zelenin P. V.**, Orlovsky G. N., Sirota M. G., Beloozerova I. N., Deliagina T. G. Maintenance of lateral stability during standing and walking in the cat. *J. Neurophysiol.*, 101: 8-19, 2009.

25. Karayannidou A., Beloozerova I. N., **Zelenin P. V.**, Stout E., Sirota M. G., Orlovsky G. N., Deliagina T. G Activity of pyramidal tract neurons in the cat during standing and walking on an inclined plane. *J. Physiol.*, 587: 3795-3811, 2009.
26. Musienko P. E., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Facilitation of postural limb reflexes with epidural stimulation in spinal rabbits. *J. Neurophysiol.*, 103: 1080-1092, 2010.
27. **Zelenin P. V.**, Beloozerova I. N., Sirota M. G., Orlovsky G. N., Deliagina T. G. Activity of red nucleus neurons in the cat during postural corrections. *J. Neurosci.*, 30: 14533-14542, 2010.
28. **Zelenin P. V.** Reticulospinal neurons controlling forward and backward swimming in the lamprey. *J. Neurophysiol*., 105: 1361-1371, 2011.
29. **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N., Karayannidou A., Dasgupta N. M., Sirota M. G., Beloozerova I. N. Contribution of different limb controllers to modulation of motor cortex neurons during locomotion. *J. Neurosci*., 31: 4636-4649, 2011.
30. **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N., Karayannidou A., Stout E. E:, Sirota M. G., Beloozerova I. N. Activity of motor cortex neurons during backward locomotion. *J. Neurophysiol*., 105: 2698-2714, 2011.
31. Lyalka V. F., Hsu L.-J., Karayannidou A., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Facilitation of postural limb reflexes in spinal rabbits by serotonergic agonist administration, epidural electrical stimulation, and postural training. *J. Neurophysiol*., 106: 1341-1354, 2011.
32. Marlinski V., Nilaweera W. U., **Zelenin P. V.**, Sirota M. G., Beloozerova I. N. Signals from the ventrolateral thalamus to the motor cortex during locomotion. *J. Neurophysiol*., 107: 455-472, 2012.
33. **Zelenin P. V.**, Hsu L.-J., Orlovsky G. N., and Deliagina T. G. Use of galvanic vestibular feedback to control postural orientation in decerebrate rabbits. *J. Neurophysiol*., 107: 3020-3026, 2012.
34. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., and Deliagina T. G. Effects of galvanic vestibular stimulation on postural limb reflexes and neurons of spinal postural network. *J. Neurophysiol*., 108: 300-313, 2012.
35. Musienko P. E., **Zelenin P. V.**, Lyalka V. F., Gerasimenko Y. P., Orlovsky G. N., Deliagina T. G. Spinal and supraspinal control of the direction of stepping during locomotion. *J. Neurosci*., 32: 17442-17453, 2012.
36. Hsu L.-J., **Zelenin P. V.**, Grillner S., Orlovsky G. N., Deliagina T. G. Intraspinal stretch receptor neurons mediate different motor responses along the body in lamprey. *J. Comp. Neurol.*, 521: 3847-3862, 2013.
37. **Zelenin P. V.**, Lyalka V. F., Hsu L.-J., Orlovsky G. N., Deliagina T. G. Effects of reversible spinalization on individual spinal neurons. *J. Neurosci*., 33: 18987-18998, 2013.
38. Hsu L.-J., Orlovsky G. N., **Zelenin P. V.** Different forms of locomotion in the spinal lamprey. *Eur. J. Neurosci.*, 39: 2037-2049, 2014.
39. Musienko P. E., Deliagina T. G., Gerasimenko Y. P., Orlovsky G. N., **Zelenin P. V.** Limb and trunk mechanisms for balance control during locomotion in quadrupeds. *J. Neurosci.*, 34:5704-5716, 2014.
40. **Zelenin P. V.**, Hsu L.-J, Lyalka V. F., Orlovsky G. N., Deliagina T. G. Putative spinal interneurons mediating postural limb reflexes provide basis for postural control in different planes. *Eur*. *J. Neurosci.*, 41: 168-181, 2015.
41. **Zelenin P. V.**, Lyalka V. F., Hsu L.-J, Orlovsky G. N., Deliagina T. G. Effects of acute spinalization on neurons of postural networks. *Sci. Rep.*, 6: 27372, 2016.
42. **Zelenin P. V.**, Lyalka V. F., Orlovsky G. N., Deliagina T. G. Effect of acute lateral hemisection of the spinal cord on spinal neurons of postural networks. *Neuroscience*, 339: 235-253, 2016.
43. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Supraspinal control of spinal reflex responses to body bending during different behaviours in lampreys. *J. Physiol.*, 595: 883-900, 2017.
44. Hsu L.-J., **Zelenin P. V.**, Lyalka V. F., Vemula M. G., Orlovsky G. N., Deliagina T. G. Neural mechanisms of single corrective steps evoked in the standing rabbit. *Neuroscience*, 347: 85-102, 2017.
45. Pirkmajer S., Kirchner H., Lundell L., **Zelenin P. V.**, Zierath J., Makarova K. S., Wolf Y. I., Chibalin A. V. Early vertebrate origin and diversification of small transmembrane regulators of cellular ion transport. *J. Physiol.*, 595: 4611-4630, 2017.
46. Merkulyeva N., Veshchitskii A., Gorsky O., Pavlova N., **Zelenin P. V.**, Gerasimenko Y., Deliagina T. G., Musienko P. Distribution of spinal neuronal networks controlling forward and backward locomotion. *J. Neurosci.*, 38: 4695-4707, 2018.
47. **Zelenin P. V.**, Lyalka V. F., Orlovsky G. N., Deliagina T. G. Changes in activity of spinal postural networks at different time points after spinalization. *Front. Cell. Neurosci.*, 13: 387, 2019. https://doi.org/10.3389/fncel.2019.00387
48. Hadjab S., Lallemend F., Wang Y., Wu H., **Zelenin P.**, Fontanet P., Wanderoy S., Petitpre C., Comai G., Huettl R.-E., Huber Brosamle A., Bellartida C., Xue-Franzen Y., Tajbakhsh S., Kiehn O., Ernfors P., Deliagina T.. Muscle-selective RUNX3 dependence of sensorimotor circuit development. *Development*, 146: dev181750, 2019. doi: 10.1242/dev.181750

49. Vemula M. G., Deliagina T. G., Zelenin P. V. Kinematics of forward and backward locomotion performed in different environmental conditions. *J. Neurophysiol.*, 122 2142-2155, 2019.

Reviews

1. Deliagina T. G., **Zelenin P. V.**, Orlovsky G. N. Encoding and decoding of reticulospinal commands. *Brain Res. Rev.*, 40: 166-177, 2002.
2. Deliagina T. G., Orlovsky G. N., **Zelenin P. V.**, Beloozerova I. N. Neural bases of postural control. *Physiology*, 21: 216-225, 2006.
3. Deliagina T. G., **Zelenin P. V.**, Beloozerova I. N., Orlovsky G. N. Nervous mechanisms controlling body posture. *Physiol. Behav.*, 92: 148-154, 2007.
4. Deliagina T. G., Beloozerova I. N., **Zelenin P. V.**, Orlovsky G. N. Spinal and supraspinal postural networks. *Brain Res. Rev.*, 57: 212-221, 2008.
5. Deliagina T. G., **Zelenin P. V.**, Orlovsky G. N. The Lamprey Postural Circuit. Chapter 38 in: *Handbook of Brain Microcircuits* (eds. G. Shepherd and S. Grillner), Oxford University Press, 2010.
6. Deliagina T. G., **Zelenin P. V.**, Orlovsky G. N. Physiological and circuit mechanisms of postural control. *Curr. Opin. Neurobiol.*, 22: 646-652, 2012.
7. Deliagina T. G., Beloozerova I. N., Orlovsky G. N., **Zelenin P. V.** Contribution of supraspinal systems to generation of automatic postural responses. *Front. Integr. Neurosci.*, 8, 1-20, 2014.
8. Deliagina T. G., Musienko P. E., **Zelenin P. V.** Nervous mechanisms of locomotion in different directions. *Curr. Opin. Physiol.*, 8: 7-13, 2019.

Abstracts

1. **Zelenin P. V.**, Arshavsky Y. I., Panchin Y. V., Pavlova G. A., Popova L.B. Control of formation of connections between identified neurons of *Clione limacina* in culture. *Abstracts of regional meeting of the International Society for Invertebrate Neurobiology*, p.53, Puschino (Russia). 1994.
2. Popova L. B., Panchin Y. V., Pavlova G. A., **Zelenin P. V.**, Sadreev R. I. Formation of synaptic connections in the pteropodal mollusc *Clione limacina*: regeneration and cell culture studies. *Abstracts of International Symposium on Intercellular Communications*, Puschino (Russia). 1994.
3. Panchin Y. V., Popova L. B., **Zelenin P. V.**, Sadreev R. I. Formation of synaptic connections in the pteropodal mollusc *Clione limacina*: regeneration and cell culture studies. *Society for Neuroscience Abstracts*. Vol.21, part 3, p.1799. 707.17. 1995.
4. Panchin Y. V., **Zelenin P. V.**, Popova L. B. Regeneration of the neuromuscular connections in the locomotory system of the pteropod mollusc *Clione limacina*. *Society for Neuroscience Abstracts*. Vol.22, part 1, p.654. 259.3. 1996.
5. Panchin Y. V., Popova L. B., **Zelenin P. V.**, Kelmanson I. V., Korshunova T. A. and Sadreyev R. I. White Sea mollusc *Clione limacina* as a model object for studying formation of neural connections in simple nervous system of adult animal. *Materials of international conference "Ecological studies of the White Sea organisms"*. 59-60. 1997.
6. **Zelenin P. V.**, Panchin Y. V., Popova L. B. Regeneration and synapse formation of the neuromuscular connections in marine mollusc *Clione limacina*. *Abstracts of the 5th East European conference of the International Society for Invertebrate Neurobiology*, p.98, Moscow (Russia). 1997.
7. Panchin Y. V., Popova L. B., **Zelenin P. V.**, Kelmanson I. V., Korshunova T. A. The choice and selectivity in synapse formation in marine mollusc *Clione limacina*. *Abstracts of the 5th East European conference of the International Society for Invertebrate Neurobiology*, p.113-114, Moscow (Russia). 1997.
8. **Zelenin P. V.**, Ullen F., Fagerstedt P., Deliagina T. G., Orlovsky G. N., Grillner S. Control of lateral turns in lamprey. *Society for Neuroscience Abstracts*, Vol.23, part 1, p.765. 299.15. 1997.
9. Panchin Y. V., Popova L. B., **Zelenin P. V.**, Kelmanson I. V., Korshunova T. A. Selectivity of synapse formation in the adult nervous system of the marine mollusc *Clione limacina*. *Society for Neuroscience Abstracts*. Vol.23, part 2, p.1981. 771.10. 1997.
10. **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N. and Grillner S. Investigation of postural control in lampreys: combined in vivo and robotic approaches. *Society for Neuroscience Abstracts*. Vol.24, 1998.
11. **Zelenin P. V.**, Orlovsky G. N., Grillner S. and Deliagina T. G. Functional projections of individual retculospinal neurons in lamprey. *European Journal of Neuroscience*. Vol.12, Suppl.11, p.149, 068.08. 2000.
12. **Zelenin P. V.**, Orlovsky G. N., Grillner S., Deliagina T. G. Longitudinal functional projections of individual reticulospinal neurons in lamprey. *Abstracts of joint meeting of Scandinavian and American Physiological Societies*, A177, 2000.

13. **Zelenin P. V.**, Orlovsky G. N., Grillner S., Deliagina T. G. Motor effects of individual reticulospinal neurons in lamprey. *Society for Neuroscience Abstracts*, Vol. 26, 460.5, 2000.
14. **Zelenin P. V.**, Orlovsky G. N., Pavlova E. L., Deliagina T. G. Effects of individual reticulo- and vestibulospinal neurons on rostral spinal segments in lamprey. *Society for Neuroscience Abstracts*, Vol. 27, 937.2, 2001.
15. Deliagina T., **Zelenin P.**, Pavlova E., Popova L., Orlovsky G. Postural corrections in the rabbit keeping balance on the tilting platform. *Soc. Neurosci. Abstr.*, Vol. 28, 566.9, 2002.
16. **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Activity of reticulospinal neurons during undulatory and non-undulatory locomotion in lamprey. *Soc. Neurosci. Abstr.*, Vol. 29, 499.2, 2003.
17. **Zelenin P. V.**, Orlovsky G. N., Grillner S., Deliagina T. Individual reticulospinal neurons in lamprey: vestibular inputs and motor effects. *Soc. Neurosci. Abstr.*, Vol. 30, 755.13, 2004.
18. Lyalka V., **Zelenin P.**, Orlovsky G., Popova L., Deliagina T. Impairment and recovery of postural control in rabbits with hemisection of the spinal cord. *Soc. Neurosci. Abstr.*, Vol. 30, 654.3, 2004.
19. Lyalka V., **Zelenin P.**, Orlovsky G., Deliagina T. Postural control in rabbits: impairment and recovery after spinal cord lesions. *XVIIth Conference of the International Society for Postural and Gait Research (ISPGR)*, 2005.
20. **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Motor effects of individual reticulospinal neurons match their vestibular inputs. *Soc. Neurosci. Abstr.*, Vol. 31, 168.3, 2005.
21. Islam S., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Backward swimming in the lamprey. *Soc. Neurosci. Abstr.*, Vol. 31, 751.9, 2005.
22. Karayannidou A., Orlovsky G. N., **Zelenin P. V.**, Deliagina T. G. Responses of descending neurons in the lamprey to lateral turns. *Soc. Neurosci. Abstr.*, Vol. 31, 168.4, 2005.
23. Islam S., Musienko P. E., **Zelenin P. V.** Slow swimming-like movements in the lamprey. *Soc. Neurosci. Abstr.*, Vol. 32, 448.9, 2006.
24. Deliagina T. G., Sirota M. G., **Zelenin P. V.**, Orlovsky G. N., Beloozerova I. N. Functional organization of postural system stabilizing trunk orientation in traversal plane in the cat. *Soc. Neurosci. Abstr.*, Vol. 32, 558.1, 2006.
25. Musienko P. E., Orlovsky G. N., **Zelenin P. V.**, Lyalka V. F., Deliagina T. G. Postural performance in decerebrate rabbit. *Soc. Neurosci. Abstr.*, Vol. 32, 558.2, 2006.
26. Karayannidou A., Tamarova Z. A., Sirota M. G., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G., Beloozerova I. N. Integration of sensory inputs from different limbs in postural responses of pyramidal tract neurons. *Soc. Neurosci. Abstr.*, Vol. 32, 657.11, 2006.
27. Karayannidou A., Beloozerova I. N., **Zelenin P. V.**, Stout E. E., Sirota M. G., Orlovsky G. N., Deliagina T. G. Participation of pyramidal tract neurons in control of standing and walking on inclined surface. *Soc. Neurosci. Abstr.*, Vol. 34, 860.3, 2008.
28. **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Activity of reticulospinal neurons during forward and backward locomotion in lamprey. *Soc. Neurosci. Abstr.*, Vol. 35, 662.1, 2009.
29. Lyalka V. F., Karayannidou A., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Facilitation of postural limb reflexes in spinal rabbits. *Soc. Neurosci. Abstr.*, Vol. 35, 766.13, 2009.
30. Deliagina T., **Zelenin P. V.**, Karayannidou A., Orlovsky G. N. Effect of reversible spinalization on spinal neurons mediating postural limb reflexes. *Soc. Neurosci. Abstr.*, Vol. 35, 766.14, 2009.
31. **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Activity of reticulospinal neurons during forward and backward locomotion in lamprey. *FENS satellite symposium on Motor Control*. 2010.
32. **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N., Karayannidou A., Stout E. E., Sirota M.G., Beloozerova I. N. Activity of corticospinal neurons in the cat during different forms of locomotion**.** *2010 FENS Forum*. 2010**.**
33. **Zelenin P. V.**, Deliagina T. G., Orlovsky G. N., Karayannidou A., Dasgupta N., Sirota M. G., Beloozerova I. N. Sources of modulation of pyramidal tract neurons during locomotion. *Soc. Neurosci. Abstr.*, Vol. 36, 290.16, 2010.
34. Deliagina T. G., **Zelenin P. V.**, Sirota M. G., Orlovsky G. N., Beloozerova I. N. Activity of red nucleus neurons in the cat during postural corrections. *Soc Neurosci Abstr* 36: 182.7, 2010.
35. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Effect of galvanic vestibular stimulation on postural limb reflexes and neurons of spinal postural network. *Soc Neurosci Abstr* 37: 923.06, 2011.
36. **Zelenin P. V.**, Hsu L.-J., Orlovsky G. N., Deliagina T. G. Restoration of balance control by means of feedback based on galvanic vestibular stimulation. *Soc Neurosci Abstr* 37: 923.05, 2011.
37. **Zelenin P. V.**, Hsu L.-J., Lyalka V. F., Orlovsky G. N., Deliagina T. G. Spinal interneurons mediating postural limb reflexes. *2012 FENS Forum*, 131.09. 2012.
38. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Different forms of locomotion in spinal lamprey. *2012 FENS Forum*, 131.18. 2012.

39. Lyalka V. F., **Zelenin P. V.**, Hsu L.-J., Orlovsky G. N., Deliagina T. G. Spinal neurons contributing to spinal shock. *Soc Neurosci Abstr* 38: 182.06, 2012.
40. **Zelenin P. V.**, Hsu L.-J., Lyalka V. F., Orlovsky G. N., Deliagina T. G. Heterogeneity of spinal interneurons mediating postural limb reflexes. *Soc Neurosci Abstr* 38: 479.08, 2012.
41. Deliagina T. G., Musienko P. E., **Zelenin P. V.**, Lyalka V. F., Orlovsky G. N., Gerasimenko Y. P. Spinal and supraspinal control of the direction of stepping during locomotion. *Soc Neurosci Abstr* 38: 577.27, 2012.
42. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Motor responses to body bending in different planes elicited by intraspinal stretch receptor neurons in lamprey. *Soc Neurosci Abstr* 38: 788.09, 2012.
43. **Zelenin P. V.**, Hsu L.-J., Lyalka V. F., Orlovsky G. N., Deliagina T. G. Spinal interneurons mediating postural limb reflexes. *TNS Meeting*. 2013.
44. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Central regulation of spinal reflex responses to body bending mediated by intraspinal stretch receptor neurons in lamprey. *Soc Neurosci Abstr* 39: 782.20, 2013.
45. Deliagina T. G., **Zelenin P. V.**, Lyalka V. F., Hsu L.-J., Orlovsky G. N. Effect of acute lateral hemisection of the spinal cord on neurons of spinal postural network. *Soc Neurosci Abstr* 39: 830.09, 2013.
46. **Zelenin P. V.**, Musienko P. E., Gerasimenko Y. P., Orlovsky G. N., Deliagina T. G. Mechanisms of balance control during locomotion. *Soc Neurosci Abstr* 39: 832.06, 2013.
47. **Zelenin P. V.**, Lyalka V. F., Hsu L.-J., Orlovsky G. N., Deliagina T. G. Effects of acute spinalization on neurons of spinal postural network. *Soc Neurosci Abstr* 40: 732.10, 2014.
48. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Neural mechanisms of corrective steps. *Soc Neurosci Abstr* 40: 734.10, 2014.
49. Deliagina T. G., **Zelenin P. V.**, Lyalka V. F., Hsu L.-J., Orlovsky G. N. Changes in activity of spinal postural networks at different time points after spinalization. *Soc Neurosci Abstr* 41: 241.04, 2015.
50. Hsu L.-J., **Zelenin P. V.**, Orlovsky G. N., Deliagina T. G. Reticulospinal neurons transmitting commands for modification of spinal reflex responses to body bending during escape behaviors in lampreys. *Soc Neurosci Abstr* 41: 798.09, 2015.
51. **Zelenin P. V.**, Musienko P. E., Gorskii O. V., Lyalka V. F., Gerasimenko Y. P., Orlovsky G. N., Deliagina T. G. Activity of individual spinal neurons during locomotion initiated from brainstem and from spinal cord. *Soc Neurosci Abstr* 41: 798.11, 2015.
52. **Zelenin P. V.**, Musienko P. E., Gorskii O. V., Lyalka V. F., Merkulyeva N., Gerasimenko Y. P., Orlovsky G. N., Deliagina T. Activity of individual spinal neurons during forward and backward locomotion. *Soc Neurosci Abstr* 42: 535.02, 2016.
53. Vemula M. G., Orlovsky G. N., Deliagina T. G., **Zelenin P. V.** Kinematics of forward and backward walking in the mouse. *Soc Neurosci Abstr* 42: 808.04, 2016.
54. Vemula M. G., Deliagina T. G., **Zelenin P. V.** Kinematics of forward and backward locomotion in the mouse. 2nd Nordic Neuroscience (http://nordicneuroscience.org/2017/), *Abstract book*, p. 103, 2017.
55. **Zelenin P. V.**, Musienko P. E., Gorskii O. V., Lyalka V. F., Merkulyeva N., Gerasimenko Y. P., Orlovsky G. N., Deliagina T. G. Neuronal mechanisms of forward and backward locomotion evoked by epidural electrical stimulation of the spinal cord. 2nd Nordic Neuroscience (http://nordicneuroscience.org/2017/), *Abstract book*, p. 106, 2017.
56. Lyalka V. F., **Zelenin P. V.**, Hsu, L.-J., Orlovsky G. N., Deliagina T. G. Changes in activity of spinal postural networks at different time points after spinalization. 2nd Nordic Neuroscience (http://nordicneuroscience.org/2017/), *Abstract book*, p. 112, 2017.
57. **Zelenin P. V.**, Lyalka V. F., Orlovsky G. N., Deliagina T. G. Changes in operation of postural networks in rabbits with postural functions recovered after lateral hemisection of the spinal cord. *Soc Neurosci Abstr* 43: 780.10, 2017.
58. Deliagina T., Musienko P. E., Gorskii O. V., Lyalka V. F., Merkulyeva N., Gerasimenko Y. P., **Zelenin P. V.** Spinal neurons mediating effect of epidural stimulation of the spinal cord on locomotor network. *Soc Neurosci Abstr* 43: 65.09, 2017.
59. Klishko A. N., Markin S. N., Rybak I. A., **Zelenin P. V.**, Gerasimenko Y. P., Musienko P. E., Deliagina T. G., Prilutsky B. I. Muscle synergies during cat locomotion: effects of epidural stimulation of the spinal cord and locomotor CPG. *Neural Control of Movement Annual Meeting Abstracts*, 2018.
60. Prilutsky B. I., Klishko A. N., Markin S. N., Rybak I. A., Gerasimenko Y. P., Musienko P. E., **Zelenin P. V.**, Deliagina T. G. The origin of muscle synergies during intact and decerebrate cat locomotion revealed by a neuromechanical model of spinal locomotor control. *World Congress of Biomechanics Abstracts*, 2018.
61. Vemula M. D.G., Lyalka V. F., Talpalar A. E., Kiehn O., Deliagina T. G., **Zelenin P. V.** Role of V0 commissural interneurons in control of basic motor behaviours. *Soc Neurosci Abstr* 44: 151.01, 2018.

62. **Zelenin P. V.**, Vemula M. D. G., Lyalka V. F., Deliagina T. Role of nucleus reticularis gigantocellularis in control of posture. *Soc Neurosci Abstr* 44: 673.01, 2018.
63. Prilutsky B. I., Rybak I. A., Markin S. N., **Zelenin P. V.**, Deliagina T. G., Gerasimenko Y. P., Musienko P. E., Klishko A. N. Modeling hindlimb elevation angles during intact locomotion and locomotion evoked by MLR- and epidural spinal stimulation in decerebrate cats. *CNS 2019 Program*: #390, 2019.
64. **Zelenin P. V.**, Gorskii O. V., Gerasimenko Y. P., Deliagina T. G., Musienko P. E. Functional organization of the spinal locomotor network based on analysis of interneuronal activity. *Soc Neurosci Abstr* 45: 497.14, 2019.