

Domonkos HORVATH

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PROFESSIONAL EXPERIENCE

- 2018- Contributing lecturer and teaching assistant – Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary
- 2014- Assistant research fellow – Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary
- 2012- Assistant research fellow – Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology, Comparative Psychophysiology Research Group, Budapest, Hungary

EDUCATION

- 2019-2020 PhD studies – János Szentágothai Neuroscience Doctoral School, Semmelweis University, Budapest, Hungary
- 2012-2013 Master's studies – Informatics specialist in Bionic Computing – Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary
- 2010 State accredited Animal Care and Use training, Semmelweis University, Budapest, Hungary
- 2010-2013 PhD Student – János Szentágothai Neuroscience Doctoral School, Semmelweis University, Budapest, Hungary
- 2005-2010 Master studies – Electronic and computer engineering, Infobionics – Pázmány Péter Catholic University, Faculty of Information Technology and Bionics, Budapest, Hungary

GRANTS

- 2014-2017 Hungarian Academy of Sciences Young researcher grant – RCNS HAS Institute of Cognitive Neuroscience and Psychology

AWARDS

- 2013 WERC-IBRO / CEERC-IBRO Stipend – Auditory Neuroscience Training School of FENS Featured Regional Meeting, Prague, Czech Republic
- 2012 FENS-IBRO-CEERC Travel Grant – 8th FENS Forum of Neuroscience, Barcelona, Spain
- 2009 Erasmus fellowship for one semester – Ludwig Maximilians University, Faculty of Bioinformatics, Munich, Germany

INTERNATIONAL CONFERENCE ORGANIZING

- 2016 Member of the Organizing Committee – IBRO Workshop 2016, Budapest, Hungary
- 2016 Member of the Organizing Committee – 1st Hungarian Neuroscience Doctoral Conference, satellite meeting of the IBRO Workshop 2016, Budapest, Hungary

SELECTED PUBLICATIONS

Fiáth R, Hofer KT, Csikós V, **Horváth D**, Nánási T, Tóth K, Pothof F, Böhrer C, Asplund M, Ruther P, Ulbert I. Long-term recording performance and biocompatibility of chronically implanted cylindrically-shaped, polymer-based neural interfaces. **BIOMEDIZINISCHE TECHNIK** 63: 3 pp. 301-315., 15 p. (2018)

Fiáth R, Raducanu BC, Musa S, Andrei A, Lopez CM, van Hoof C, Ruther P, Aarts A, **Horváth D**, Ulbert I. A silicon-based neural probe with densely-packed low-impedance titanium nitride microelectrodes for ultrahigh-resolution in vivo recordings. **Biosensors & Bioelectronics** 106: pp. 86-92. (2018)

Fiath R, Kerekes BP, Wittner L, Toth K, Beregszaszi P, **Horvath D**, Ulbert I. Laminar analysis of the slow wave activity in the somatosensory cortex of anesthetized rats. **European Journal of Neuroscience** 44:(3) pp. 1935-1951. (2016)

Fiath R, Beregszaszi P, **Horvath D**, Wittner L, Aarts AA, Ruther P, Neves HP, Bokor H, Acsady L, Ulbert I. Large-scale recording of thalamocortical circuits: in vivo electrophysiology with the two-dimensional electronic depth control silicon probe. **Journal of Neurophysiology** 116:(5) pp. 2312-2330. (2016)

Dombovári B, Fiáth R, Kerekes BP, Tóth E, Wittner L, **Horváth D**, Seidl K, Herwik S, Torfs T, Paul O, Ruther P, Neves H, Ulbert I. In vivo validation of the electronic depth control probes, **Biomed Tech (Berl)**. 59:(4) pp. 283-289. (2014).

Horvath D., Lesica NA. The effects of interaural time difference and intensity on the coding of low frequency sounds, **Journal of Neuroscience**, 2011 March 9; 31(10):3821-7

Lesica NA., Hofer SB., Mrcic-Flogel TD., **Horvath D.**, Grothe B. Genetic optimization of population decoding with distance metrics, **Neural Networks**, 2010 August; 23(6):728-32

INVITED TALKS

2019 University College London, London, United Kingdom
2017 The 3rd Workshop on Cognitive Neuroscience of Auditory and Cross-modal Perception, Kosice, Slovakia

RESEARCH EXPERTISE

Experience in acute and chronic surgery techniques for in vivo rodent and cat electrophysiology and imaging, including anesthesia, craniotomy, implantation and postoperative care methods. Performed several dozens of cat brain surgeries for chronic multielectrode array implantation and for chronic cortical imaging window implantation. Carried out chronic electrophysiology recordings on anesthetized and freely moving, awake and naturally sleeping cats for several months. Performed two-photon imaging experiments for several weeks on anesthetized cats.

LANGUAGES

Hungarian: Mother tongue
English, German: Fluent