Aleksandras Voicikas Curriculum vitae

Contact Information

Researcher, Assistant Professor
Life Sciences Center
Vilnius University
Saulėtekio ave. 7, LT-10257 Vilnius, Lithuania

E-mail: avoicikas@gmail.com
WWW: avoicikas.github.io

Research Interests

Brain-computer interface (BCI), biosignals processing and analysis, neurofeedback, electroencephalography (EEG), steady state response (ASSR, VSSR, SSSR), event-related potentials (ERP), experiment setup and optimization.

Education

PhD studies, VU, Life Sciences Center, 2019
- Biophysics
- Thesis topic: Investigation of the Dependence of Brain Auditory Steady-State Responses on Stimulation Type
- Supervisor: dr. Inga Griškova-Bulanova

Master studies, VU, Faculty of Natural Sciences, 2013
- Biophysics
- Thesis topic: EEG Phase Coherence During Presentation of Emotional Stimuli
- Supervisor: Prof. dr. Osvaldas Rukšėnas

Bachelor studies , VU, Faculty of Physics , 2008
- Computing Physics
- Thesis topic: Statistical Simulations: Sinai's Billiard and Resistor Networks
- Supervisor: Prof. dr. Egidijus Anisimovas

Secondary education, Žemynos gymnasium, 2004

Publications


- Griskova-Bulanova I, Voicikas A, Dapsys K, Melynyte S, Andruskevicius S, Pipinis E (2021) Envelope Following Response to 440 Hz Carrier Chirp-Modulated Tones Show Clinically Relevant Changes in Schizophrenia. Brain Sciences 22
- Binder M, Gorska U, Pipinis E, Voicikas A, Griskova-Bulanova I (2020) Auditory steady-state response to chirp-modulated tones: A pilot study in patients with disorders of consciuosness. NeuroImage: Clinical 102261
- Griskova-Bulanova I, Voicikas A, Pipinis E, Parciauskaite V, Potapovas M, Jurkuvenas V (2019) Auditory steady-state responses and the complex information processing. IBRO Reports 6-S191
- Parciauskaite V, Voicikas A, Jurkuvenasa V, Tarailis P, Kraulaidis M, Pipinis E, Griskova-Bulanva I (2019) 40-Hz auditory steady-state responses and the complex information processing: An exploratory study in healthy young males. Plos one 10-14
- Pipinis E, Voicikas A, Griskova-Bulanova I (2018) Low and high gamma auditory steady-states in response to 440 Hz carrier chirp-modulated tones show no signs of attentional modulation. Neurosci Lett 678
- Griskova-Bulanova I, Pipinis E, Voicikas A, Koenig T (2018) Global field synchronization of 40 Hz auditory steady-state response: Does it change with attentional demands? Neurosci Lett 674:127–131
- Griskova-Bulanova I, Dapsys K, Melynyte S, Voicikas A, Maciulis V, Andruskevicius S, Korostenskaja M (2018) 40 Hz auditory steady-state response in schizophrenia: Sensitivity to stimulation type (clicks versus flutter amplitude-modulated tones). Neurosci Lett 662:152–157.
- Melynyte S, Pipinis E, Genyte V, Voicikas A, Rihs T, Griskova-Bulanova I (2017) 40 Hz Auditory Steady-State Response: The Impact of Handedness and Gender. Brain Topogr 31:1–11
- Griskova-Bulanova I, Griksiene R, Voicikas A, Ruksenas O (2016) Go and NoGo: modulation of electrophysiological correlates by female sex steroid hormones. Psychopharmacology (Berl) 233:2607–2615

- Voicikas A, Niciute I, Ruksenas O, Griskova-Bulanova I (2016) Effect of attention on 40 Hz auditory steady-state response depends on the stimulation type: Flutter amplitude modulated tones versus clicks. Neurosci Lett 629:215–220
- Rimgailė-Voicik R, Naujalis JR, Voicikas A (2015) Organization of club moss gametophytes and juvenile sporophyte populations in pine forests. Polish J Ecol 63:467–480

Participation in projects

- Research project "Individual gamma frequency based neurofeedback"; Researcher, 2020-2022
- Research project "40 Hz ASSR dependence on stimulus duration"; Researcher, 2020-2021
- Research project "Brain-Computer Music Interfacing for Embodied Musical Interaction"; Researcher, 2019-2021
- Research project "New EEG Clustering Methods for Pre-clinical and Clinical Applications" funded by Chilean funding agency Comisión Nacional de Investigación Científica y Tecnológica (CONICYT); 2018-2019
- Institutional partnership project "State-dependent information processing: implementation of electrical neuroimaging approach in Lithuania" in collaboration with University of Geneva and University Hospital of Psychiatry Bern, CH-3-ŠMM-02/03 from the Research Council of Lithuania within the Lithuanian-Swiss programme "Research and development"; 2016
- Research project "Treatment-resistant schizophrenia: identification of electrophysiological markers" MIP-009/2014 form the Research Council of Lithuania within the collaboration programme with USA scientists; Researcher, 2014-2016
- PhD project "Brain steady-state response dependence on stimulation type"; 2014-2019

Teaching

- Biological data analysis and collection (BSc; 2019 to present)
- Biological data analysis (MCs: 2020 to present)
- Study Course "EEG experiment design and data analysis" 2019

Awards

- LMT (Research Council of Lithuania) scholarship for academic results (2017)

Qualification improvement

Internship:

- 2016.06.02-07.01 Functional Brain Mapping Laboratory at the University of Geneva (Prof. Christoph Michel, Geneva (Switzerland))

Courses Attended:

- "EEG: Analytical Approaches and Applications"; 6-7 06 2019
- "General competency skills training"; Vilnius, Lithuania; 17-21 10 2016
- "Neuroimaging and fMRI data analysis – clinical and research applications"; Vilnius, Lithuania; 5-9 09 2016
- "London SPM Courses 2016" London, UK; 16-19 04 2016
- "EEG/ERP Topography"; Vilnius, Lithuania; 20-23 03 2016
- "3rd Baltic-Nordic Summer School on Neuroinformatics"; Tartu , Estonia; 15-18 06 2015
- "Cognitive neurosciecne of auditory and cross-modal perception"; Kosice, Slovakia; 20-24 04 2015
- "Practical data analysis and modeling in cognitive and clinical neuroscience"; Ghent, Belguim; 14-18 03 2014
- "Nervous system analysis methods: EEG and ERP"; Vilnius, Lithuania;26-28 09 2013
- "1st Baltic-Nordic Summer School on Neuroinformatics"; Kaunas, Lithuania; 29-31 05 2013

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| Hardware and Software Skills | Computer Programming:<br>• Matlab , Python, R, UNIX shell scripting<br>Experiment Setup:<br>• E-Prime, Experiment Builder, PsychoPy, Psychtoolbox<br>Productivity Applications:<br>• Git, Microsoft Office, Libre Office, TEX (LATEX, BibTEX)<br>Operating Systems:<br>• Microsoft Windows, Linux<br>Analog and Digital Electronics:<br>• Arduino UNO/DUE, Raspbery PI |
| Languages | • Lithuanian - mother tongue<br>• English -(CERF - understanding C1 , speaking B2, writing B2)<br>• Russian -(CERF - understanding B2 , speaking B2, writing A1) |
| Professional Memberships | • Lithuanian Neuroscience Association (2012 to present)<br>• The International Society for Brain Electromagenetic Topography (ISBET) (2016 to present)<br>• Organisation of Human Brain Mapping (OHBM) (2016 to present) |
| Service | • "10th Conference of Lithuanian Neuroscience Association (LNA)"; Vilnius. Lithuania; 30-1 11-12 2018<br>• "Nervous system analysis methods: EEG and ERP"; Vilnius, Lithuania; 5-6 02 2016<br>• "Brain Awareness Week 2015" Vilnius, Lithuania;16 – 22 03 2015<br>• "School 2013"; Litexpo ;Vilnius, Lithuania 6-8 12 2016<br>• "Spaceship Earth"; Kaunas, Lithuania; 13 09 2013 |
| Other information | • Driving license B category, 2016 |