

Eduard Bakštein

researcher, lead data scientist
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<http://bakstein.net>



WORK EXPERIENCE

- 10/2016 - *Researcher, head of biomedical signal processing research group*, National Institute of Mental Health, Klecany, Czech. Rep.
- 10/2014 - 10/2016 *Junior researcher*, National Institute of Mental Health, Klecany, Czech. Rep.
- 01/2021 - *Chief Data Officer*, mindpax.me
- 01/2016 - 12/2020 *Data scientist*, mindpax.me
- 2011 - *Researcher*, Dept. of Cybernetics, Faculty of Electrical Engineering, Czech Tech. University in Prague
- 2005 - 2013 *Freelance webdeveloper and data analyst*

EDUCATION

- 2010 - 2017 *Faculty of Electrical Engineering, CTU in Prague*
PhD in artificial intelligence and biocybernetics. Dissertation: *Deep Brain Recordings in Parkinson's Disease: Processing, Analysis and Fusion with Anatomical Models* (supervisor: assoc. prof. Daniel Novak and prof. Olga Stepankova, CTU Prague), *defended 03/2017*
- 2007 - 2010 *Faculty of Electrical Engineering, CTU in Prague*
Master's degree in Biomedical Engineering
Diploma thesis: *Tremor detection for Parkinsonian patients* (supervisor: prof. Kevin Warwick, University of Reading)
- 2004 - 2007 *Faculty of Electrical Engineering, CTU in Prague*
Bachelor Degree in Cybernetics and Measurements

KEY SKILLS

- Data analysis *Managing teams working on complex applied and research-oriented data analysis, modelling and machine-learning tasks.*
- Machine learning *Classifier design, evaluation and interpretation, working with images and high-dimensional data.*
- Statistical analysis *Statistical evaluation of data, Biostatistics, study design.*
- Signal processing *Handling, (pre)processing and transformation of time series,*

AWARDS

- 2016 best publication award of the Czech Society for Clinical Neurophysiology for the paper Mikolas et. al. Psychol. Med. 2016
- 2018 Young Investigator Award at the World Congress on Medical Physics and Biomedical Engineering in Prague offered by the International Federation of Biomedical Engineers for his work on STN mapping (Bakstein et al. 2018)

EDUCATIONAL AND EDUCATIONAL ACTIVITIES

lecturer and main teaching assistant, author of laboratory exercises at the FEE CTU in Prague in pregraduate courses on NIN-Neuroinformatics and BIO-Biometrics, previously also teaching Introduction to artificial intelligence and Data analysis.

Supervisor of multiple bachelor's and master's students and 2 PhD students.

SCIENTOMETRIC PARAMETERS

- citations: 199 (Scopus) 169 (WoS) 247 (google scholar), as of Aug 29, 2022
- h-index: 8 (WoS, google scholar), 7 (scopus)
- peer review: completed reviews for multiple biomedical-oriented journals including Neuroscience methods, Annals of Biomedical Engineering, Biomedical Signal Processing and Control, British Journal of Psychiatry or conferences (ACM UBICOMP, EMBC, MICCAI)

OTHER EXPERIENCE

- 2019- Recipient (co-PI) of national grant from the Czech Ministry of Health (NV19-04-00233). Previously also PI of education-oriented grants from the Ministry of Education. He worked as a part of the team on multiple national (Czech science foundation, ministry of health, ministry of education)
- 2015-2019 Working on European (ENIAC) and national (Czech Science foundation, Ministry of Education, Youth and Sports) grants, grant applications and management. Education, Youth and Sports) grants, grant applications and management.
- 03/2009 Short-term study at École des Mines de Paris
- 2009 Study at NTNU Trondheim (Norway)
- 2004 - 2006 Main leader of children organization KRUH organizing events for ca. 80 children, leadership of the organizing team

LANGUAGE SKILLS

Czech	native speaker
English	fluent
German	communicative
Spanish	communicative

LINKS

- <http://bakstein.net> - personal research page
 - <http://neuro.felk.cvut.cz/team/#eduard-bakstein>
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SELECTED PUBLICATIONS

- J. Schneider, E. Bakštejn, M. Kolenič, P. Vostatek, C. U. Correll, D. Novák, and F. Španiel (2020). “Motor activity patterns can distinguish between interepisode bipolar disorder patients and healthy controls”. In: *CNS Spectrums*, pp. 1–11. DOI: [10.1017/S1092852920001777](https://doi.org/10.1017/S1092852920001777), *IF(2020)=3.8*
- J. Anýž, E. Bakštejn, D. Dudysová, K. Veldová, M. Kliková, E. Fárková, J. Kopřivová, and F. Španiel (2019). “No wink of sleep: Population sleep characteristics in response to the brexit poll and the 2016 U.S. presidential election”. In: *Social Science and Medicine* 222.November 2018, pp. 112–121. DOI: [10.1016/j.socscimed.2018.12.024](https://doi.org/10.1016/j.socscimed.2018.12.024), *IF(2020)=4.4*
- E. Bakštejn, K. Mladá, E. Fárková, M. Kolenič, F. Španiel, D. Manková, J. Korčáková, P. Winkler, and T. Hajek (2020). “Cross-sectional and within-subject seasonality and regularity of hospitalizations: A population study in mood disorders and schizophrenia”. In: *Bipolar Disorders* 902, bdi.12884. DOI: [10.1111/bdi.12884](https://doi.org/10.1111/bdi.12884), *IF(2021)=6.7*
- E. Bakštejn, T. Sieger, J. Wild, D. Novák, J. Schneider, P. Vostatek, D. Uργοšík, and R. Jech (2017). “Methods for automatic detection of artifacts in microelectrode recordings”. In: *Journal of Neuroscience Methods* 290, pp. 39–51. DOI: <https://doi.org/10.1016/j.jneumeth.2017.07.012>, *IF(2016)=2.6*
- E. Bakštejn, J. Burgess, K. Warwick, V. Ruiz, T. Aziz, and J. Stein (2012). “Parkinsonian tremor identification with multiple local field potential feature classification”. In: *Journal of Neuroscience Methods* 209.2, pp. 320–330. DOI: [10.1016/j.jneumeth.2012.06.027](https://doi.org/10.1016/j.jneumeth.2012.06.027), *IF(2012)=2.1*
- F. Španiel, E. Bakštejn, J. Anyz, J. Hlinka, T. Sieger, J. Hrdlicka, N. Gornerova, and C. Hoschl (2016). “Relapse in schizophrenia: definitively not a bolt from the blue”. In: *Neuroscience Letters* S0304-3940.16, pp. 30265–8. DOI: [10.1016/j.neulet.2016.04.044](https://doi.org/10.1016/j.neulet.2016.04.044), *IF(2015)=2.1*
- P. Mikolas, T. Melicher, A. Skoch, M. Matejka, A. Slovakova, E. Bakštejn, T. Hajek, and F. Španiel (2016). “Connectivity of the anterior insula differentiates participants with first-episode schizophrenia spectrum disorders from controls: a machine-learning study”. In: *Psychological Medicine*. cited By 0; Article in Press, pp. 1–10. DOI: [10.1017/S0033291716000878](https://doi.org/10.1017/S0033291716000878), *IF(2016)=5.2*, *best publication award of the Czech Society for Clinical Neurophysiology*