Europass curriculum vitae

Personal information

Surname(s) / First name(s)	Dr. Berényi Antal
Address(es)	
Telephone(s)	
E-mail(s)	
Nationality	
Date of birth	
Gender	

Work experience

Dates	2013-
Occupation or position held	Principal Investigator, Adjunct Professor
Name and address of employer	MTA-SZTE 'Momentum' Oscillatory Neural Networks Research Group, Department of Physiology, University of Szeged, Hungary
Dates	2013-
Occupation or position held	Adjunct Assistant Professor
Name and address of employer	Department of Neuroscience and Physiology, NYU Langone Medical Center, New York City, NY, USA
Dates	2012-2013
Occupation or position held	Postdoctoral Fellow
Name and address of employer	Buzsáki Lab, Neuroscience Institute, NYU Medical Center, New York, USA
Dates	2010-2012
Occupation or position held	Postdoctoral Fellow
Name and address of employer	Buzsáki Lab, Center for Molecular and Behavioral Neuroscience, Rutgers University, Newark, USA
Dates	2002-2010
Occupation or position held	Early-stage researcher; Experienced researcher and assistant lecturer since 2009
Name and address of employer	Vision research group, Department of Physiology, University of Szeged, Hungary

Education and training

Dates	2006 – 2009
Title of qualification awarded	Medical economist
Title of the diploma work	*R&D strategies of Hungarian small and medium size enterprises*
Name and type of organisation providing education and training	Faculty of Economics, University of Szeged
Dates	2006 – 2009
Title of qualification awarded	Ph.D.

Title of the dissertation	*Spatial and temporal analysis of information processing in the ascending tectofugal visual system*
Principal subjects/skills covered	Neurosciences; Theoretical medical sciences
Organisation and leaders providing education and training	Department of Physiology, University of Szeged Dr. György Benedek MD PhD DSc; Dr. Attila Nagy MS PhD
Dates	2000 – 2006
Title of qualification awarded	M.D. (summa cum laude - excellent)
Title of the diploma work	*Processing of visual information along the pathway between the suprageniculate nucleus and the anterior ectosylvian cortex*
Name and type of organisation providing education and training	Faculty of Medicine, University of Szeged

Personal skills and competences

Mother tongue(s): Hungarian

Other language(s)	Understanding		Speaking		Writing
European level (*)	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C1	C1
German	B1	B2	B1	B1	B1
French	A1	A1	A1	A1	A1

(*) Common European Framework of Reference (CEF) level

Scientific skills and competences	30 published articles in referred, international journals (cited 614 times), 40 conference publication Cummulative impact factor of the whole text articles (ISI 2013): 185.41, Research experience on anaesthetized and behaving animal models (mice, rats, cats and awake, non-human primates
Organisational skills and competences	Successful international collaborations with US, Japanese, and Polish research groups, establishing and leading a successful research group in Hungary
Technical skills and competences	Stereotaxic aiming Extracellular single-unit and local-field potential recording experience Signal processing automation, data analysis and software development experience Experience with analogue and digital electronics development Optogenetics Transcranial stimulation
Computer skills and competences	Knowledge of advanced programming techniques in MATLAB, C++, Delphi, Visual Basic and Assembler languages
Visiting scholarships	Ruhr University, Bochum, Germany (1st-31st October 2006) Nencki Institute of Experimental Biology, Warsaw, Poland (2007, 2008) 4th ISS on Emerging Technologies in Biomedicine, Patras, Greece (June 2008) Niigata University, Niigata, Japan (07th-22nd December 2008)
Scholarships and Grants	EU FP7 ERC Starting Grant (2013-2018; 1.85 mUSD) 'Momentum' Grant of the Hungarian Academy of Sciences (2013-2018;1.15 mUSD) Marie Curie International Outgoing Fellowship (2010-2012; 310 kUSD) Rosztóczy Fellowship (2010; 30 kUSD) Scholarship of the Hungary Republic (2003-2004, 2004-2005)
Awards	'Junior Prima' Most successful young neuroscientist of the country (Hungarian Academy of Sciences, 2013)

Selected publications related to the research described in the essay

1. Berényi A, Belluscio M, Mao D, Buzsaki G. (2012) Closed-loop control of epilepsy by transcranial electrical stimulation. Science 337:735-737.

2. Madisen L, Mao T, Koch H, Zhuo Jm, Berényi A, Fujisawa S, Hsu Yw, Garcia Aj 3rd, Gu X, Zanella S, Kidney J, Gu H, Mao Y, Hooks Bm, Boyden Es, Buzsáki G, Ramirez Jm, Jones Ar, Svoboda K, Han X, Turner Ee, Zeng H. A (2012) Toolbox of Cre-dependent optogenetic transgenic mice for light-induced activation and silencing. Nat Neurosci 15:793-802.

3. Patel J, Fujisawa S, Berényi A, Royer S, Buzsáki G. (2012) Traveling theta waves along the entire septotemporal axis of the hippocampus. Neuron 75:410-417.

4. Patel J, Schomburg EW, Berényi A, Fujisawa S, Buzsáki G. (2013) Local Generation and Propagation of Ripples along the Septotemporal Axis of the Hippocampus J Neurosci. 33:17029-17041

5. Agarwal G, Stevenson IH, Berényi A, Mizuseki K, Buzsáki G, Sommer FT. (2014) Spatially Distributed Local Fields in the Hippocampus Encode Rat Position Science 344:626-630

6. Berényi A, Somogyvári Z, Nagy AJ, Roux L, Long JD, Fujisawa S, Stark E, Leonardo A, Harris TD, Buzsaki G. (2013) Large-scale, high-density (up to 512 channels) recording of local circuits in behaving animals. J Neurophysiol. 111: 1132-1149

Relevant professional experience

2013- Investigating the neuronal circuit dynamics of the evolution of epileptic seizures
Developing a method to simultaneously record electroencephalograms with transcranial electrical stimulation
Investigating the electrical conductive properties of the human skull

2010-2013 Developed a closed loop transcranial electronic stimulation system to detect and terminate thalamocortical seizures in rats
Developed a 256 channel multiplexed biosignal amplifier system for freely moving rats and mice
Participated in the development of a new transgenic mouse strain that constitutionally express photosensitive ion channels, and performed optogenetical experiments to investigate hippocampal network activity

2006-2009 Conducted visual experiments in anesthetized cats and investigated the role of the substantia nigra and caudate nucleus in visual motion processing.
Investigated oscillatory network activity in these structures

2000-2006 Conducted visual experiments in anesthetized cats
Developed a mathematical model to automate the determination of neuronal response onset latency