

## Employment

**Research Technician at Centre for Neural Circuits and Behaviour**, University of Oxford, UK.

*Duties:* Maintenance and update of the [ICGenealogy Database](#), that provides in-deep property characterisation of ion channel models and network visualization of their genealogy relationships.

## Education

**PhD Candidate at the Computational Neuroscience Laboratory**, Institute of Molecular Biology & Biotechnology, Foundation for Research & Technology, Greece, Supervised by Dr. Poirazi.

- *Research Topic:* Investigation of the role of structural plasticity in synaptic integration and information processing capabilities of the CA1 pyramidal neurons in hippocampus.

**Master of Science courses**, Computer Science Department, University of Crete, Greece

- Machine Learning
- Artificial Intelligence

**Bachelor of Science**, Molecular Biology and Genetics Department, Health Sciences School, Democritus University of Thrace, Greece

- Grade: 8.4/10 - 5th between 87 graduates of academic year 2010-2011
- *Diploma Thesis:* "Transcriptional Regulation of the Lhx6 Gene"

**Secondary Education**, 3rd General High School of Ptolemaida, Greece

- Grade: 19.2/20 - Excellent

## Laboratory Experience

Traineeship at the **Developmental Biology and Molecular Neurobiology Laboratory**, at the Department of Molecular Biology & Genetics, School of Health Sciences, Democritus University of Thrace, Greece, under the supervision of Dr. Grigoriou. I gained experience in:

- **Data Mining.** Experimental gene expression data were extracted from public repositories and exhaustively analyzed to select genes with a spatio-temporal expression pattern restricted to the Medial Ganglionic Eminence (MGE) during prenatal development of the mouse telencephalon.
- **In Situ Hybridization.** Analysis of the spatiotemporal expression pattern of the *tle6* gene was performed by implementing in situ hybridization experiments on mouse embryo slides at multiple different developmental stages.

Diploma Thesis at the **Gene Expression Regulation Laboratory**, at the Department of Molecular Biology & Genetics, School of Health Sciences, Democritus University of Thrace, Greece, under the supervision of Dr. Skavdis. I was trained in genetic engineering manipulations and molecular cloning techniques by constructing luciferase reporter vectors:

- **Molecular Cloning Techniques.** PCR, primer design, restriction digests, phenol-chloroform extraction, column chromatography, electroelution, competent cells preparation & transformation, plasmid and genomic DNA isolation [by using both boiling and alkaline protocols].

## Computer Skills

- Operating Systems: Linux, Mac OS X, Windows
- Programming Languages: **Python, NEURON, Perl, C, C++, Java, MATLAB**
- Software: Adobe Photoshop/Illustrator, ClustalW, Jalview, RasMol, DNA Strider, REMOD
- Databases: NeuroMorpho.Org, NCBI (PubMed, GenBank, Blast, Unigene), EMBL-EBI (ExPASy tools: Uniprot, Prosite), GenePaint, SAGE, MGI, Allen Brain.

## Code Achievements

In 2014, I developed and published a **Computational Neuroscience/Neuroinformatics tool**, intended to be used in the study of neural structural plasticity. It counts more than **7,000 lines of Python code** [back-end] and can be found here:

- *web app*: <http://www.remod.gr/>
- *published as Research Method in*: <http://journal.frontiersin.org/article/10.3389/fnana.2015.00156>
- *github code*: <https://github.com/bozelosp/remod>

In 2017, I developed custom code frameworks to facilitate the **analysis/visualization of Ca<sup>2+</sup> imaging data** and **electrophysiological recordings** from place-field forming **CA1 pyramidal neurons**, in rat hippocampus. *Research articles soon to be published, in collaboration with Dr. Losonczy, Columbia University, New York, USA.*

## Language Skills

- **Greek**: Native Speaker
- **English**: Proficiency in English  
(State Certificate Of Foreign Language Proficiency - C1 Level)
- **Spanish**: Elementary proficiency
- **French**: Elementary proficiency

## Scholarships & Awards

- **Latsis Foundation Scholarship** for post-graduate research in the field of Life Sciences, based on academic excellence, September 2011
- **Bodossakis Foundation Scholarship** for post-graduate research studies at PhD level, based on academic excellence, September 2012
- Selected among top 35 Greek university graduates to attend the **Bodossaki Foundation Seminar Lectures in Biology & Medicine**, based on academic excellence, June 2012

## Funding

My PhD candidacy was supported by the **ERC Starting Grant dEMORY** (ERC-2012-StG-311435) and **BIOSYS research project**, Action KRIPIS, project No MIS-448301 (2013SE01380036). The latter was funded by the General Secretariat for Research and Technology, Ministry of Education, Greece

## Research Articles

Bozelos P, Stefanou - Stamatiadis S, Bouloukakis G, Melachrinos C and Poirazi P (2015). REMOD: a tool for analyzing and remodeling the dendritic architecture of neural cells. *Front. Neuroanat.* 9:156. doi: 10.3389/fnana.2015.00156

## Book Chapters

Panagiotis Bozelos and Panayiota Poirazi, “Impact of Structural Plasticity on Memory Capacity”, ‘Rewiring the Brain: A Computational Approach to Structural Plasticity in the Adult Brain’, edited by Arjen van Ooyen and Markus Butz, **Springer**, New York (2017).

## Conference Posters

Bozelos, P., Poirazi, P, “Assessing the place field formation capability of CA1 pyramidal models in Alzheimer’s Disease”, EMBO Conference “Cell Biology of the Neuron: Polarity, Plasticity and Regeneration”, held at Fodele Beach Resort, Fodele, Crete, Greece, 7-10 May 2017.

Bozelos, P., Bouloukakis, G., Stefanou, S., Poirazi, P. “*REMOD: A Computational Tool For Remodeling Neuronal Dendrites*”, AREADNE Conference on Research in Encoding And Decoding of Neural Ensembles, Santorini, Greece, 25-29 June 2014.

Chytoudis, C., Sadikoglou, E., Gountakos, A., Bozelos, P., Grigoriou, M., Skavdis, G., “*Expression and Regulation of the tle4 gene in the developing mouse nervous system*”, 61st Congress of the Greek Society of Biochemistry and Molecular Biology, Alexandroupolis, Greece, 15-17 October 2010.

## Oral Presentations

Bozelos, P., Bouloukakis, G., Stefanou, S., Poirazi, P. “*REMOD: A Computational Tool For Remodeling Neuronal Dendrites*”, Hellenic Society for Computational Biology and Bioinformatics, Athens, Greece, 10-12 October 2014.

## Positions of Responsibility

I occasionally contribute to a **science column** hosted at <http://www.lifo.gr>, one of the **top 5 Greek news portals** with > 4.5 million unique visitors per month. My articles have been read by more than 800.000 people around the world, as of August 2017.

I **founded and administrated** <http://mbg.edu.gr> (discontinued), a portal dedicated to science communication efforts on the latest proceedings in Molecular Biology and Genetics.

## Other Interests

I am particularly interested in topics related to **History and Philosophy of Science, Artificial Intelligence, and Astrophysics**. I also enjoy artistic activities, especially photography, and occasionally engage in sports, like volleyball, and cycling.