

Computational Neuroscience Lab, Institute of Molecular Biology and Biotechnology (IMBB)
Foundation of Research and Technology-Hellas (FORTH)
N. Plastira 100, P.O. Box 1385, 70013 Heraklion, Greece
Email: bozelosp@gmail.com - Tel: +306949666719
Date of Birth: 14/11/1989

Education

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

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

Practical Training at the **Laboratory of Developmental Biology and Molecular Neurobiology**, Department of Molecular Biology & Genetics, Health Sciences School, Democritus University of Thrace. 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 *t/e6* gene was performed by implementing in situ hybridization experiments on mouse embryo slides at multiple different developmental stages.

Diploma Thesis at the **Laboratory of Molecular Regulation**, Department of Molecular Biology & Genetics, Health Sciences School, Democritus University of Thrace. 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, R, MATLAB**
- Software: Adobe Photoshop, Adobe Illustrator, DNA Strider, ClustalW, Jalview, RasMol, REMOD
- Databases: NeuroMorpho.Org, NCBI (PubMed, GenBank, Blast, Unigene), EMBL-EBI (ExPASy tools: Uniprot, Prosite), GenePaint, SAGE, MGI, Allen Brain

Code Achievements

I have developed and published a **Computational Neuroscience tool**, dedicated to the study of neural dendrites' structural plasticity. It counts more than **7,000 lines of Python code** [just the 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>

Language Skills

- **Greek**: Native Speaker
- **English**: Effective Operational 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 is supported by the **ERC Starting Grant dEMORY** (ERC-2012-StG-311435) and previously **BIOSYS research project**, Action KRIPIS, project No MIS-448301 (2013SE01380036) that was funded by the General Secretariat for Research and Technology, Ministry of Education, Greece

Research Articles

Bozelos P, Stefanou - Stamatidis 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", To appear in '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., Bouloukakis, G., Stefanou, S., Poirazi, P. "*REMODO: A Computational Tool For Remodeling Neuronal Dendrites*". (AREADNE Conference on Research in Encoding And Decoding of Neural Ensembles, Santorini, 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, 15-17 October 2010)

Oral Presentations

Bozelos, P., Bouloukakis, G., Stefanou, S., Poirazi, P. "*REMODO: A Computational Tool For Remodeling Neuronal Dendrites*". (Hellenic Society for Computational Biology and Bioinformatics, Athens, 10-12 October 2014)

Positions of Responsibility

I occasionally contribute to a science column hosted at <http://www.lifo.gr>, **one of the top 10 Greek websites** with 4.5 million unique visitors per month. My articles have been read by more than **400.000 people** around the world, till now.

I was **founder and website administrator** at <http://mbg.edu.gr> (discontinued), a portal dedicated to science communication efforts about 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 often engage in sports activities, like volleyball and cycling.