

# George Kastellakis

---

Computational Biology Lab, IMBB  
Foundation of Research and Technology-Hellas (FORTH)  
e-mail: gk@ignimedia.com

## EDUCATION

2016

### **Ph.D., Computational Neuroscience**

Computational Biology Lab, IMBB-FORTH & Dept. of Biology, University Of Crete  
Thesis: "Dendritic contributions to neuronal and synaptic memory allocation"  
Advisor: Dr. Panayiota Poirazi

2009

### **Master's Degree, Brain and Mind Sciences**

Faculty of Medicine, University of Crete, Greece

2004

### **B.Sc., Physics**

Department of Physics, University of Crete, Greece

## EMPLOYMENT

2016-

Post-Doctoral researcher  
Computational Biology Lab, IMBB/FORTH

2008-

Co-Founder  
Ignimedia EE

2006-2008

Software Engineering  
Communications and Networking Center (UCNet)  
University of Crete, Greece

2001-2006

Software Engineering  
Research and Development Dept.  
Phaistos Networks S.A.

## PUBLICATIONS *Research Article*

Kastellakis, G., Silva, A. J., Poirazi, P. (2016) *Linking Memories across Time via Neuronal and Dendritic Overlaps in Model Neurons with Active Dendrites*. Cell Reports, 17(6), 1491-1504.

*Review Article*

Kastellakis, G., Cai, D.J., Mednick, S.C., Silva, A.J., Poirazi, P. (2015) *Synaptic clustering within dendrites: An emerging theory of memory formation*. Prog Neurobiol. 2015 Mar; 126:19-35.

*Book Chapter*

Kastellakis G., Poirazi P. (2013) *Cellular and Dendritic Memory Allocation in Dendritic Computations Through Morphology and Connectivity*. (Springer) (ed. B. Torben-Nielsen)

*Book Chapter*

Stefanou S. , Kastellakis G. and Poirazi P. (2016) *Creating and constraining compartmental models of neurons using experimental data*. In Patch Clamp Analysis: advanced techniques, third edition. Edited by Alon Korngreen, Springer, New York

*Review Article*

Papoutsis A., Kastellakis G., Psarrou M., Anastasakis S., Poirazi P. (2013) *Coding and Decoding with Dendrites*. Special Issue of Journal of Physiology Paris

**CONFERENCES** *Refereed Conference Paper*

E. Kousanakis, A. Dollas, E. Sotiriades, I. Papaefstathiou, D. Pnevmatikatos, A. Papoutsis, P.Petrantonakis, P. Poirazi, S. Chavlis and G. Kastellakis (2017) An Architecture for the Acceleration of a hybrid Leaky Integrate and Fire SNN on the Convey HC-2ex FPGA-Based Processor  
The 25th IEEE International Symposium on Field-Programmable Custom Computing Machines 2017, Napa, CA, USA

*Lecture*

Kastellakis G. (2014) Overview of neuronal simulation tools  
DENDRITES 2014 Training Workshop on Dendrites

*Poster*

Pollali E, Kastellakis GI and Poirazi P (2014). Place cell formation by grid cell convergence in the dendrites of a CA1 model neuron. Front. Syst. Neurosci. Conference Abstract: 4th NAMASEN Training Workshop - Dendrites 2014. doi: 10.3389/conf.fnsys.2014.05.00007 & AREADNE 2014, Santorini, Greece.

*Poster*

Kastellakis GI and Poirazi P (2014). Computational modeling of memory allocation in neuronal and dendritic populations. Front. Syst. Neurosci. Conference Abstract: 4th NAMASEN Training Workshop - Dendrites 2014. doi: 10.3389/conf.fnsys.2014.05.00015

*Poster*

Kastellakis G., and Poirazi, P. Modeling multiple plasticity rules in dendritic branches, 43rd Society for Neuroscience Annual Meeting, 9-13 Nov. 2013, San Diego, California, U.S.A.

*Poster*

Kastellakis, G. and Poirazi, P. (2013) Modeling Multiple Plasticity Rules in Dendritic Branches. 7th Conference of the Hellenic Society for Computational Biology and

Bioinformatics (p. 113)

*Poster*

Anastasakis, S, Kastellakis G and Poirazi, P Computational modeling of fear memory allocation in amygdalar neuronal populations, HSCBB 2012, Heraklion, Crete, Greece, October 4-6, 2012.

*Poster*

Anastasakis, S, Kastellakis G and Poirazi, P Computational modeling of fear memory allocation in amygdalar neuronal populations, AREADNE 2012, Santorini, Greece, June 21-24, 2012

*Poster*

Kastellakis, G. and Poirazi, P. Computational modeling of the Fear Memory Trace. (2010)  
Molecular and Cellular Cognition Society Meeting 2010, Venice Italy

*Poster*

Kastellakis, G. and Poirazi, P. Computational model of fear conditioning. (2010)  
Hellenic Society for Neuroscience Meeting, Athens, Greece

**POST-GRADUATE COURSES**

*Postgraduate School*

HP-SEE Training course on Parallel Computing (2011)  
HP-SEE Regional Training Meeting, Sofia, Bulgaria

*Postgraduate School*

EMBO/FENS Course on Molecular and Cellular Cognition  
Molecular and Cellular Cognition Society 2010, Venice, Italy (2010)

*Postgraduate School*

Quantum Optics and Information Physics Summer School (2006)  
Physics Department, University of Crete/FORTH, Greece

*Lab Rotation*

Modeling grasping movements with Restricted Boltzmann Machines (2009)  
Computation Vision and Robotics Laboratory, Institute of Computer Science, FORTH, Greece

*Lab Rotation*

Automated Parameter Optimization of Compartmental Neuronal Models (2009)  
Computational Biology Lab, IMBB/FORTH, Greece

**EXPERTISE**

Web development technologies (*PHP, JavaScript, CSS, Websockets, WebRTC, NodeJS, HTML5*)

Neuronal Simulation (*NEURON, Brian, MATLAB, Python, Parallel Programming*)

Deep Learning (*TensorFlow, MATLAB*)

Desktop Programming (*C/C++, Win32, WxWidgets, Python*)

3D & Games Programming (*Unity3D, OpenGL, Blender, LSL*)

Systems Administration & Optimization (*Debian, CentOS, Solaris, Apache, MySQL, Memcached, InnoDB*)

**LANGUAGES** Greek (Native), English (Fluent, CPE), French (Beginner)

**MEMBERSHIPS** Society For Neuroscience

Hellenic Society for Neuroscience

Chamber of Commerce and Industry, Heraklion