

George Kastellakis

Computational Biology Lab, IMBB
Foundation of Research and Technology-Hellas (FORTH)
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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 & CEO
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 Chamber of Commerce and Industry, Heraklion

Society For Neuroscience

Hellenic Society for Neuroscience