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IDENTIFYING INFORMATION:

NAME: Lykotrafitis, George

POSITION TITLE: Professor

ORGANIZATION AND LOCATION: University of Connecticut, Storrs, CT, USA

Professional Preparation:

ORGANIZATION AND LOCATION	DEGREE (if applicable)	DATE RECEIVED	FIELD OF STUDY
California Institute of Technology, Pasadena, California, USA	PHD	06/2006	Mechanical Engineering
California Institute of Technology, Pasadena, California, USA	MMA	06/2003	Mechanical Engineering
National Technical University of Athens, Athens, Greece	PHD	06/2001	Applied Mathematics and Physical Sciences
National University of Athens, Athens, Greece	BS	05/1986	Physics

Appointments and Positions

2023 - present	Professor, University of Connecticut, Department of Mechanical Engineering, Storrs, CT, USA
2015 - 2023	Associate Professor, University of Connecticut, Department of Mechanical Engineering, Storrs, CT, USA
2009 - 2015	Assistant Professor, University of Connecticut, Department of Mechanical Engineering, Storrs, CT, USA
2006 - 2008	Post-Doctoral Fellow, Massachusetts Institute of Technology, Materials Science and Engineering, Cambridge, MA, USA
2001 - 2006	Graduate Research Assistant, California Institute of Technology, Department of Mechanical Engineering, Pasadena, CA, USA
1997 - 2001	Research Assistant, National Technical University of Athens, Athens, Greece

Products

Products Most Closely Related to the Proposed Project

1. Gu S, Tzingounis AV, Lykotrafitis G. Differential Control of Small-conductance Calcium-activated Potassium Channel Diffusion by Actin in Different Neuronal Subcompartments. Function (Oxf). 2023;4(3):zqad018. PubMed Central PMCID: PMC10165553.

2. Chai Z, Gu S, Lykotrafitis G. Dynamics of the axon plasma membrane skeleton. Soft Matter. 2023 Apr 5;19(14):2514-2528. PubMed PMID: 36939651.

3. Chai Z, Tzingounis AV, Lykotrafitis G. The periodic axon membrane skeleton leads to Na nanodomains but does not impact action potentials. Biophys J. 2022 Sep 20;121(18):3334-3344. PubMed Central PMCID: PMC9515372.

4. Abiraman K, Tzingounis AV, Lykotrafitis G. K(Ca)2 channel localization and regulation in the axon initial segment. FASEB J. 2018 Apr;32(4):1794-1805. PubMed Central PMCID: PMC5893165.

5. Abiraman K, Sah M, Walikonis RS, Lykotrafitis G, Tzingounis AV. Tonic PKA Activity Regulates SK Channel Nanoclustering and Somatodendritic Distribution. J Mol Biol. 2016 Jun 5;428(11):2521-2537. PubMed PMID: 27107637.

Other Significant Products, Whether or Not Related to the Proposed Project

1. Zhang Y, Chai Z, Lykotrafitis G. Deep reinforcement learning with a particle dynamics environment applied to emergency evacuation of a room with obstacles. Physica A. 2021 June 01; 571:125845. Available from: https://www.sciencedirect.com/science/article/abs/pii/S0378437121001175?via%3Dihub DOI: 10.1016/j.physa.2021.125845

2. Zhang J, Abiraman K, Jones SM, Lykotrafitis G, Andemariam B. Regulation of Active ICAM-4 on Normal and Sickle Cell Disease RBCs via AKAPs Is Revealed by AFM. Biophys J. 2017 Jan 10;112(1):143-152. PubMed Central PMCID: PMC5232864.

3. Maciaszek JL, Soh H, Walikonis RS, Tzingounis AV, Lykotrafitis G. Topography of native SK channels revealed by force nanoscopy in living neurons. J Neurosci. 2012 Aug 15;32(33):11435-40. PubMed Central PMCID: PMC6621203.

4. Zhang Y, Tzingounis AV, Lykotrafitis G. Modeling of the axon plasma membrane structure and its effects on protein diffusion. PLoS Comput Biol. 2019 May;15(5):e1007003. PubMed Central PMCID: PMC6497228.

5. Zhang Y, Abiraman K, Li H, Pierce DM, Tzingounis AV, Lykotrafitis G. Modeling of the axon membrane skeleton structure and implications for its mechanical properties. PLoS Comput Biol. 2017 Feb;13(2):e1005407. PubMed Central PMCID: PMC5348042.

Synergistic Activities

1. I am co-founder of the Connecticut Sickle Cell Translational Science (CTS2) group, which is a core interest group of the Connecticut Institute for Clinical and Translational Science (CICATS).

2. We developed "IMPETUS – Interactive MultiPhysics EnvironmenT for Unified Simulations" an object oriented, easy-to-use, high performance, C++ program for three-dimensional simulations of complex physical systems that can benefit a large variety of research areas, especially in cell mechanics. The program is available for free download from https://cmlab.engr.uconn.edu//impetus.html

3. We developed "FRAME - Force Review Automation Environment" to greatly increase the speed at which atomic force microscopy (AFM) data are processed. FRAME features a number of algorithms to streamline automated processing as well as a GUI interface to expedite manual processing and review of the data. The program is available for free download from https://cmlab.engr.uconn.edu//frame.html

4. I co-organized symposia called "Molecular, Cellular, and Tissue Mechanics" which were held in Society of Engineering Science 53rd and 54th Annual Technical Meetings in 2016, 2017, and 2019

Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Lykotrafitis, George in SciENcv on 2023-08-04 06:07:41