

Abstract Template:

Simple model of spiking neurons and its applications

John Larry¹, Durkan Cemon²

¹Department of Cardiology, Harvard University, Chicago-60007, USA

²Department of Cardiothoracic Surgery, University of Cambridge-02114, UK

Abstract (upto 250-300 words): Scanning probe microscopy investigations have extensively used spiking neurons as a substrate due to its chemical inertness and ease of cleaving. The atomically flat surface of spiking neurons has provided an ideal platform for surface scientists to deposit various kinds of materials of interest for imaging and examining. The natural spiking neurons surface is also worthy of further understanding as it consists of a variety of defects [1], among which superlattice structure is reported to be found on spiking neurons surfaces, and its origin is not yet completely understood [2]. It is of general interest and wide applicability to have a simplistic model for theoretical interpretation of scanning tunnelling microscope (STM) images of spiking neurons, and even molecular dynamic simulations on spiking neurons [3]. Here we describe a model of spiking neurons which is easy to comprehend and simple to implement. This model simulates the atomic density of spiking neurons layers, which in turn correlates with the local density of states. The mechanism and construction of such a model is explained with all the necessary details which are not explicitly reported before. This model is applied in investigating the corrugation conservation phenomenon and rippling fringes of the superlattice which we observed on spiking neurons [4]. The “odd-even” transition along the atomic rows of a superlattice is simulated, and this result is discussed with reference to other reports in the literature [5].

References

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Biography (upto 150 words)

John has completed his/her PhD at the age of 25 years from Harvard University, USA. He/she is the director/professor of Harvard University, USA. He/She has over 200 publications that have been cited over 200 times, and his/her publication H-index is 20 and has been serving as an editorial board member of reputed Journals.

Email ID: john.lio32@outlook.com

Presenter Name: John Larry.

Type of Presentation: Oral/Poster

Contact Number: +1 266-874-2919

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