The End Of Great Summer! [1]

Submitted by Gabriela Corali Del Valle [2] on 6 August 2016 - 9:23am

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Without doubt, the bubbles have become a topic of great interest for the scientific community. This is because their contribution in different areas such as drug delivery, treatments for diseases as cancer, and their application in environmental scenarios. However, currently there still much to

learn and discover about them. Is for this reason, this summer I was working in the Bubble Dynamic Lab in the project “Dynamic of One Microbubble Subjected to a 3D Acoustic Field”. The objective of this project was studying the behavior of one microbubble exposed to a three-dimensional acoustic field. To perform this, an algorithm in Matlab was implemented, in which the trajectory of the microbubble was calculated using the velocity of microbubble. This velocity is given by three fundamental forces exerted when the microbubble was exposed in an acoustic field, these are: Buoyancy, Drag and Bjerknes forces. Research in this field give us the possibility to control and manipulate the microbubbles to implement them as treatment of diseases like the Decompression Sickness, which is caused by the presence of nitrogen bubbles.

Work with microbubbles in this summer was memorable, because the challenges that it represents. These ten weeks I had a number of experiences and acquired several tools that will be a great help for my development in the scientific and professional scenarios. In addition, in this summer I had the opportunity to explore and visit different parts of my island Puerto Rico with amazing people that I met in REU program. There is no doubt that this summer was one full of knowledge and great experiences.

Links
[1] https://www.cienciapr.org/en/blogs/soft-matter/end-great-summer [2] https://www.cienciapr.org/en/user/gabrieladelvalle