

Carlos M. Pérez Penichet

Curriculum Vitae

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Education

2004–2009 **Bachelor of Science in Physics**, *Universidad de La Habana*, Cuba.

Graduate Thesis

title *Image Processing and Analysis in Bacterial Micro-Flows.*

supervisor Dr. E. Altshuler

1999–2003 **High School**, *Instituto vocacional de ciencias exactas V. I. Lenin*, Cuba.

Work Experience

2009–onwards **Instructor professor and researcher**, *Faculty of Physics. University of Havana.*

Tutorial lessons Computer Programming using LabView, General Physics, Optics and Modern Physics.

2006–2009 **Teaching Assistant**, *General Physics Department. Faculty of Physics. U. of Havana.*

Tutorial lessons Mathematics for biology students.

Laboratory lessons Digital electronics, Electricity and magnetism.

Languages

Spanish **Native**

English IELTS Band Scores: Listening 8.5/Reading 8.5/Writing 7.5/Speaking 7.0/Overall 8.0 (Nov 2010)

Portuguese(*) Listening: B2/Reading: B2/Spoken interaction: B1/Spoken production: B1/Writing: A2
(*) Common European Framework of Reference (CEF) level

Publications

E. Altshuler, G. Miño, C. Pérez-Penichet, A. Rousselet, A. Lidner, and E. Clément. Concentration of active swimmer suspensions through a microfluidic funnel. 2010. In preparation.

E. Martínez, C. Pérez-Penichet, O. Sotolongo-Costa, O. Ramos, K. J. Måløy, S. Douady, and E. Altshuler. Uphill solitary waves in granular flows. *Physical Review E*, 75(031303), 2007.

C. F. Sánchez-Valdés, C. Pérez-Penichet, C. Noda, M. Arronte, A. J. Batista-Leyva, O. Haugen, T. H. Johansen, Z. Han, and E. Altshuler. Laser patterning: A new approach to measure local magneto-transport properties in multifilamentary superconducting tapes. *Journal of Magnetism and Magnetic Materials*, 316:e930–e933, 2007.

C. Noda, J. Fernandez, C. Pérez-Penichet, and E. Altshuler. Measuring Activity in Ant Colonies. *Review of Scientific Instruments*, 77(126102), 2006.

Advanced Courses

- 2010 **Complimentary electronics**, Prof. M. H. Calviño from University of Havana.
Introduction to granular matter physics, Prof. E. Altshuler from University of Havana.
Introduction to LEGO-based educational robotics, Prof. Julio Pastor Mendoza from University of Alcalá.
- 2009 **Introduction to stochastic methods**, Prof. E. Kulich from University of Havana.
Introduction to the physics of complex systems I, Prof. O. Sotolongo-Costa from University of Havana.
Nano-biology concepts, Prof. Braulio Gutierrez from Stanford University.
- 2008 **Wireless sensor networks fundamentals**, Prof. Claro Noda from University of Havana.
- 2007 **Introduction to image processing and pattern recognition**, Prof. Fred Hamprecht from University of Hildeberg.
- 2004 **PIC micro controllers. Support for data acquisition and experiment control**, University of Havana.

Computer Skills and Competences

Programming Languages	Java, Python, C, C++, nesC
Additional Skills	Git, Subversion, Gnuplot, L ^A T _E X

Awards

- 2009 Awarded "Best Researcher Student" of the Physics Faculty's 2009 promotion.
Second award in the Computing and Electronics commission of the Student Scientific Forum of the Physics Faculty. "*Image Processing and Analysis in bacterial micro-flows.*"
- 2007 First Award in the Biophysics and Complex Systems commission and Absolute Winner of the Student Scientific Forum of the Physics Faculty. "*Uphill solitary waves in granular flows.*"
Second Award in the Biophysics and Complex Systems commission of the Student Scientific Forum. "*EasyWay. Una plataforma para el desarrollo de aplicaciones de redes de sensores.*"
- 2006 First Award in the Biophysics and Complex Systems commission of the Student Scientific Forum. "*Measuring activity in ant colonies.*"
- 2005 Honorable Mention in the Science and Technology forum at IMRE. University of Havana. "*TINI-based elevator automation system.*"
Honorable mention in the Electronic Devices and Systems commission of the Student Scientific Forum. "*Automation of a system to measure superconductor transport properties.*"

International Schools and Conferences

- Mar, 2011 *Dynamics of E. coli suspensions through a microfluidic funnel.* (Poster Presentation) Cuban Physical Society Symposium 2011. Havana.
- Jul, 2010 *Living Granular Matter: The Dynamics of Foraging Ants.* (Oral Presentation) 150th orbit of Alexander Von Humboldt Workshop on Complex Systems. Havana.
- Apr, 2007 First Research Workshop on Wireless Computing and Sensor Networks, WCSN 2007. Havana.
- Jan, 2006 Third International Seminar on Complexity Theory. Havana.