

Juan David

ORJUELA ZÚÑIGA

PERSONAL INFORMATION

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GITHUB: github.com/juandavido

EDUCATION

PRESENT GRADUATE STUDENT of Master of Science - Physics. Currently in
JANUARY 2015 second year at **Universidad de los Andes** in Bogotá, Colombia.
Relevant courses: Bioinformatics, Advanced Computational Methods.

DECEMBER 2014 BACHELOR OF SCIENCE - Physics at **Universidad Nacional de**
AUGUST 2007 **Colombia** in Bogotá, Colombia. GPA=3.9/5
Relevant courses: Simulation of Physical Systems, Computational Tools,
Programming and Numerical Methods, Object-oriented Programming.

JUNE 2007 BACHELOR from **Colegio Champagnat** in Popayán, Cauca, Colombia.

RESEARCH EXPERIENCE

AUGUST 2015 Researcher for the project: "Mechanical properties of lipid bilayers
JUNE 2015 containing lysolipids" funded by the Research and Graduate Education
Committee - Universidad de los Andes. Advisor: Antonio Manu Forero
Shelton.
Proposed, tested and executed biophysical models to determine the set of
parameters that reproduced the best the physicochemical properties of the
system under study.

JUNE 2015 Research assistant for the project: "Estudio de Factibilidad de uso de
JANUARY 2015 detectores MEDIPIX para imágenes mamográficas". Branch: "Estudio de
Tejidos Blandos Animales con Microcalcificaciones Usando el Detector
MEDIPIX".
Designed and executed tests that validated the viability of using MEDIPIX
detectors for early and safe breast cancer diagnosis using animal tissue.

MARCH 2014 Thesis project: "Energetic analysis of the extraction process of a phospholipid
AUGUST 2013 from a lipid bilayer using Molecular Dynamics simulations" (Advisor: José
Daniel Castaño).
Extracted, processed and produced visualization of data to measure changes
in membrane properties from simulations.

TEACHING EXPERIENCE

PRESENT Computational Tools Lecturer at Universidad de los Andes, Bogotá
AUGUST 2015 Teach and help students from STEM fields to develop programming skills in
a high-level language (Python), with methods and tools for basic numerical
and data analysis.

JUNE 2015	Physics II Lab Lecturer at Universidad de los Andes, Bogotá
JANUARY 2015	Trained STEM students on the methods and skills for experimental physics.
JUNE 2015	Basic Physics II Lab Lecturer at Universidad de los Andes, Bogotá
JANUARY 2015	Trained life sciences students on the methods and skills for experimental physics.
JUNE 2015	Math Tutor (bilingual - online) for Latinhire Inc., Bogotá
JANUARY 2015	Tutored college and high school students with drop-in sessions for areas ranging from basic math to differential equations, including math for social sciences and business majors.

SCHOOLS AND EVENTS

AUGUST 2015	2015 Martini Coarse-Graining Workshop, Groningen, The Netherlands
SEPTEMBER 2014	2nd Workshop on Statistical Physics, Bogotá, Colombia,
FEBRUARY 2014	58th Annual Meeting of the Biophysical Society. San Francisco, CA.

SCHOLARSHIPS AND DISTINCTIONS

NOVEMBER 2007	FIRST PLACE regionally in the Colombian Standardized Tests to access higher education (ICFES) of 2007.
JUNE 2007	FIRST PLACE nationally in the Colombian Standardized Tests to access higher education (ICFES) in the first semester of 2007.
JUNE 2005	FIRST PLACE at the regional test. XXIV Colombian Mathematical Olympiads - Intermediate level (competed through the final classificatory round). Universidad Antonio Nariño.

LANGUAGES

SPANISH:	Native proficiency.
ENGLISH:	Full professional proficiency
FRENCH:	Limited working proficiency
GERMAN:	Basic proficiency

COMPUTER SKILLS

Programming Languages:	C++ (2.5 years), C (1.5 years), Python (1.5 years).
Basic Knowledge:	GitHub, \LaTeX , UNIX.
Operating Systems:	Ubuntu, Windows.

SKILLS, INTERESTS AND ACTIVITIES

Analytical, intuitive insight with data, resourceful, diplomatic, adaptable, eager to learn.
 Data Science, analytics, programming and physics (computational biophysics and chemistry, computational fluid dynamics with Lattice Boltzmann methods).
 Choir (member of the University Choir for 1.5 years), Theatre (worked with an independent company for 4 years).