

Julián Andrés Meléndez Delgado

Curriculum Vitae

PERSONAL DETAILS

Address 12420 Belcroft Dr. Riverview, Florida
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Github <https://github.com/JAMelendezD>

EDUCATION

Bachelor of Science Physics

2014-2018

Universidad de los Andes, Bogotá, Colombia

Thesis project: Studying the role of staphyloxanthin in modulating membrane structural parameters in DMPG and DPPG lipid bilayers (Advisors: Chad Leidy, Ph.D and Camilo Aponte-Santamaria, Ph.D). GPA=3.96/5

Minor in Biology

2014-2016

Universidad de los Andes, Bogotá, Colombia

The minor is constituted of 45 credits that correspond to biology courses with field experience and courses of basic and organic chemistry.

WORK EXPERIENCE

Computational tools Tutor

2018(Aug-Dec)

Universidad de los Andes, Part-time

Help students from STEM fields with their programming skills in a high-level language (Python), with methods and tools for basic numerical and data analysis.

Physics Tutor

2016-2017

Universidad de los Andes, Part-time

The university gives the opportunity to last year physics students to become tutors of the first and second year students. The job consists on interacting with students to solve physics problems and general doubts.

SKILLS

Languages Spanish (mother tongue)
English (fluent); TOEFL (iBT) 114/120
French (basic)
Software Python (numpy, matplotlib, pandas, scikit, tensorflow), Bash, C, \LaTeX , Java, R, Github.

RESEARCH

Researcher for the project:

2018-present

Studying the role of staphyloxanthin in modulating membrane structural parameters in DMPG and DPPG lipid bilayers using molecular dynamics.

Max Planck Tandem Group of Computational Biophysics, Universidad de los Andes, Bogotá, Colombia. Main Researcher: Camilo Aponte-Santamaria, Ph.D. (Member of the Max Planck Institute for Medical Research, Heidelberg, Germany)

Researcher for the project:

2017-2018

The effect of cardiolipin in the lysis of POPG membranes under osmotic stress.

Membrane Biophysics Research Group, Universidad de los Andes, Bogotá, Colombia. Main Researcher: Chad Leidy, Ph.D. (Physics Department Director Universidad de los Andes)

SCOLARSHIPS AND DISTINCTIONS

First Place Nationally

Apr-2012

Colombian standardized tests to access higher education (ICFES). Equivalent to the SAT in the USA.

First Place Regionally

Apr-2012

Colombian standardized tests to access higher education (ICFES). Equivalent to the SAT in the USA.

Final Round Math Olympiads in Colombia

Nov-2010

XXIX Colombian mathematical olympiads, Universidad Antonio Nariño.

INTERESTS AND ACTIVITIES

Data analysis, programming and physics (computational biophysics and computational chemistry). My research interest is to understand membrane dynamics and protein dynamics with computational methods such as molecular dynamics. Outside the academia, I like to spend my time analyzing data using machine learning algorithms, computer vision, or statistical analysis with the goal of solving complex problems and creating new ways to represent data in an effective manner. I also enjoy helping students of any age to understand subjects related to programming, mathematics and physics.