

Diego Wust-Calvo

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Education

Bachelor in Engineering Physics

2020 - Present

Instituto Tecnológico de Costa Rica (ITCR)

International Baccalaureate (IB)

2018 - 2019

Yorkin School

Work Experience

ITCR-School of Chemistry

2023 - Present

Research Assistant

- Investigation using Low Field Nuclear Magnetic Resonance (NMR) techniques, with a focus on the Physics behind the technique.
- Work includes operation of NMR equipment, sample preparation, spin relaxation time measurement, spectrum interpretation, and molecule identification.

Supervisor: Ph.D. Isaac Céspedes-Camacho

ITCR Student Group-TECSpace

2023 - Present

Rover Development

- Design and construction of a rover's robotic arm to collect volcanic samples from Costa Rica's volcanoes.
- Work includes component design, assembly and testing.

Student-run project

ITCR-Delta Laboratories

2023 - Present

Ambient Air Monitoring System (AAMS)

- Development of an AAMS to detect Sulfur Dioxide, Nitrogen Dioxide, and Carbon Monoxide in the air.
- Work primarily focused on power and energy supply to the AAMS via solar panels.

Supervisor: Eng. Juan José Rojas-Hernández

ITCR-School of Chemistry

2023 - Present

Basic Chemistry II Teacher's Assistant

- Grading of exams and quizzes on chemical solutions, thermodynamics, chemical kinetics, chemical equilibrium, among other related topics.

Supervisor: Ph.D. Isaac Céspedes-Camacho

ITCR-School of Mathematics

2022 - June 2023

Multivariable Calculus Teacher's Assistant

- Grading of quizzes and homework on topics like conic sections, quadric surfaces, cylindrical surfaces, solids, partial derivatives, Lagrange multipliers, double and triple integrals, polar coordinates, vector fields theory, among others.

Supervisor: M.Sc Juan José Fallas-Monge

Certificates and Awards

- Honor Scholarship-Department of Scholarships and Social Management ITCR**

Scholarship awarded because of outstanding academic performance.

2022-Present
- Best Admission Scores for the ITCR Selection Process**

Recognition for having an admission score amongst the top 10 in the country.

2020
- Cambridge English Level 3 Certificate in ESOL International (Advanced)**

Certificate in Advanced English-Performance at Council of Europe Level C2.

2018

Memberships

- Member of Student Group TECSpace

2023-Present
- Member of the American Chemical Society (ACS)

2022-Present

Publications

[1] D. Wust-Calvo, J. A. Borloz-Chinchilla, B. Ortega-Cordero, I. F. Céspedes-Camacho, “Applied Physics as a bridge between Physics and Chemistry in the field of NMR: Costa Rica's Perspective”, presented at ACS Fall 2023: Harnessing the Power of Data, San Francisco, CA.

Languages

- Spanish - Native
- English - Cambridge C2

Technical Skills

- Python
- LabVIEW
- SolidWorks
- Fusion 360
- Minitab
- LaTeX
- MS Excel
- Visual Basic
- LTSpice
- Multisim

Soft Skills

- Leadership
- Teamwork
- Problem-solving
- Commitment
- Versatility
- Creativity
- Ambition
- Perseverance
- Reliable
- Adaptability