



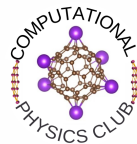
Computational Physics Club

Introductory Presentation

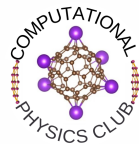
Gustavo Campi, Luis Andrade

School of Physical Sciences and Nanotechnology
Yachay Tech University

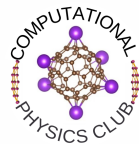
November 24th, 2022



- 1 General objectives, vision and mission
- 2 Computational physics research at yachay
- 3 Supercomputador
- 4 Activities

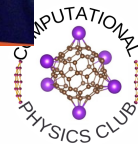
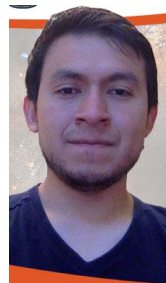


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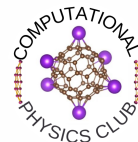
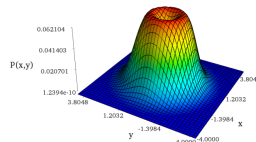
Organizacion del club - Agradecimientos

- Advisor PhD. Wladimir Banda Barragan
- Directiva
Gustavo Campi
Luis Andrade
Ricardo Fernandez
Bryan Pinargote
- Miembros Fundadores



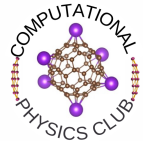
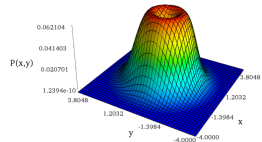
General Objectives

- Scientific divulging of the research groups and areas of computational physics on campus.
- Explain the importance of computational physics as a key tool to physicists in order to solve problems.



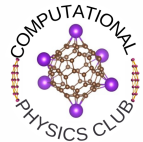
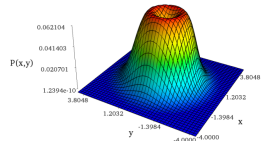
Vision

- Create an association or network of computational physics in LATAM
- Finding financing available from certain programs.



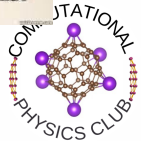
Mission

- Developing the necessary tools for a correct understanding and uses of computational physics.

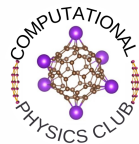


Opinions, experiences of programming

Sometime could be annoying doing coding when it just don't compile, but the gratification at the end its just mind-blowing and it inspires to continue.



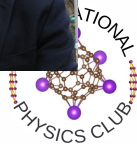
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Material Science

Henry Pinto

- PhD in Condensed matter physics and Quantum mechanical simulations
- CompNano (computational nano)



Material Science

Duncan John Mowbray

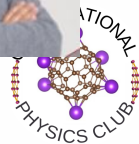
- PhD in applied mathematics
Hydrodynamic Modelling of
Carbon Nanotubes.



Climate Modeling

PhD. Oscar Chimborazo

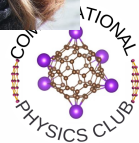
- Modelacion numerica usando datos reales sobre el clima en el Ecuador y la coordillera de los Andes.



Astrophysics

PhD. Helga Denes

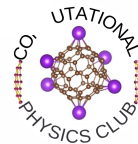
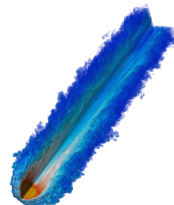
- Data processing and Gaussian fitting of data using machine learning.



Astrophysics

PhD. Wladimir Banda

- Computational and analytical modelling and could be placed at the boundary between (magneto)hydrodynamics and astrophysics.



Complex systems

PhD. Mario Consenza

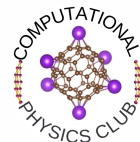
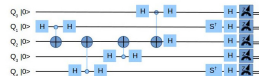
- Chaos, Complex systems, Sociophysics
- Research Group on Chaos and Complex Systems



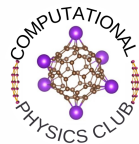
Quantum Computing

PhD. Duncan John Mowbray

- Did his Msc. Coefficient Based Simulation of Quantum Algorithms.



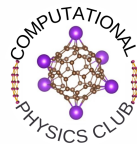
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Quinde I

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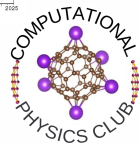
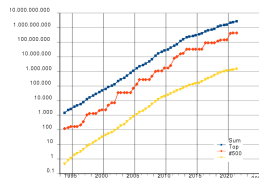
- 232 TFlops - 489 TFlops.
- TOP 500 when released in 2017.

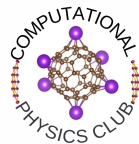


SuperComputers

- TOP 1 -> 1102 PFlops or ExaFlops
- TOP 500 -> 1.73 PFlops
-

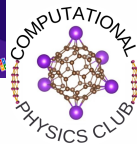
<https://www.top500.org/>





Trivia

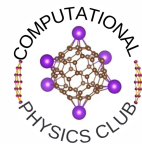
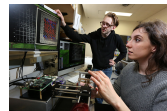
1,2,3...GO!



Plus

Benefits / Future projects

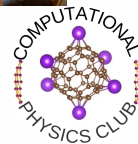
- Certificates for people who work in commissions
- Data automation linkage project
- Summer and winter schools
- Movie nights



Plus

Commissions (Work groups)

- Department Foreign Affairs
- Department of Academic Affairs
- Department of Communication
- Department of Financing



Thanks so much!

