



The Abdus Salam
**International Centre
 for Theoretical Physics**
 Physics Without Frontiers



**SCHOOL OF
 PHYSICAL SCIENCES
 AND NANOTECHNOLOGY**

**UNIVERSIDAD
 YACHAY
 TECH**



Physics Without Frontiers: Ecuador

EPIC 3

III Escuela de Programación para Investigación Científica

“The Frontiers of Computational Physics”

**Astrophysics - Biophysics - Particle Physics - Materials Science
 Machine Learning - Data Analysis - Scientific Visualisation**



Grupo de Investigadores Latitud Cero



Lupe Villegas
Institute of Optics, Spain



Luis Manzanillas
Annecy Uni., France



Henry Osorio
EPN, Ecuador



Alejandro Gómez
Carnegie Mellon U., USA



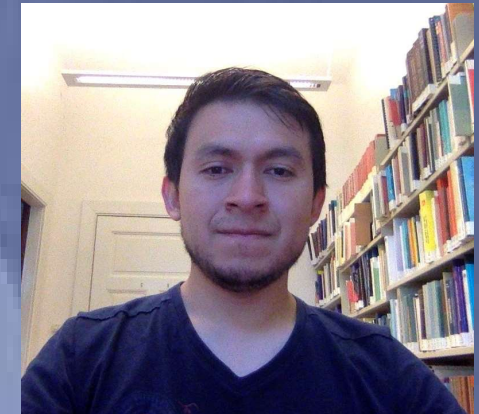
Helga Dénes
Yachay U, Ecuador



Andrés Morales-Navarrete
Konstanz U., Germany



Edison Salazar
Leiden U. Netherlands



Wladimir Banda-Barragán
Yachay U, Ecuador

Why EPIC?

- High importance of computational analysis to understand complex problem in physical and life sciences
- Lack of structured scientific programs on computational physics and data analysis for students and young researchers in Ecuador
- Establish an annual series of Schools of Programming for Scientific Research (EPIC)
- Opportunity to learn state-of-the-art computational methods
- Provide students in Ecuador spaces to interact with experts in their fields and work

School of Programming for Scientific Research Series (EPIC)

- EPIC 1: - October 2021
 - On-line
 - 20 students and young professionals
- EPIC 2: - October 2022
 - On-line
 - 43 students and young professionals
 - Support ICTP Physics Without Frontiers (PWF)
- EPIC 3: - August 2023
 - **First In-Person**
 - 30 students and young professionals
 - **Sponsored by ICTP Physics Without Frontiers (PWF)**
 - **Follow-up Programming Contest**

EPIC 3

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- > 80 applications from 5 Universities in Ecuador and 1 in Peru
- 30 students selected : 29 From Ecuador and 1 from Peru
- 13 female and 17 male students
- Physics and Computer Science students
- Batchelor : last semesters or thesis

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Lectures and talks

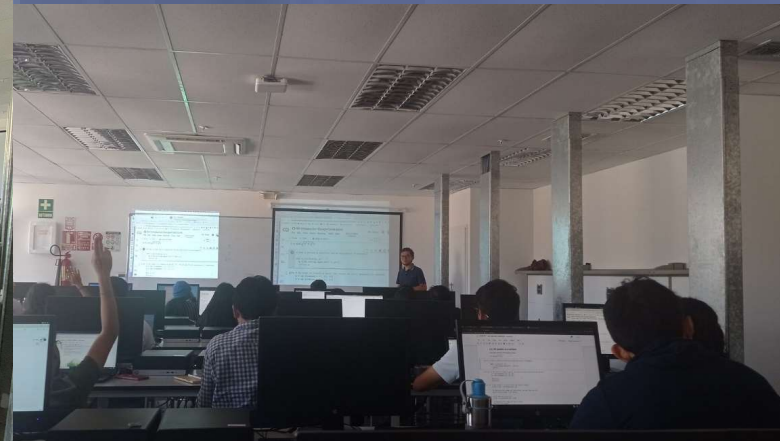
More than 10 volunteers from Ecuador, Germany, Slovakia and France



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Hands-on tutorials

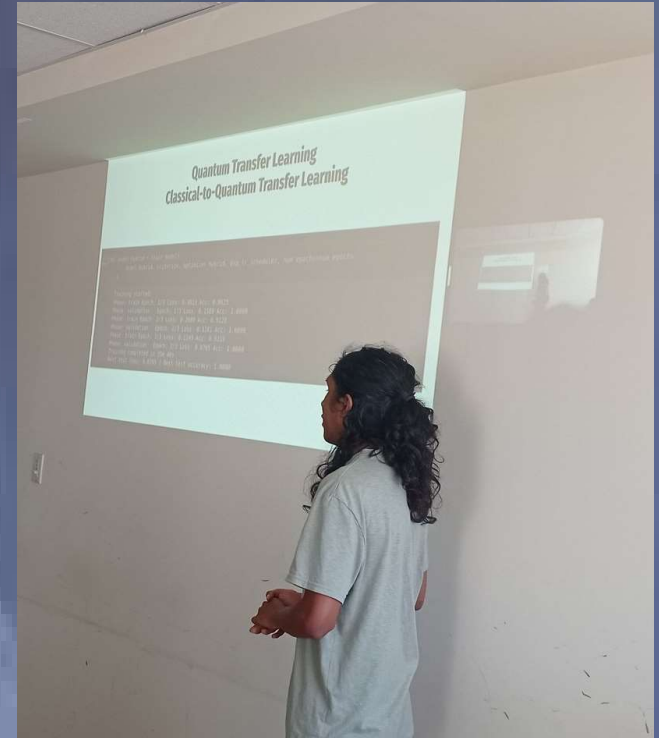
4 tutorials in Particle Physics,
Astrophysics and Machine Learning



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Students' presentations

10 groups of 3 students showing the results of their projects



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Students' experiences

"As a young woman in the scientific world, the opportunity to be part of EPIC III fostered my scientific curiosity and provided me with tools to approach new problems from a programming perspective."

Mayra Elizabeth Tualombo



"I wanted to express my heartfelt gratitude for the incredible opportunity to be a part of the EPIC 3 focused on machine learning and computational physics. That week has been an invaluable experience, enriching my knowledge and understanding in ways I couldn't have imagined"

Alexis Garzón

"Great friends, wonderful experiences and a lot of knowledge, summary of what EPIC 3 was. "

Bryan Pinargote



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Students' follow up

- Took advanced on-line courses in programming
- Starting Bachelor thesis with volunteers
- Applying to master programs



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Follow up: EPIC JUNIOR for high school students



#HacemosCienciaYT

EPIC JUNIOR

ESCUELA DE COMPUTACIÓN
CIENTÍFICA PARA ESTUDIANTES
DE SECUNDARIA

Un evento de vinculación parte
de la ESCUELA DE PROGRAMACIÓN EPIC 3

1 HORA ONLINE - 20 CUPOS DISPONIBLES

Miércoles 13/Septiembre/2023
ONLINE 
19h00 a 20h00

FECHA LÍMITE DE REGISTRO:
Martes 12 / Septiembre / 2023
o hasta agotar los cupos disponibles.



FORMULARIO REGISTRO SITIO WEB DEL EVENTO PROGRAMA DE EPIC III

SE ENTREGARÁ UN CERTIFICADO DIGITAL DE ASISTENCIA

UNIVERSIDAD YACHAY TECH  ESCUELA DE CIENCIAS FÍSICAS Y NANOTECNOLOGÍA       

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Follow up: Coding challenge in December 2023

CONCURSO DE PROGRAMACIÓN CIENTÍFICA **THE DOROTHY CODING CHALLENGE**



Fecha límite de inscripciones:
19 de noviembre

**REINVENTEMOS
EL FUTURO**



EPIC 3

Thanks to Physics Without Frontiers
for making it possible!

