

# ALPS I: QUANTUM INFORMATION, FROM GRAVITY TO COMPUTERS AND BACK

## Organisers:

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*The ALPS (Advanced Lectures in Physics in Switzerland) is a series of junior schools in theoretical physics taking place in the Swiss Mountains. This first edition will focus on quantum information from different perspectives: quantum computing, quantum field theory and holography. It will take place at the SwissMAP Research station, located in the bucolic village of Les Diablerets. A set of three lectures of 6 hours each will introduce the students to these different topics. They will be complemented by thorough exercise, discussion and team-building sessions. The school is designed for PhD students and early postdocs in theoretical physics. Participation of people from underrepresented groups is encouraged. Childcare or financial support can be asked for.*

The three mini-courses are:

- **Quantum computing** by Jesse Stryker (Lawrence Berkeley National Laboratory)
- **Entanglement in QFT** by Sara Murciano (Caltech)
- **Quantum information and holography** by Pranjal Nayak (CERN)

Furthermore, we acknowledge financial support by *Quantinuum*, which will provide a

- **Colloquium talk** and a **hands-on session** by Enrico Rinaldi (Quantinuum)

For more information, visit <https://www.quantinuum.com>

Registration is open until March 01, 2024 at  
<https://indico.cern.ch/event/1225798>

More information on the SwissMAP Research Station at [www.swissmaprs.ch](http://www.swissmaprs.ch)

