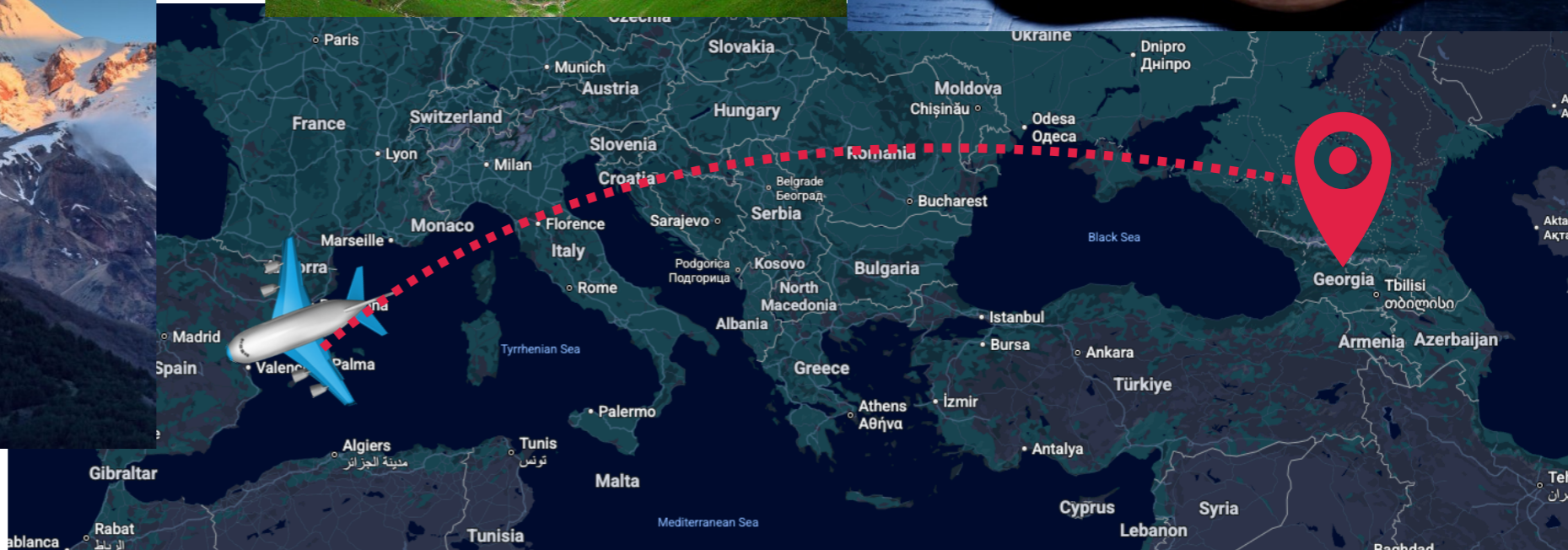
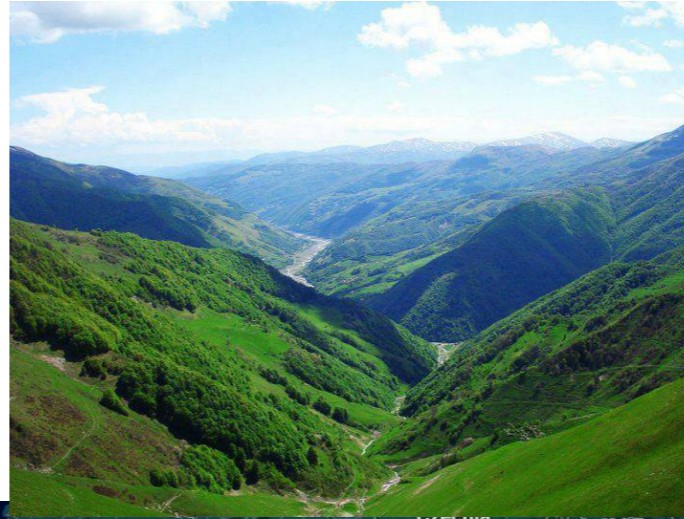


IFIC Newcomers Fest 2025

Mariam Chitishvili

Where I come from

- I come from a little town in **Georgia** called Akhalgori.



Oldest Known Wine Culture in the World.
Archaeological evidence of winemaking dates to 6000–5800 BC (8,000 years old).



My academic path

- ▶ It all started from the school ;)
- ▶ Bachelor, MsC at Iv. Javakhishvili Tbilisi State University

Research in General Relativity

★ When we study false-vacuum decay including gravity, why do some bounce solutions acquire **infinitely many negative modes**, and what does that mean physically?

Aspects of the negative mode problem in quantum tunneling with gravity

[Sebastian F. Bramberger](#) ^{1,*}, [Mariam Chitishvili](#) ^{2,†}, and [George Lavrelashvili](#) ^{3,‡}

Show more ▾

Phys. Rev. D **100**, 125006 – Published 6 December, 2019

★ Could the Higgs potential be modified near black-hole horizons enough to temporarily destabilize the electroweak vacuum—and would this produce observable signals during binary black-hole mergers?

Higgs Field-Induced Triboluminescence in Binary Black Hole Mergers

by [Mariam Chitishvili](#) ¹, [Merab Gogberashvili](#) ^{1,2} , [Rostislav Konoplich](#) ³ and [Alexander S. Sakharov](#) ^{3,4,*}

¹ Department of Exact and Natural Sciences, Javakhishvili Tbilisi State University, 0179 Tbilisi, Georgia

² Department of High Energy Physics, Andronikashvili Institute of Physics, 0177 Tbilisi, Georgia

³ Physics Department, Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, USA

⁴ Experimental Physics Department, CERN, CH-1211 Genève, Switzerland

* Author to whom correspondence should be addressed.

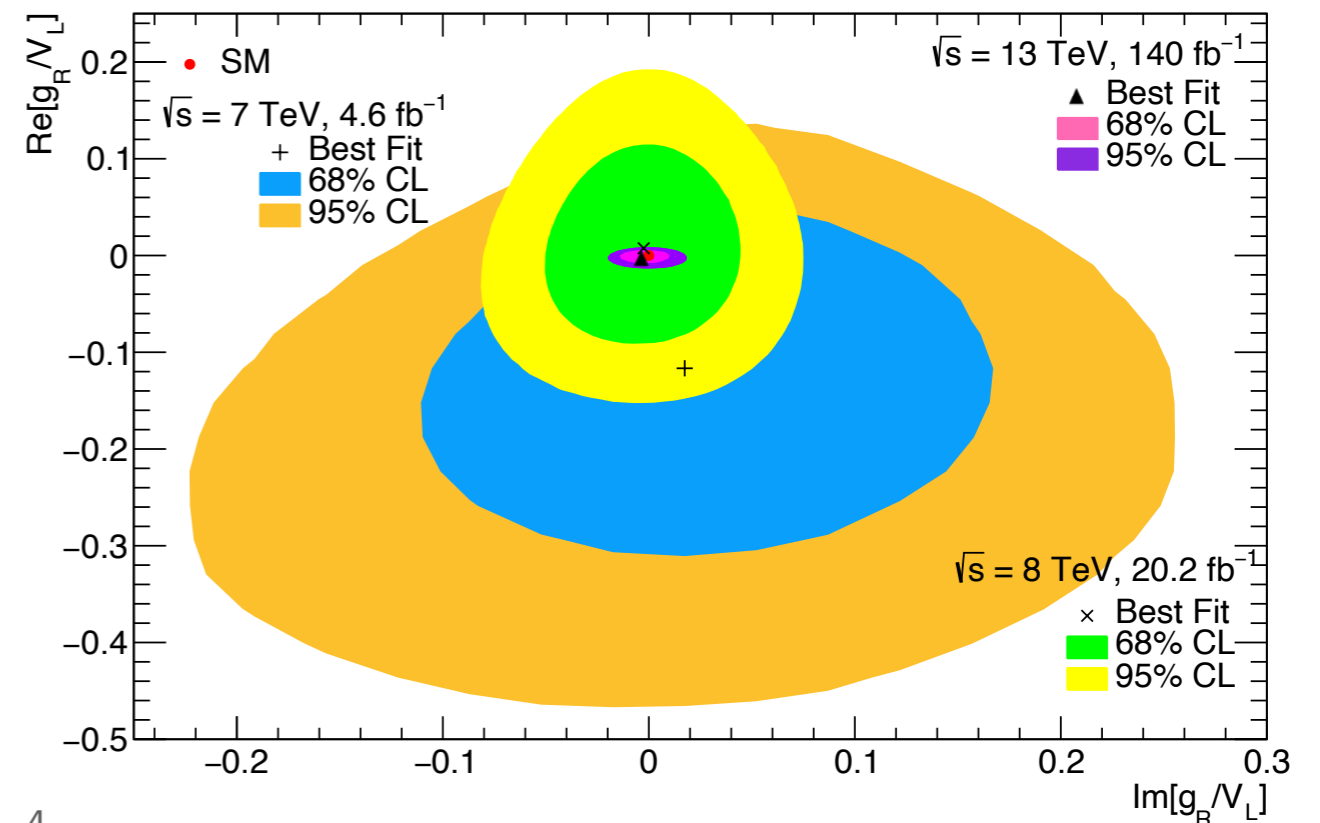
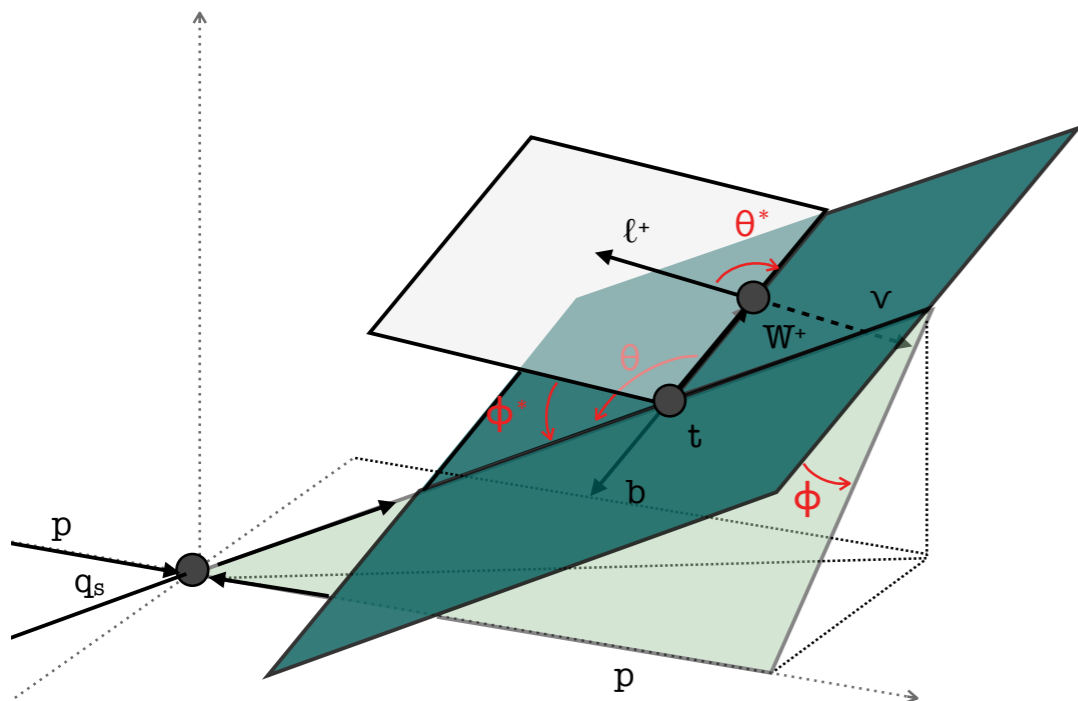
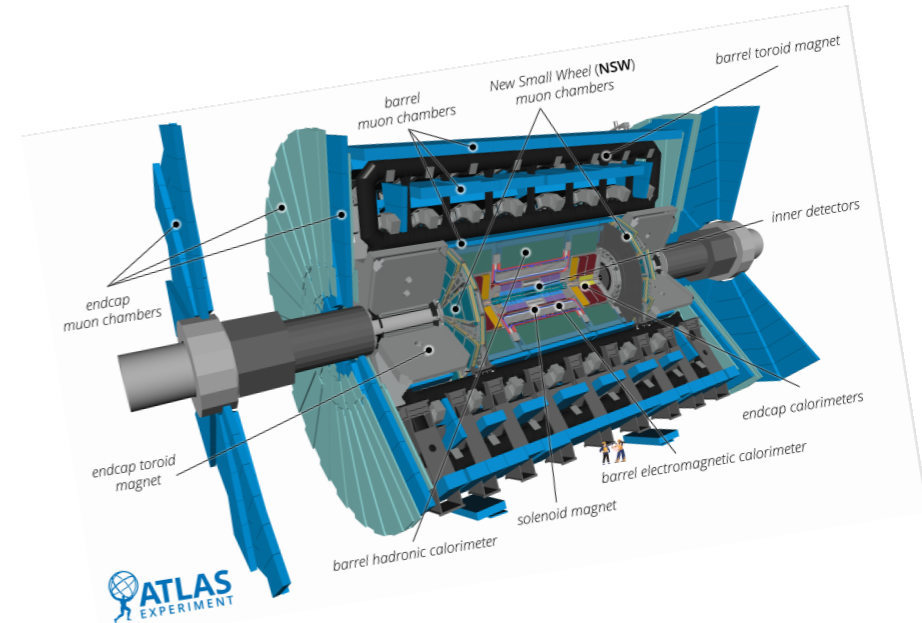
Universe **2023**, *9*(7), 301; <https://doi.org/10.3390/universe9070301>

Then there was CERN summer school where I tried research in experiment, and I liked it ;)

PhD Research in experimental Particle Physics at IFIC

We measure four angles in the top-quark decay to capture its full behaviour.

Then we compare these angular patterns to EFT predictions and set limits on possible new interactions (Wilson coefficients).



What else do I do?

- Yoga



- Long walks



- Cooking



- Painting

**Thank you for listening
See you around!**