

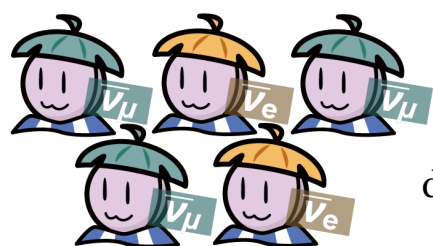


Experimental Neutrino Physics Group @ SLAC Lab



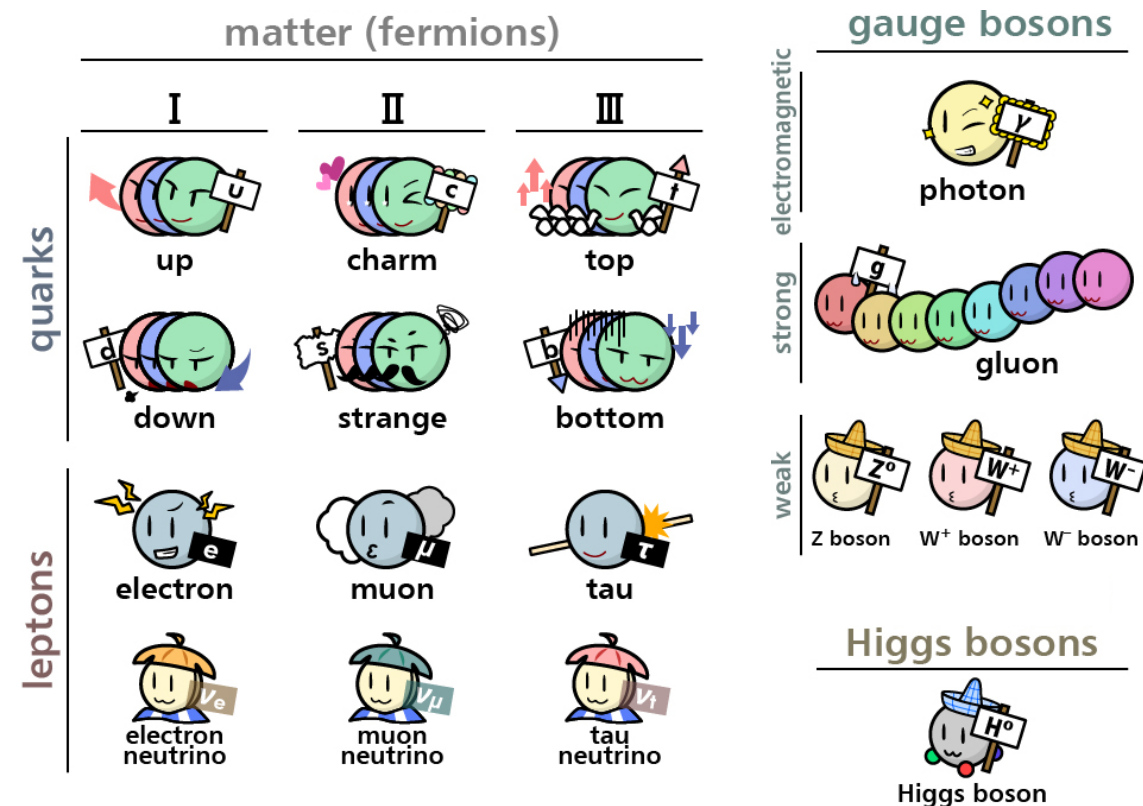
What is neutrino? Why we study?

- **Neutrinos** are the **least known elementary particles** in the Standard Model (SM) of particles, and they might be the keys to explain the matter-dominated universe we live in today!
- They exhibit **non-SM physics phenomenon** called “**neutrino oscillation**.” We build high precision experiments to observe this and study more about neutrinos!



What is “oscillation”?

While neutrinos are produced in a definite flavor, **they can transform into a different flavor** as they travel through spacetime!



Machine Learning (ML) for Analyzing Particle Images

- We use liquid argon time projection chambers (LArTPCs) to record **high precision image** of neutrino interactions!
- We **lead the field for ML techniques R&D** (in particular **deep neural networks**) for data analysis
- **Join us** for an **opportunity for cutting-edge physics research w/ ML!**



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