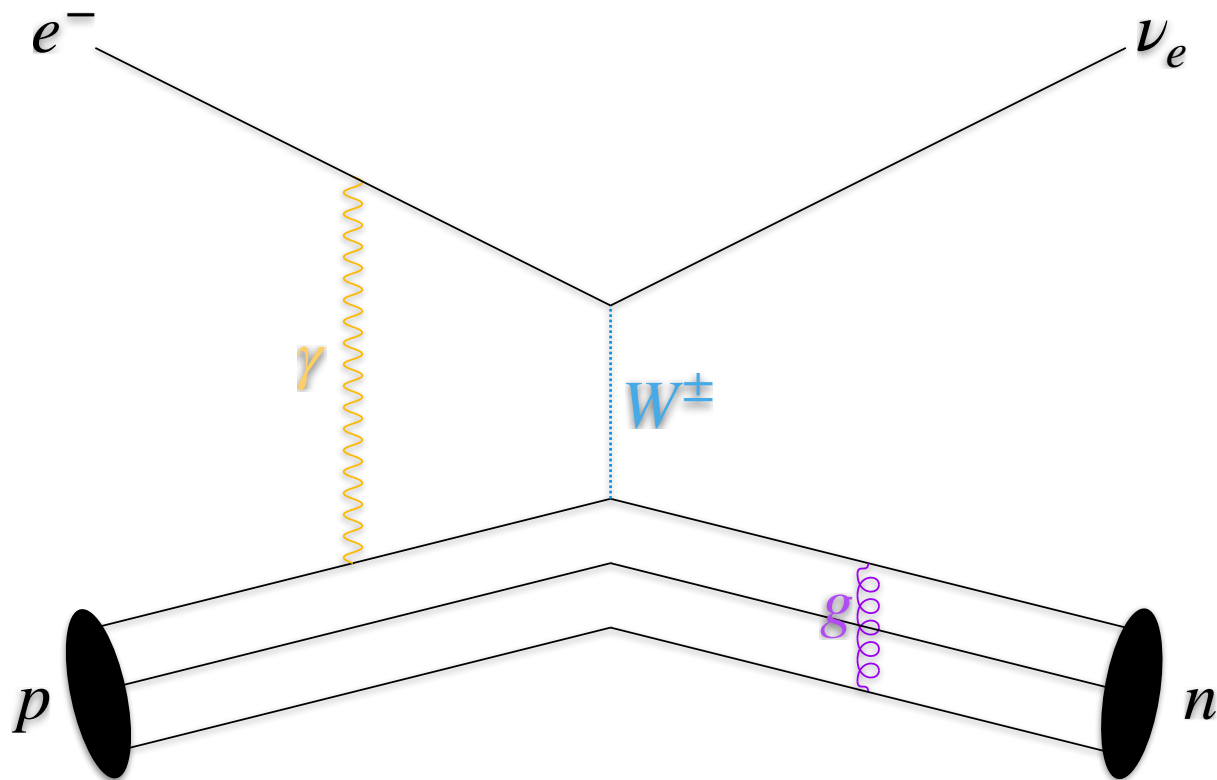


# When Quantum Mechanics Meets Special Relativity



## Particle Physics II PHYS 581.006

Spring 2022  
Tuesday / Thursday  
11 am — 12:15 pm

PAIS 3205

What is our world made of? How do the smallest constituents of Nature interact? You are invited to the wonderland of particle physics and have a glimpse of how the quantum theory works on the smallest scales.

**Prerequisites:** A good understanding of quantum mechanics (PHYS 521) and electromagnetism (PHYS 405/406) and a solid grasp of mathematics (PHYS 466). Particle Physics I (PHYS 542) is NOT required.

**Contents:** Relativistic wave equations, second quantization, introduction to quantum electrodynamics (QED) and quantum chromodynamics (QCD), electroweak theory, standard model (SM) of particle physics and beyond.

**Instructors:** Dr. Huaiyu Duan (first half) and Dr. Rouzbeh Allahverdi (second half)