

Physics Seminar: Grant Remmen  
Wednesday, May 20 · 2:00 – 3:00pm, room 313

Title: Strings from Almost Nothing

Abstract: Is string theory unique? String amplitudes famously accomplish several extraordinary mathematical feats in order to UV-complete gravity, including exhibiting an infinite tower of spinning states and dual resonance. In this talk, I will show that string amplitudes can be uniquely bootstrapped from first principles, using techniques from the modern amplitudes program and quantum field theory to constrain the possibilities for quantum gravity from the bottom up. I will identify physical criteria for scattering amplitudes from which string theory—including its spectrum—emerges as the only consistent answer.