

Joshua Isaacson – Special HEP Seminar – February 17, 2025
FNAL

The title of my talk is: "Event Generation for Next-Gen HEP Experiments"

Abstract:

The next generation of high-energy physics experiments will push the boundaries of our understanding of fundamental interactions, demanding more precise and computationally efficient event generators. This talk explores recent theoretical and computational advancements in event generation and their critical role in both collider and neutrino physics. Efforts to address common challenges shared by these two domains will be highlighted, along with the importance of fostering collaboration and knowledge transfer between the two previously separate communities. Finally, I will conclude with a vision for the future of event generation in HEP, emphasizing the need for improved theoretical precision, innovative algorithms, and increased cross-experiment collaboration.