Efficient computation of Lorentzian 6J symbols[1] JOSHUA WILLIS, Abilene Christian University — Spin foam models are a proposal for a quantum theory of gravity, and an important open question is whether they reproduce classical general relativity in the low energy limit. One approach to tackling that problem is to simulate spin-foam models on the computer, but this is hampered by the high computational cost of evaluating the basic building block of these models, the so-called 10J symbol. For Euclidean models, Christensen and Egan have developed an efficient algorithm, but for Lorentzian models this problem remains open. In this talk we describe an efficient method developed for Lorentzian 6J symbols, and we also report on recent work in progress to use this efficient algorithm in calculating the 10J symbols that are of real interest.

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