Error estimation and bounds for gravitational-wave surrogate models[1] FEROZ SHAIK, SCOTT FIELD, University of Massachusetts Dartmouth — In the era of high-precision gravitational wave (GW) astronomy, modeling error may routinely dominate over statistical error as GW detectors approach design sensitivity. Due to the expected increase in the signal-to-noise ratio of future detections, models that provide uncertainty estimates across the parameter space should play an increasingly important role in the analysis effort. For example, the inclusion of these uncertainties into the analysis will improve confidence in parameter estimates of future GW events. In this talk, I will discuss current efforts in the development of an error estimation methodology for surrogate waveform models. We apply this methodology to a set of benchmark test cases to verify the theoretical framework and implement the framework to non-spinning surrogate models.

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