SPEAKER:

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TITLE:

Pointwise decay for solutions to linear and semilinear wave equations

ABSTRACT:
We will be interested in optimal pointwise decay rates of solutions to the wave equations

$$\Box_g \phi = \lambda \phi |\phi|^{p-1}$$

If $\lambda = 0$, the rate of decay only depends on the decay of the metric coefficients provided that local energy estimates (which will also be discussed) hold. On the other hand, for the nonlinear problem, the rate might also depend on p. Examples of metrics for which our results apply include Minkowski and perturbations (which is upcoming work of Looi) and Schwarzchild and Kerr (for small initial data).