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Gulsah Yeni* (gyq3f@mst.edu) and **Elvan Akin**. *Some Epidemic Models on Time Scales*.

The theory of time scales has been introduced in order to unify and extend continuous and discrete analysis. In this talk, we give a formulation of SIS (susceptible-infected-susceptible) and SIR (susceptible-infected-recovered) epidemic models with time dependent coefficients on time scales. After presenting the derivation of these models, we find exact solutions by the approach of the Bernoulli equation on time scales. We also discuss the asymptotic behavior of susceptibles and infectives and illustrate our results on different time scales in which we compare them to existing models in literature. (Received September 17, 2019)