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Nicolette Meshkat* (ncmeshka@ncsu.edu) and **Seth Sullivant**. *Identifiable Reparametrizations of Linear Compartment Models*.

Identifiability concerns finding which unknown parameters of a model can be quantified from given input-output data. Many linear ODE models, used primarily in Systems Biology, are unidentifiable, which means that parameters can take on an infinite number of values and yet yield the same input-output data. We study a particular class of unidentifiable models and find conditions to obtain identifiable reparametrizations of these models. In particular, we use a graph-theoretic approach to analyze the models and show that graphs with certain properties allow a monomial scaling reparametrization over identifiable functions of the parameters. (Received January 20, 2014)