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Nicolette Meshkat* (ncmeshka@ncsu.edu) and **Seth Sullivant**. *Identifiability of Linear 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. Unidentifiable models are generally undesirable to work with since not all of the parameters can be determined (or approximated). We study a particular class of linear models using a differential algebra approach and find sufficient conditions to obtain identifiability. In particular, we show how local identifiability can be determined by simply looking at the graphical structure of these models. (Received September 01, 2014)