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**Juliann Leifeld\*** (leif0020@umn.edu). *Smooth and Nonsmooth Bifurcation Structures in an Ocean Convection Model.*

In conceptual climate modeling, nonsmooth models are prolific. However, it has been demonstrated that there are challenges to bifurcation analysis in nonsmooth systems, which do not arise in their smooth counterparts. We explore the bifurcation structure in a low dimensional ocean convection model, in which oscillatory behavior depends on an abrupt transition between mixing states. We put particular emphasis on the relationship between the smooth model and the limit as the transition becomes nonsmooth. (Received January 20, 2015)