

1145-VN-1325 **Vinicio R. Ríos*** (vrios@demat-fecluz.org), Universidad del Zulia, Facultad Experimental de Ciencias, Departamento de Matemáticas, Maracaibo, Edo. Zulia 526, Venezuela. *Time-delayed differential inclusions and contractibility of their solution sets.*

Topological properties of the set of trajectories play a central role in the understanding of the qualitative behavior of deterministic dynamical systems. Among such properties, contractibility is one of the strongest and most useful due to the simplicity that it provides to the structure of the solution set. In this talk we announce contractibility in the case of a time-delayed dynamical system that is parametrized by a differential inclusion under very mild hypotheses. We sketch the proof of the aforementioned fact, which improves Haddad's result within this talk's context (see [1]).

[1] Haddad G., Topological properties of the sets of solutions for functional differential inclusions, *Nonlinear Analysis, Theory, Methods & Apps.*, 5, 1349-1366 (1981). (Received September 21, 2018)