Centers On Center Manifolds in the Lü System

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Abstract

We confirm a conjecture of Mello and Coelho [*Physics Letters A* **373** (2009) 1116–1120] concerning the existence of centers on local center manifolds at equilibria of the Lü system of differential equations on $\mathbb{R}^3$. Our proof shows that the local center manifolds are algebraic ruled surfaces, and are unique.

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