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examples of Lagrangian submanifolds

Canonical name ExamplesOfLagrangianSubmanifolds

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Author matte (1858) Entry type Example Classification msc 53D05 1. Suppose M is a manifold, and $f \colon M \to \mathbb{R}$ is a smooth function. Then

$$\{(df)(x)\in T_x^*(M):x\in M\}$$

is a Lagrangian submanifold of the cotangent bundle T^*M when this is equipped with the canonical symplectic structure.