

## **Lefschetz fibrations on cotangent bundles**

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In this talk I will explain how to construct some explicit Lefschetz fibrations on cotangent bundles, in the sense that they have explicit and relatively simple fiber and vanishing cycles. These are meant to be models for a complexified Morse function on the zero section.

I will also spend a few minutes discussing two potential uses of such fibrations: the study of Lagrangian submanifolds in cotangent bundles (using Floer theory and Picard-Lefschetz theory) and the construction of exotic cotangent bundles (by tampering with the given explicit vanishing cycles).