Linearization and Transversality

D. Zack Garza

Review 8.2

Space of Perturbations of H

Section 8.4: Linearizing the Floer Equation: The Differential of F

Linearization and Transversality

Sections 8.3 and 8.4

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April 2020

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Section 8.3: The Space of Perturbations of

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Linearizing the Floer Equation: The Differential of F

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Goal

Linearization and Transversality

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Section 8.3: The Space of Perturbations of

Section 8.4: Linearizing the Floer Equation: The Differentia of F **Goal**: Given a fixed Hamiltonian $H \in C^{\infty}(W \times S^1; \mathbb{R})$, perturb it (without modifying the periodic orbits) so that $\mathcal{M}(x, y)$ are manifolds of the expected dimension.

Goal

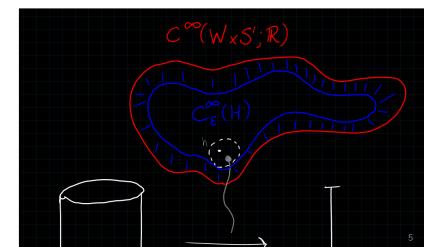
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Section 8.3: The Space of Perturbations of

Linearizing the Floer Equation: The Differential of F Start by trying to construct a subspace $C_{\varepsilon}^{\infty}(H) \subset C^{\infty}(W \times S^1; \mathbb{R})$, the space of perturbations of H depending on a certain sequence $\varepsilon = \{\varepsilon_k\}$, and show it is a dense subspace.



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Section 8.4: Linearizing the Floer Equation: The Differential of F

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