

Day 5 HW: "Take Home Final"

Simplest example of HMS

•  $p: \mathbb{C} \rightarrow \mathbb{C}$  generic poly of deg  $n$

Directed Fukaya  $n$  category (alternatively)

$$(x, y) \mapsto (x^2 + p(y))$$

$$\text{or } x^2 + y^2 + p(z)$$

closed  
equivalent

•  $W(z) = z^n$ ; consider the dg Category

of  $\mathbb{Z}/n$ -equivariant matrix factorizations.

( $n=2$  very feasible,  $n=3$  less feasible)

(ex. due to Kapustin).

(Remarkable bc it came up later than Kontsevich's  
complicated example)