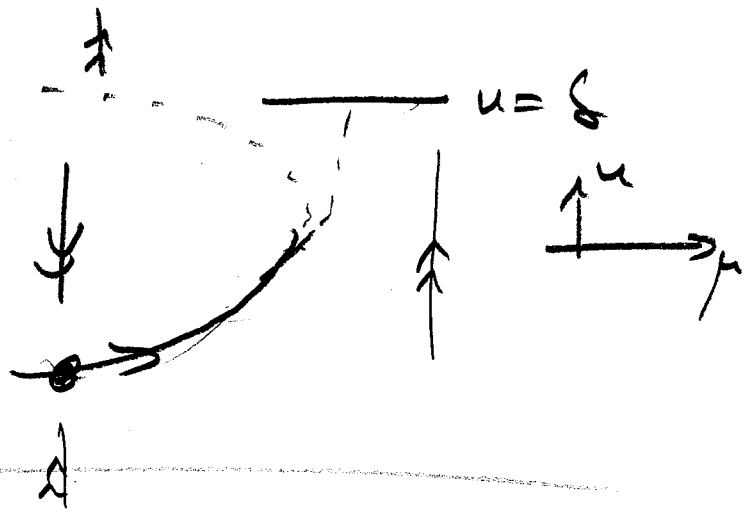


$$\ddot{u} = \mu + u^2$$

$$\dot{\mu} = \varepsilon(\mu + 1)$$



---

b.c.  $t \in (-\infty, 0)$   $\left| \begin{array}{l} (u, \mu)(-\infty) = (-1, -1) \\ u|_{t=0} = \delta \end{array} \right.$

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Solve using expansions / ideas  
from geometric slowup

$\mu < -\delta \rightarrow$  slow manifold /  $W^u$

vicinity of  $u, \mu = 0$ :

$\rightarrow$  course notes

(Wechselberger)

$\rightarrow$  Kuznetsov & Szmolyan

$\rightarrow$  Ch. Kuehn book