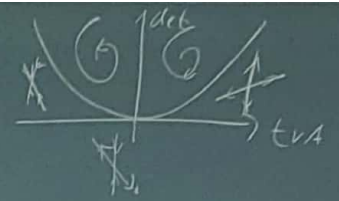


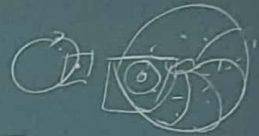
lin. Stabilität \rightarrow Eigenwerte, Jacobi-Matrix

Fixpunkte - Sattel, Fokus, Center, Knoten

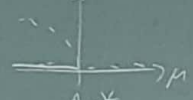
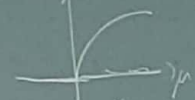
Bifurkationen: - sub/supercritische



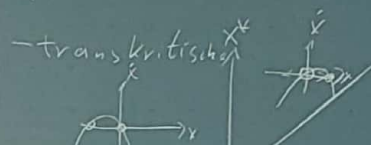
Neimark-Sacker



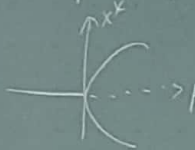
Flip



Hopf



-transkritische



Hengabel pitchfork

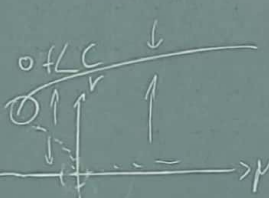
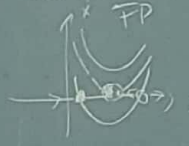


-homokline

super

sub

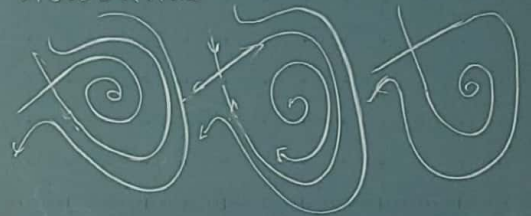
-Sattel-knoten



onLC



SNIC/SNIC



Chaos:

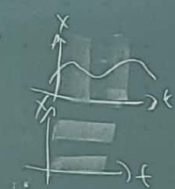
- Feigenbaum-Diagramm (Periodverdopplung)
- Lyapunov-Exponent

sensitive Abhängigkeit
bzgl. Anfangsbedingungen



- seltsamer Attraktor (Langzeitverhalten)
 - \hookrightarrow fraktale Dimension
 - \hookrightarrow asymptotisch
 - \hookrightarrow Lyapunov-stabil
- min 3 Variablen
- Kontrolle
 - \hookrightarrow OGY
 - \hookrightarrow TDAS, zeitverzögerte Rückkopplung

- Diffusion
- Hopf
- Turing



- komplex Ginzburg-Landau
- Reaktionsdiffusionssysteme