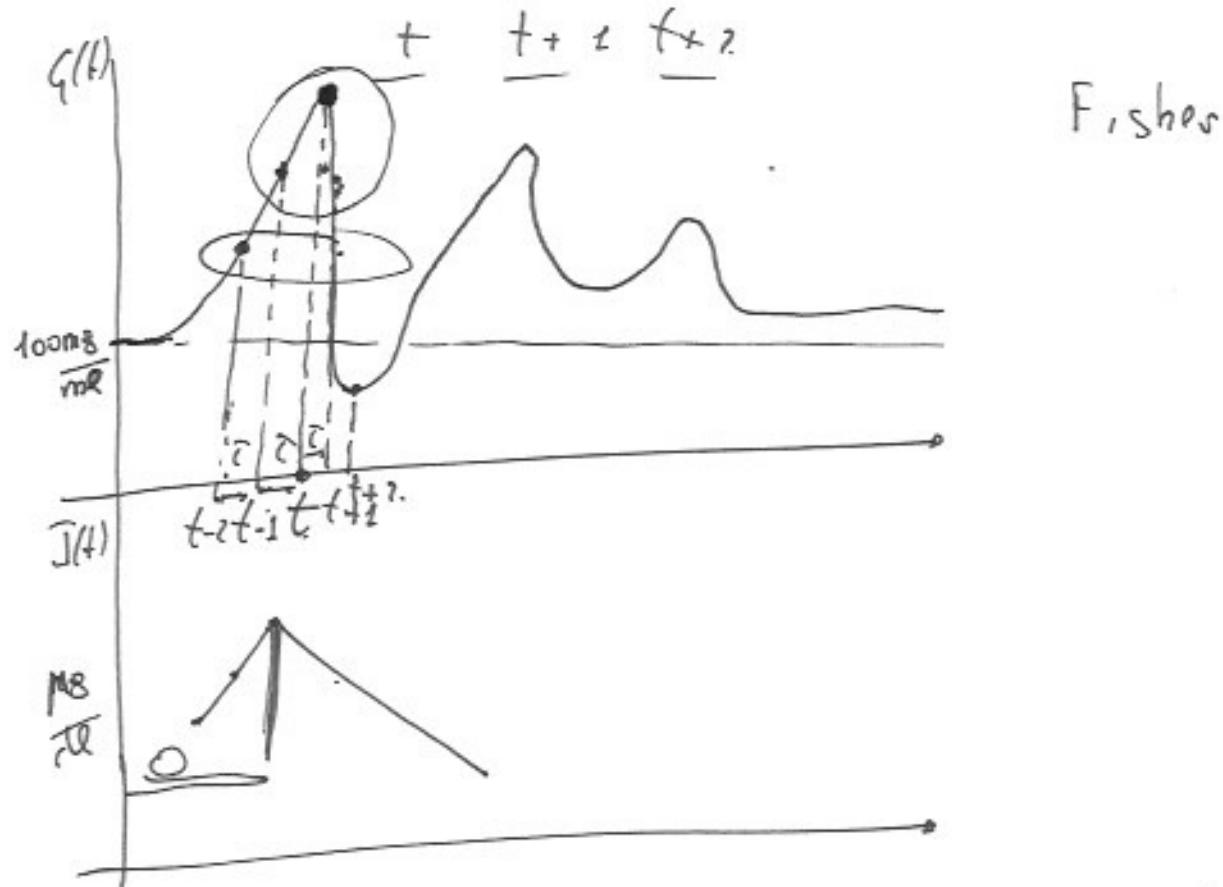


①



Fisher $I(t) = \alpha_0 + \alpha_1 (G(t) - BI) + \alpha_2 \frac{dG}{dt}$

$$\begin{cases} I(t) = \alpha_0 + \alpha_1 (G(t) - BI) + \alpha_2 \frac{G(t) - G(t-1)}{\tau} \\ I(t-1) = \alpha_0 + \alpha_1 (G(t-1) - BI) + \alpha_2 \frac{G(t-1) - G(t-2)}{\tau} \\ I(t-2) = \alpha_0 + \alpha_1 (G(t-2) - BI) + \alpha_2 \frac{G(t-2) - G(t-3)}{\tau} \end{cases}$$

$$I(t) = I_{\max} \quad \tau = 15 \text{ min}$$

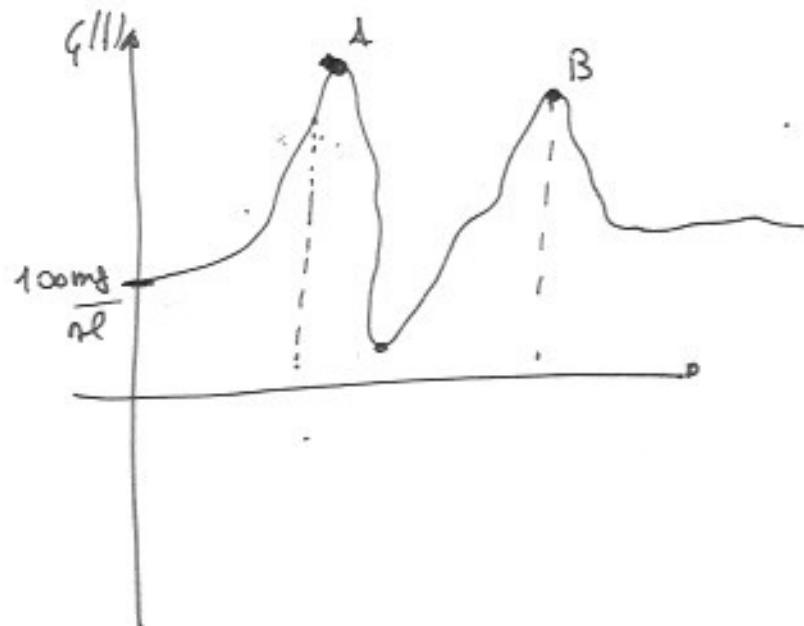
$$I(t-1) = I_{\max} - \frac{1}{4} I_{\max} = \frac{3}{4} I_{\max}$$

$$I(t-2) = I_{\max} - \frac{1}{4} I_{\max} - \frac{1}{4} I_{\max} = 0.5 I_{\max}$$

$$\text{Do, } \alpha_1, \alpha_2 > 0$$

⑦

Clemens



$$\frac{I_R}{I} = \left(K \right) \frac{d G(t)}{dt} \quad \text{dynamisch}$$

$$J_A(t) = R I \left[1 + \frac{G(t) - B I}{\alpha_J} \right]^? \quad \text{statisch} \quad K > 0$$

$$K > \phi$$

$$\frac{100 \mu g}{\Delta t} = \left(K_1 \right) G_A(t) - \frac{G_A^{new}(t-1)}{\tau} \quad K_1 = 1$$

$$\frac{100 \mu g}{\Delta t} = \left(K_2 \right) G_B(t) - \frac{G_B^{new}(t-1)}{\tau} \quad K_2 = 1$$

$$\tau = t_{max} - t_{min}$$

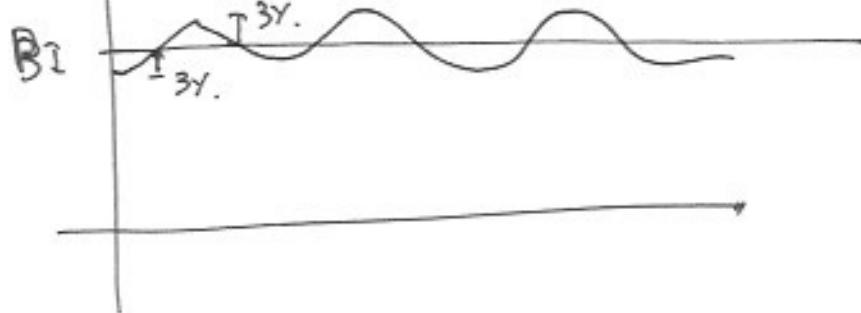
$$0 < K < 1$$

$K = \max(K_1, K_2) \rightarrow$ glukoseinsulinoza

$K = \min(K_1, K_2) \rightarrow$ glukose- $J_n \geq \phi$

$[K = \text{media}(K_1, K_2)]$

(3)



Alibi SS P5

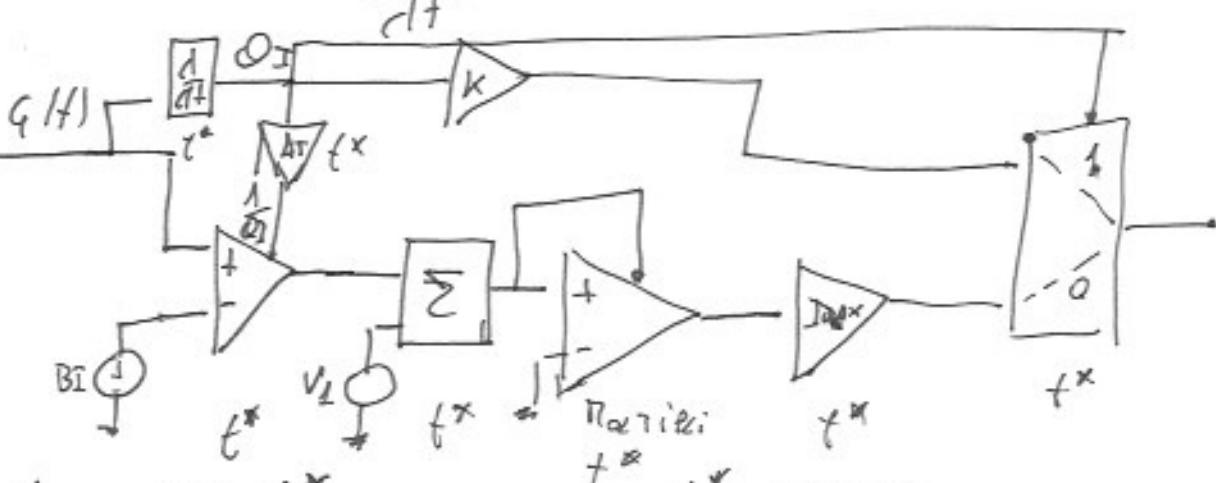
$$I(t) = \frac{I_{\max}}{2} \left[1 + \tanh \frac{G(t) - G_I}{P_I} \right] \approx \frac{I_{\max}}{2} \left[1 + \frac{G(t) - G_I}{P_I} \right]$$

Block diagram:

- Input $G(t)$ is fed into a differentiator ($\frac{d}{dt}$) and a summing junction.
- The differentiator output is fed into a gain block P_I .
- The summing junction also receives a feedback signal from a integrator ($\frac{1}{P_I}$).
- The output of the integrator is fed into a gain block $\frac{G(t) - G_I}{P_I}$.
- The outputs of the gain blocks are summed to produce the final output $I(t)$.
- Below the circuit, it is noted: $8t^* = t_{\max} \quad t^* = \frac{0.4ms}{8}$

(clomens) $I_R = I_{\max} \left[1 + \frac{G(t) - BF}{Q_I} \right] ?$

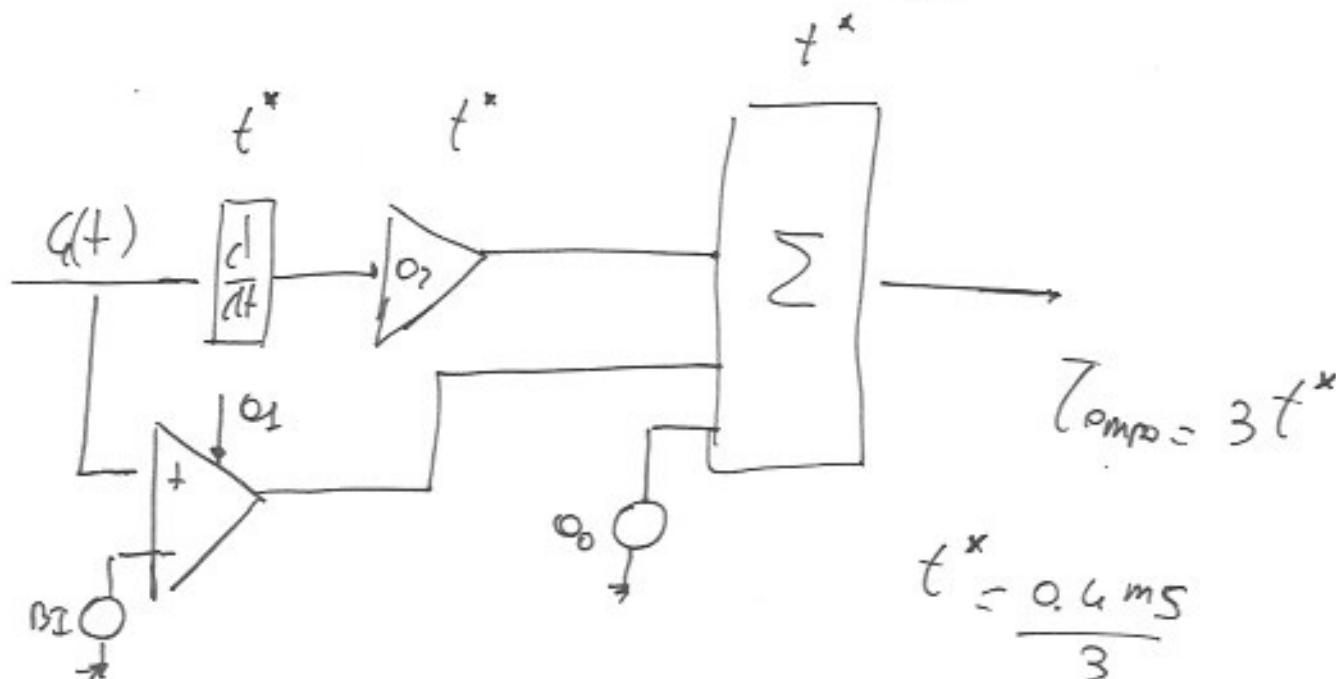
$$I_R = K \frac{dG(t)}{dt}$$



$$t_{\max} = 7t^* \quad t^* = \frac{0.4ms}{7}$$

(4)

$$T(t) = \alpha_0 + \alpha_1 (G(t) - BT) + \alpha_2 \frac{dG}{dt} \quad \boxed{\text{Fisher}}$$



$$T_{\text{mpo}} = 3t^*$$

$$t^* = \frac{0.4 \text{ ms}}{3}$$