

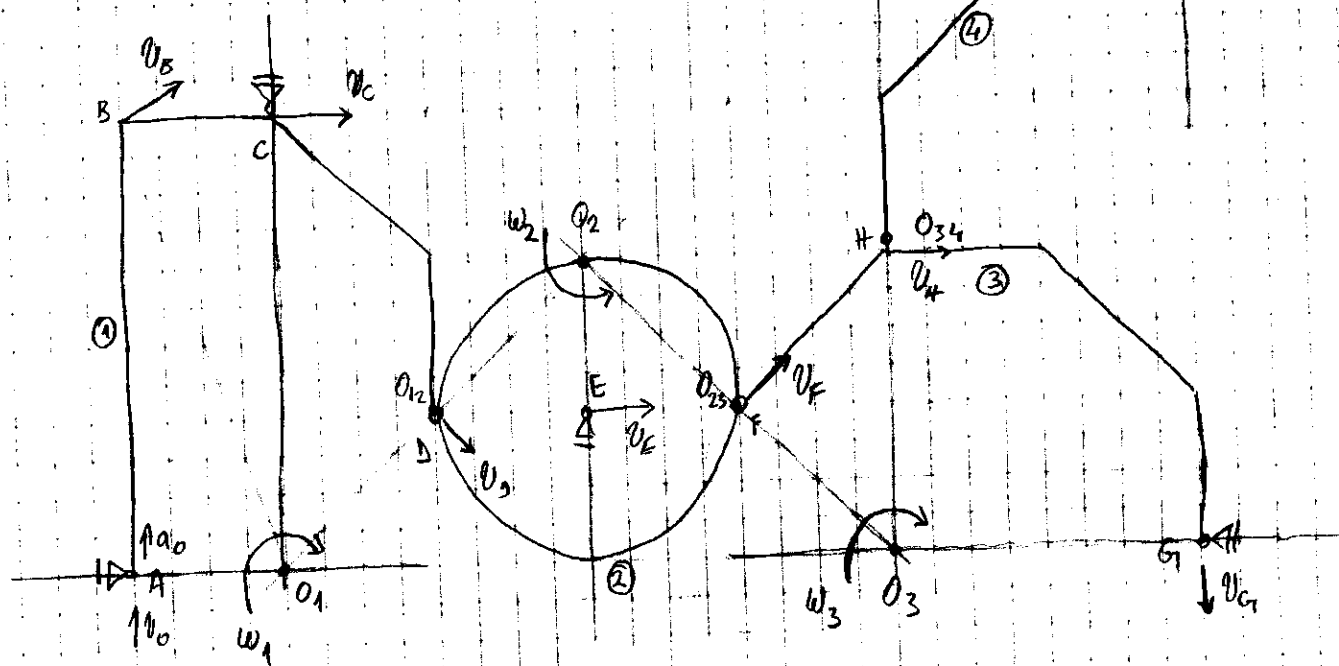
②

$$v_h = v_0$$

$$a_h = a_0$$

$$\omega_h \rightarrow \infty$$

$$\omega_4 = 0$$



$$\omega_1 = \frac{v_0}{e}$$

$$\underline{v_B} = \omega_1 \cdot \sqrt{(3e)^2 + e^2} = \frac{v_0}{e} \cdot e\sqrt{10} = \underline{\underline{\sqrt{10} v_0}}$$

$$\underline{v_C} = \omega_1 \cdot 3e = \frac{v_0}{e} \cdot 3e = \underline{\underline{3v_0}}$$

$$v_D = \omega_1 \cdot e\sqrt{2} = \frac{v_0}{e} \cdot e\sqrt{2} = v_0\sqrt{2}$$

$$\underline{\omega_2} = \frac{v_D}{e\sqrt{2}} = \frac{v_0\sqrt{2}}{e\sqrt{2}} = \underline{\underline{\frac{v_0}{e}}}$$

$$\underline{v_E} = \omega_2 \cdot e = \frac{v_0}{e} \cdot e = \underline{\underline{v_0}}$$

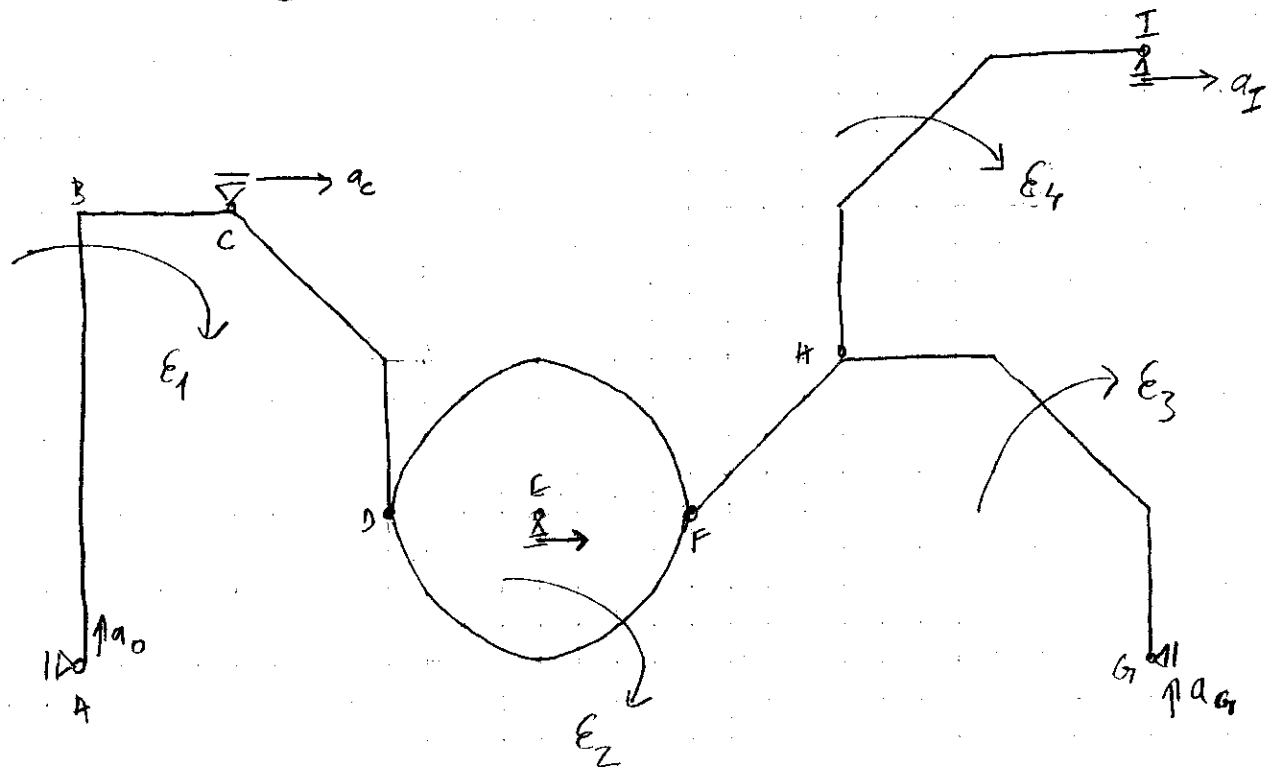
$$v_F = \omega_2 \cdot e\sqrt{2} = \frac{v_0}{e} \cdot e\sqrt{2} = v_0\sqrt{2}$$

$$\underline{\omega_3} = \frac{v_F}{e\sqrt{2}} = \frac{v_0\sqrt{2}}{e\sqrt{2}} = \underline{\underline{\frac{v_0}{e}}}$$

$$\underline{v_G} = \omega_3 \cdot 2e = \frac{v_0}{e} \cdot 2e = \underline{\underline{2v_0}}$$

$$\underline{v_I} = v_H = \omega_3 \cdot 2e = \frac{v_0}{e} \cdot 2e = \underline{\underline{2v_0}}$$

$$w_1 = w_2 = w_3 = \frac{v_0}{e} \quad w_4 = 0$$



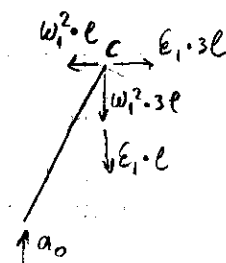
$$\vec{a}_C^A = \vec{a}_A^A + \vec{a}_{w,c}^A + \vec{a}_{T,c}^A \quad / \quad \begin{matrix} \vec{i} \\ \vec{j} \end{matrix}$$

$$a_c = 0 + \epsilon_1 \cdot 3l - w_1^2 \cdot l$$

$$0 = a_0 - \epsilon_1 \cdot l - w_1^2 \cdot 3l$$

$$\underline{\underline{\epsilon_1 = \frac{a_0}{l} - \left(\frac{v_0}{e}\right)^2 \cdot \frac{3l}{e} = \frac{a_0}{l} - 3 \frac{v_0^2}{e^2}}}$$

$$\underline{\underline{a_c = \left(\frac{a_0}{l} - 3 \frac{v_0^2}{e^2}\right) \cdot 3l - \left(\frac{v_0}{e}\right)^2 \cdot l = 3a_0 - 9 \frac{v_0^2}{e} - \frac{v_0^2}{e} = 3a_0 - 10 \frac{v_0^2}{e}}}$$



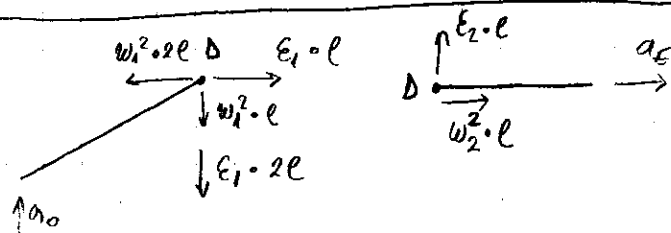
$$\vec{a}_D^A = \vec{a}_D^E \quad / \quad \begin{matrix} \vec{i} \\ \vec{j} \end{matrix}$$

$$0 - w_1^2 \cdot 2l + \epsilon_1 \cdot l = a_E + w_2^2 \cdot l$$

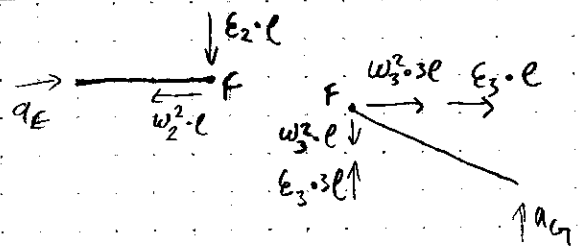
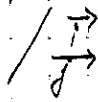
$$a_0 - w_1^2 \cdot l - \epsilon_1 \cdot 2l = 0 + \epsilon_2 \cdot l$$

$$\underline{\underline{a_E = -\left(\frac{v_0}{e}\right)^2 \cdot 2l + \left(\frac{a_0}{l} - 3 \frac{v_0^2}{e^2}\right) \cdot l - \left(\frac{v_0}{e}\right)^2 \cdot l = -\frac{2v_0^2}{e} + a_0 - \frac{3v_0^2}{e} - \frac{v_0^2}{e} = a_0 - 6 \frac{v_0^2}{e}}}$$

$$\underline{\underline{\epsilon_2 = -\left(\frac{v_0}{e}\right)^2 \cdot \frac{l}{e} - \left(\frac{a_0}{l} - 3 \frac{v_0^2}{e^2}\right) \cdot \frac{2l}{e} = -\frac{v_0^2}{e^2} - 2 \frac{a_0}{e} + \frac{6v_0^2}{e^2} = -\frac{2a_0}{e} + \frac{5v_0^2}{e^2}}}$$



$$\vec{a}_F^E = \vec{a}_F^G$$



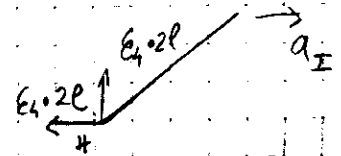
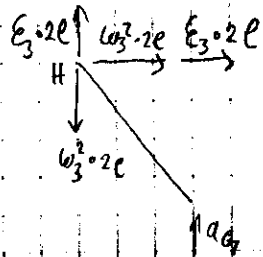
$$q_E - \omega_2^2 \cdot l = \omega_3^2 \cdot 3l + E_3 \cdot l$$

$$-E_2 \cdot l = a_G - \omega_3^2 \cdot l + E_3 \cdot 3l$$

$$\begin{aligned} E_3 &= (a_0 - 6 \frac{v_0^2}{e}) / l - (\frac{v_0}{e})^2 \cdot \frac{l}{e} - (\frac{v_0}{e})^2 \cdot \frac{3l}{e} = \\ &= \frac{a_0}{e} - 6 \frac{v_0^2}{e^2} - \frac{v_0^2}{e^2} - \frac{3v_0^2}{e^2} = \frac{a_0}{e} - 10 \frac{v_0^2}{e^2} \end{aligned}$$

$$\begin{aligned} a_G &= - \left(-\frac{2a_0}{e} + \frac{5v_0^2}{e^2} \right) \cdot l + \left(\frac{v_0}{e} \right)^2 \cdot l - \left(\frac{a_0}{e} - 10 \frac{v_0^2}{e^2} \right) \cdot 3l = \\ &= 2a_0 - \frac{5v_0^2}{e} + \frac{v_0^2}{e} - 3a_0 + 30 \frac{v_0^2}{e} = -a_0 + 26 \frac{v_0^2}{e} \end{aligned}$$

$$\vec{a}_H^G = \vec{a}_H^I$$



$$0 + \omega_3^2 \cdot 2l + E_3 \cdot 2l = -E_4 \cdot 2l + q_I$$

$$q_G + E_3 \cdot 2l - \omega_3^2 \cdot 2l = E_4 \cdot 2l$$

$$\begin{aligned} E_4 &= \left(-a_0 + 26 \frac{v_0^2}{e} \right) / 2l + \left(\frac{a_0}{e} - 10 \frac{v_0^2}{e^2} \right) \cdot \frac{2l}{2l} - \left(\frac{v_0}{e} \right)^2 \cdot \frac{2l}{2l} = \\ &= -\frac{a_0}{2l} + 13 \frac{v_0^2}{e^2} + \frac{a_0}{e} - 10 \frac{v_0^2}{e^2} - \frac{v_0^2}{e^2} = \frac{a_0}{2l} + 2 \frac{v_0^2}{e^2} \end{aligned}$$

$$\begin{aligned} q_I &= \left(\frac{v_0}{e} \right)^2 \cdot 2l + \left(\frac{a_0}{e} - 10 \frac{v_0^2}{e^2} \right) \cdot 2l + \left(\frac{a_0}{2l} + 2 \frac{v_0^2}{e^2} \right) \cdot 2l = \\ &= \frac{2v_0^2}{e} + 2a_0 - 20 \frac{v_0^2}{e^2} + a_0 + 4 \frac{v_0^2}{e^2} = 3a_0 - 16 \frac{v_0^2}{e^2} \end{aligned}$$