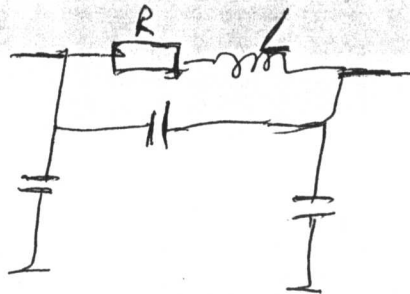
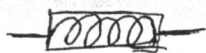


ACE

SEMINAR NR1

Suportamur.



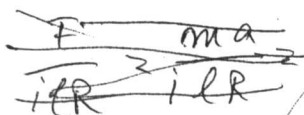
$$[H] = [S]$$

$$[Z] = [S]$$

$$[F][Z] = [S]$$

~~F = Bk~~

$$\frac{B}{R} = \frac{F}{iR}$$



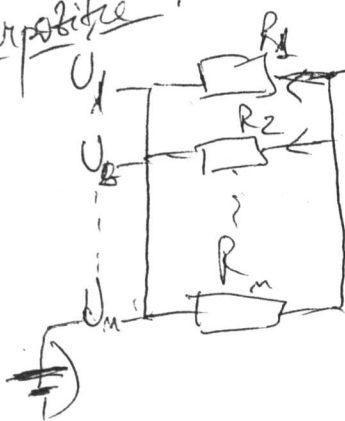
→ 0V (punct de masă definit - Pământul)



- puncte de masă (0V)

Generatoare  $\oplus$ ,  $\ominus$

Suprapoziție

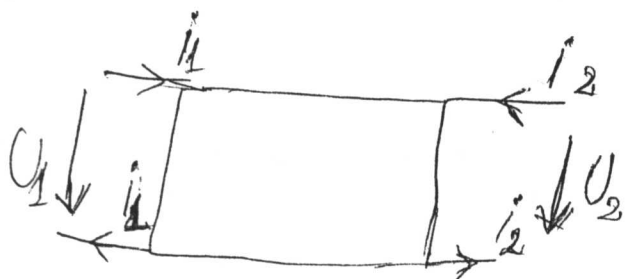


$$U_x = U_1 \frac{R_{e1}}{R_1 + R_{e1}} + U_2 \frac{R_{e2}}{R_2 + R_{e2}} + \dots + U_m \frac{R_{em}}{R_m + R_{em}}$$

$$\frac{1}{R_{e1}} = \sum_{\substack{j=1 \\ j \neq i}}^m \frac{1}{R_j}$$

$$\text{Millman: } U_x = \frac{\frac{U_1}{R_1} + \frac{U_2}{R_2} + \dots + \frac{U_m}{R_m}}{\frac{1}{R_1} + \frac{1}{R_2} + \dots + \frac{1}{R_m}}$$

$\sum i = 0$



$$\begin{cases} U_1 = z_{11} i_1 + z_{12} i_2 \\ U_2 = z_{21} i_1 + z_{22} i_2 \end{cases}$$

$$\begin{cases} i_1 = Y_{11} U_1 + Y_{12} U_2 \\ i_2 = Y_{21} U_1 + Y_{22} U_2 \end{cases}$$

$$h_{11} = \frac{U_1}{i_1} \Big|_{U_2=0}$$

impedanta de intrare cu intrarea  
in scurtcircuit.

$$h_{21} = \frac{I_2}{I_1} \Big|_{U_2=0}$$

$$h_{12} = \frac{U_1}{U_2} \Big|_{I_1=0}$$

imp. de intr. cu iesire in gol.

$$h_{22} = \frac{I_2}{U_2} \Big|_{I_1=0}$$

admittanta iesire cu intrarea in gol.

$$\begin{cases} U_1 = h_{11} i_1 + h_{12} U_2 \\ I_2 = h_{21} i_1 + h_{22} U_2 \end{cases}$$

$$\underline{h_{11} =}$$

$$\begin{bmatrix} U_1 \\ U_2 \end{bmatrix} = [Z] \begin{bmatrix} i_1 \\ i_2 \end{bmatrix}$$

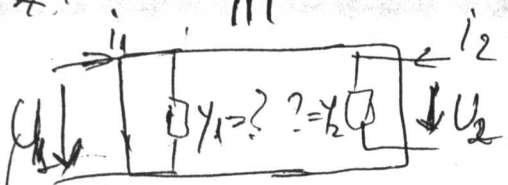
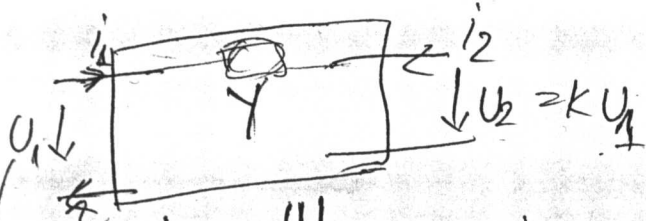
$$\downarrow$$

$$\begin{bmatrix} U_1 \\ U_2 \end{bmatrix} \neq 0$$

$$i_1 = \frac{U_1}{h_{11}} - \frac{h_{12} U_2}{h_{11}}$$

$$i_2 = h_{21} \left( \frac{U_1}{h_{11}} - \frac{h_{12} U_2}{h_{11}} \right) + h_{22} U_2$$

$$? i_{21} = \frac{h_{21}}{h_{11}} \quad ? i_{22} = h_{22} - \frac{h_{12} h_{21}}{h_{11}}$$



$$i_1 = Y U_1$$

$$i_1 = Y(U_1 - U_2) = Y U_2 (1 - k)$$

$$i_2 = Y_2 U_2$$

$$i_2 = (U_2 - U_1) Y = Y U_2 \left(1 - \frac{1}{k}\right)$$

$$\begin{aligned} Y_1 &= Y(1 - k) \\ Y_2 &= Y\left(1 - \frac{1}{k}\right) \end{aligned}$$

T. Müller