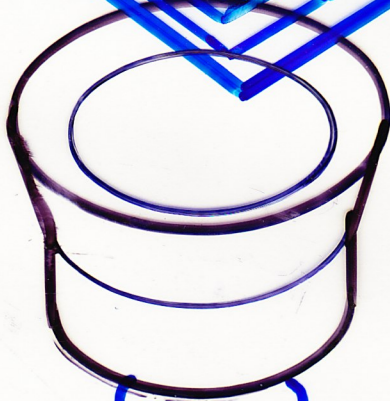
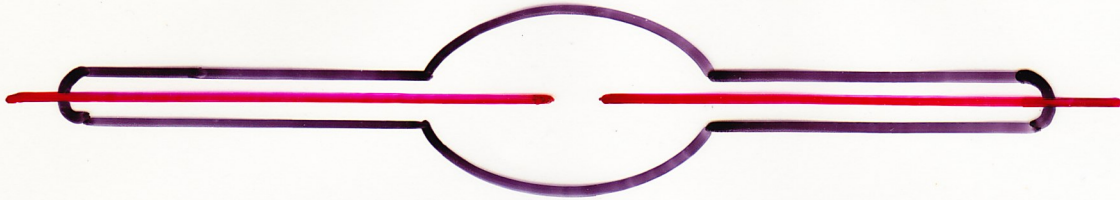


A MODEL FOR
POLYCHROMATIC
PHOTORESIST
EXPOSURE
IN OPTICAL
MICROLITHOGRAPHY

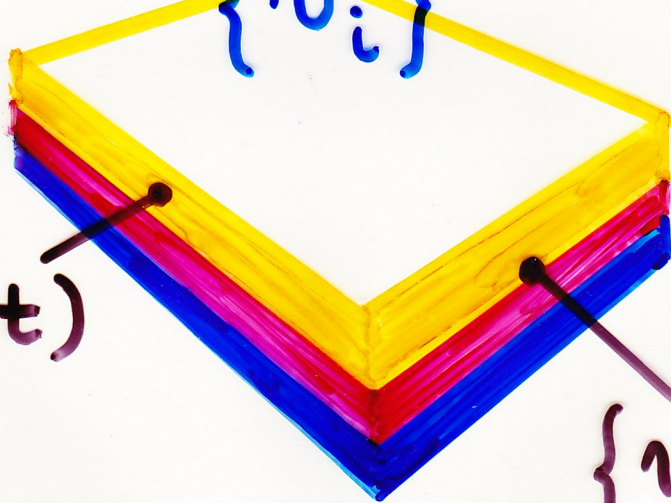
Giovanni Crosta

SPINE

PHYSICAL SYSTEM



$\{v_i\}$

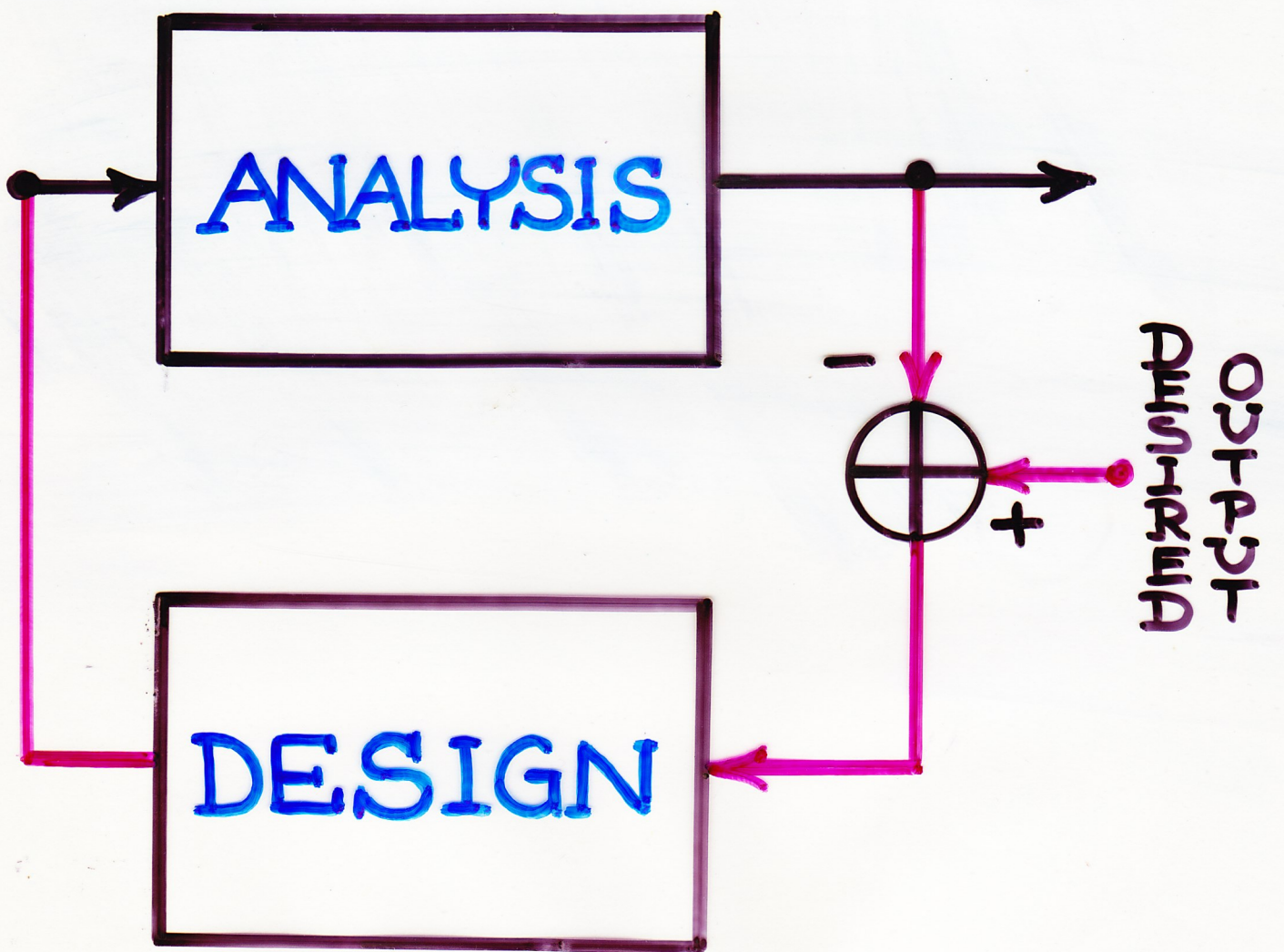


Photoresist
 SiO_2
Si

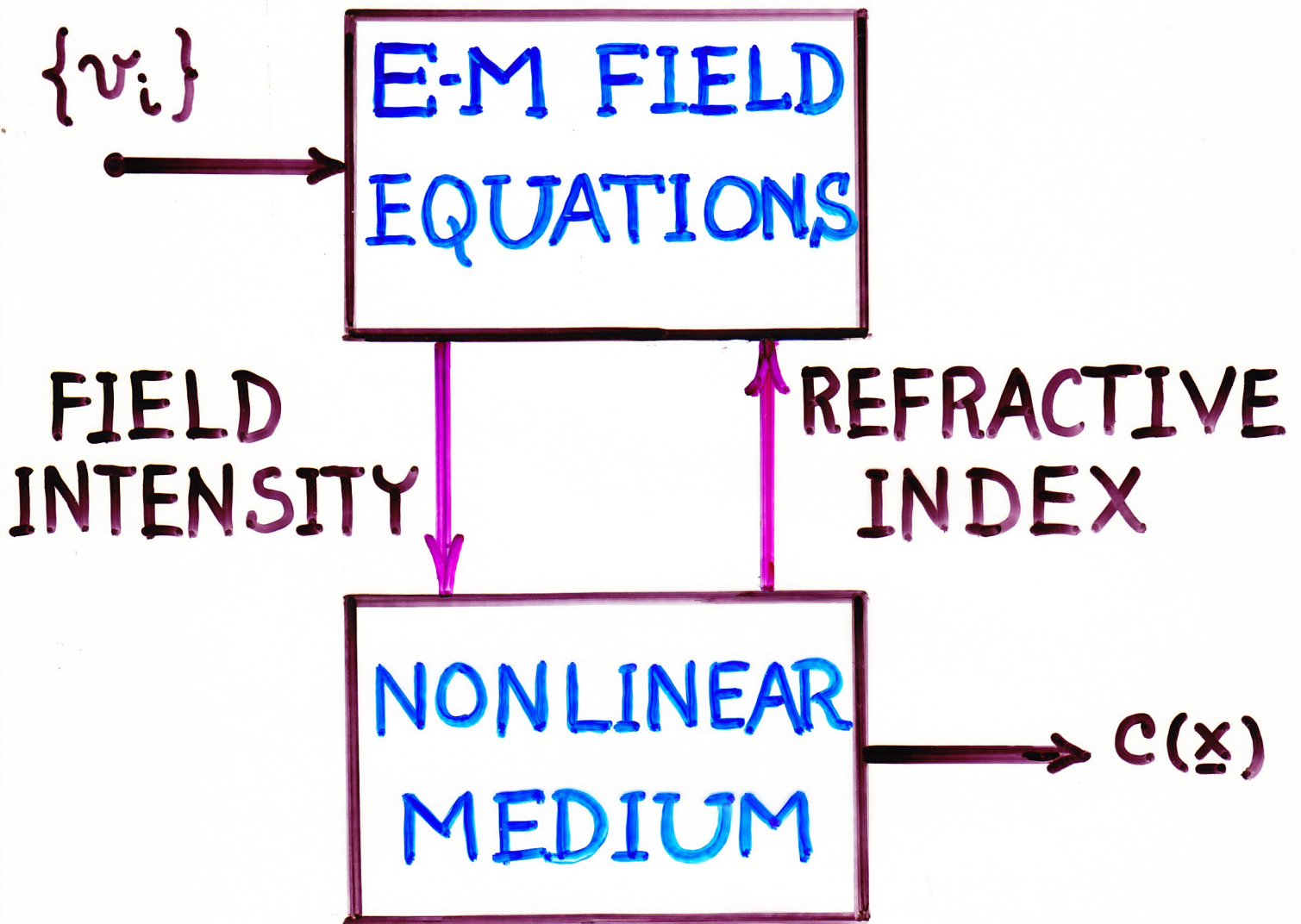
$C(x,t)$

$\{w_i\}$

TYPES OF MODELS



DIRECT PROBLEM (PROCESS ANALYSIS)



FIELD EQUATIONS

$$(\nabla^2 + k_i^2(c(x,t))) w_i(x,t) = 0$$

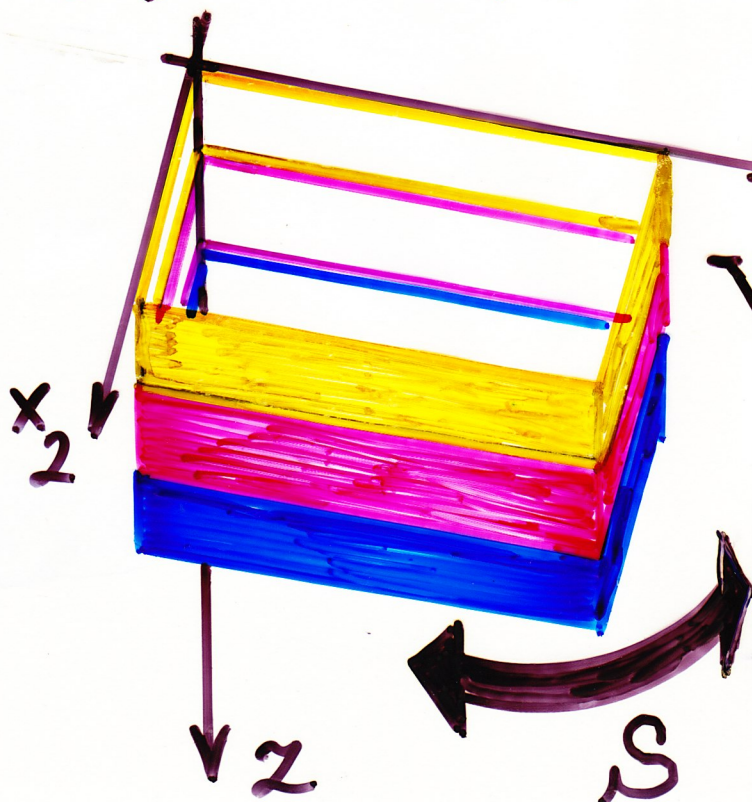
$$1 \leq i \leq I$$

$$x \in V; 0 \leq t \leq T$$

$$w_i(x_1, x_2) \Big|_{G_0} = v_i(x_1, x_2); \forall t$$

$$w_i(x_1, x_2) \Big|_{G_x} = 0; \forall t$$

$$\partial_y w_i(x_1, x_2, z) + jk(c(\cdot, \cdot)) w_i(\cdot, \cdot, \cdot) = 0; \forall x \in S; \forall t; j := \sqrt{-1}$$



$$V = V_y U V_x$$