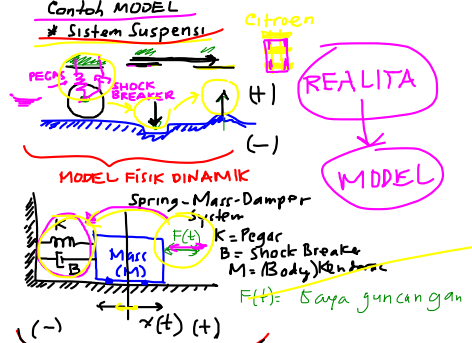
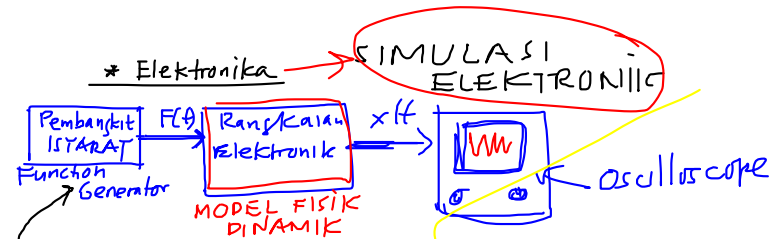




PEKAN DEPAN
Jum'at, 29 Nov 2013, jam 13.30
MIDTEST (40%) open-book
no-laptop
bahan ujian s/d materi 23/11/13
bisa diunduh dari
<http://www.unhas.ac.id/rhiza/arsip/kuliah/>
→ cari Pengantar-Teknologi



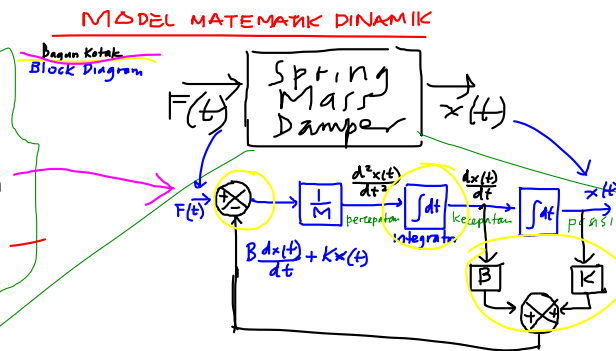
Persamaan Differensial:
Hukum NEWTON
KALKULUS

$$F(t) = M \frac{d^2x(t)}{dt^2} + B \frac{dx(t)}{dt} + Kx(t)$$

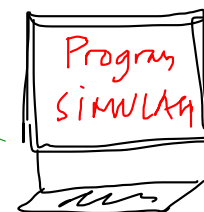
Percepatan, Kecepatan, Posisi

$$\frac{d^2x(t)}{dt^2} = \frac{1}{M} [F(t) - (B \frac{dx(t)}{dt} + Kx(t))]$$

Percepatan = perubahan kecepatan
DIAH = kecepatan nol
BERGERAK = kecepatan tidak nol



* Programmer



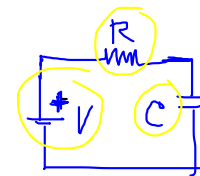
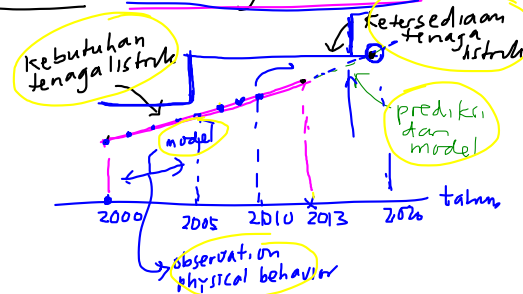
METODE NUMERIK

MODEL MATEMATIK DINAMIK

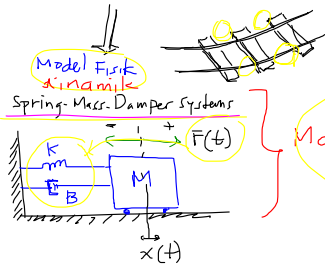
Pemodelan

Contoh

"Ketenaga-listrik"



Pengantar Telekomunikasi



Model Matematika Dinamik

Hukum NEWTON

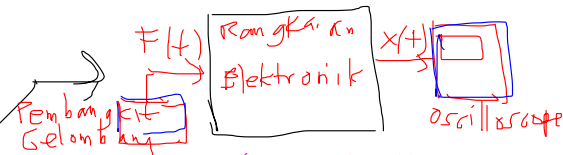
$$F(t) = M \frac{d^2x(t)}{dt^2} + B \frac{dx(t)}{dt} + Kx(t)$$

percepatan kecepatan posisi

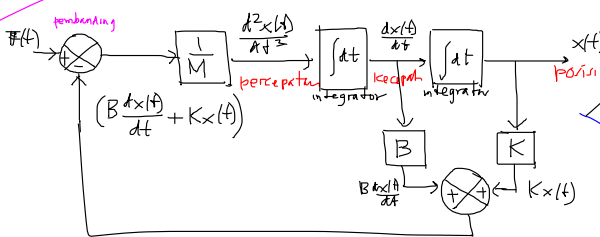
$$\frac{d^2x(t)}{dt^2} = \frac{1}{M} [F(t) - (B \frac{dx(t)}{dt} + Kx(t))]$$

(Persamaan Differensial)

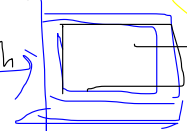
Bagan Kotak (Block Diagram)



Model Fisik



Program Metode Numerik



SIMULASI

