

Numerical - - -

Pemodelan & Metode Numerik

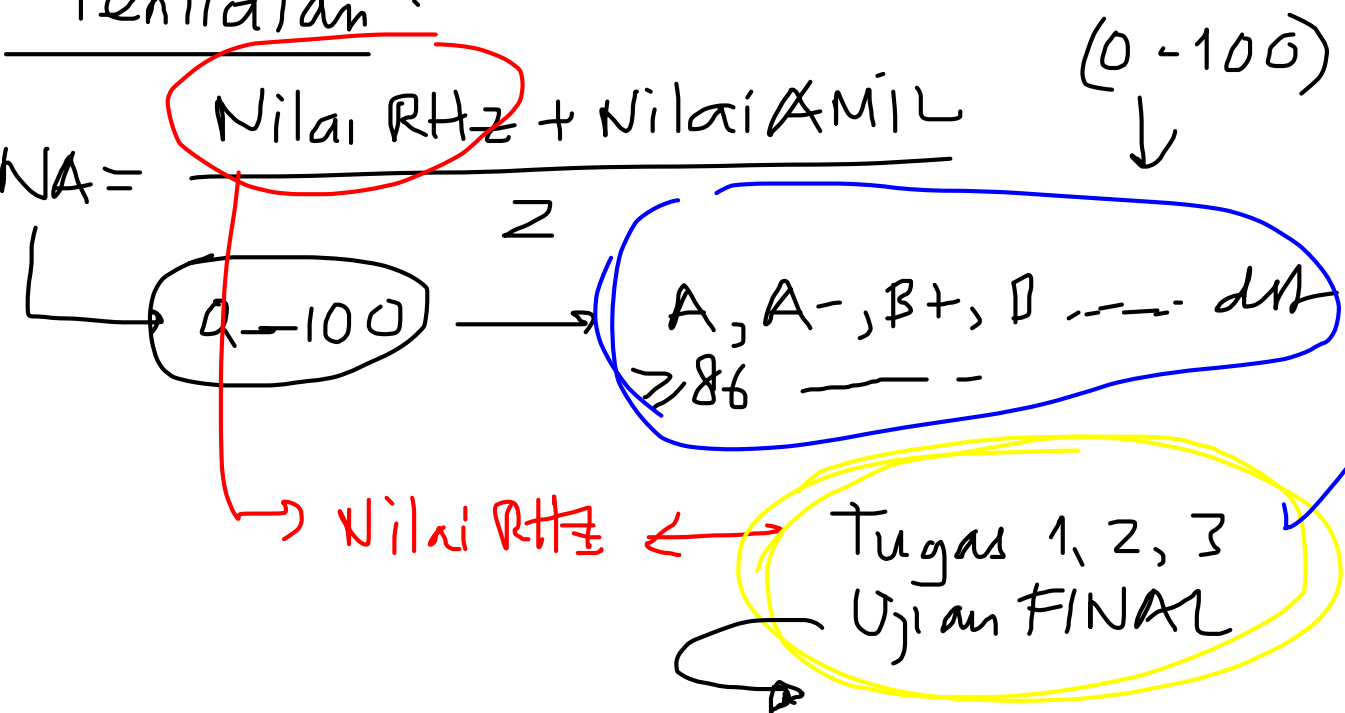
Pemodelan NUMERIK → Rhiza

Metode NUMERIK → Dr. Amil

website:

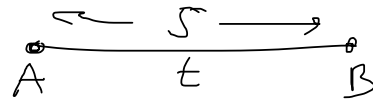
www.unhas.ac.id/rhiza/arsip/kuliah/

Penilaian:



Rhiza@unhas.ac.id } 24 jam
#628164312162

Time Continuum

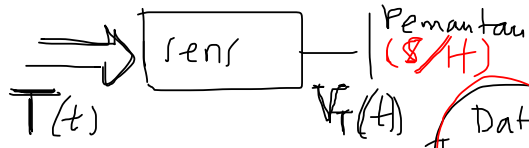


Kecepatan: $\frac{S}{t}$

$v(t) = \frac{ds}{dt}$

ANALOG

Discrete-Time



Data Terampuk

report

Waktu	Tuh
01.00	25
02.00	27
03.00	26

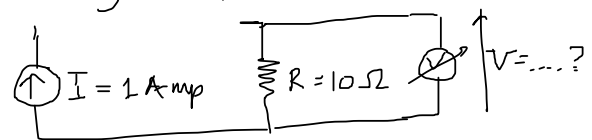
DiscreteTime

DIGITAL

T(t) is uruangan

Conto Sistem Deterministik & Stochastic

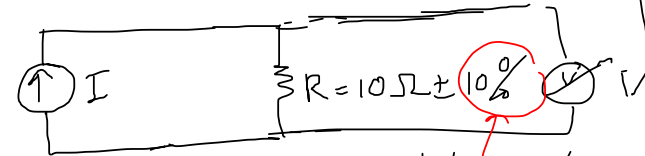
* Rangkaian Listrik



Hukum Ohm $V = I \cdot R$

$I = 1 \text{ Amp} \rightarrow V = 1 \times 10 = 10 \text{ Volt}$
 $I = 2 \text{ Amp} \rightarrow V = 2 \times 10 = 20 \text{ Volt}$

(DETERMINISTIK)



toleransi

$9 \Omega \leq R \leq 11 \Omega \rightarrow 10\%$

$I = 1 \text{ Amp} \rightarrow 9 \text{ Volt} \leq V \leq 11 \text{ Volt}$

$I = 2 \text{ Amp} \rightarrow 18 \text{ Volt} \leq V \leq 22 \text{ Volt}$

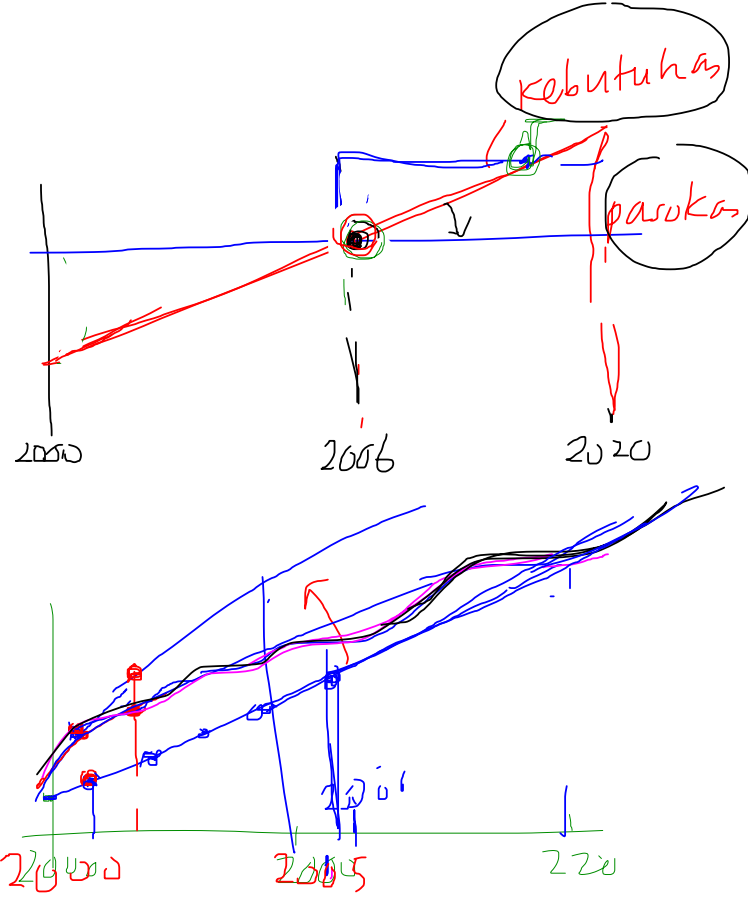
(STOKHASTIK)

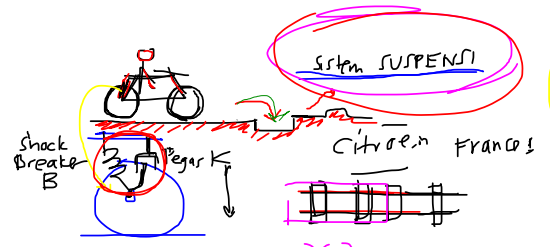
RU'YAT
HISAB

Imkannur. Ru'yat

VISIBILITAS
"stokhasitik"

"deterministik"
posisi

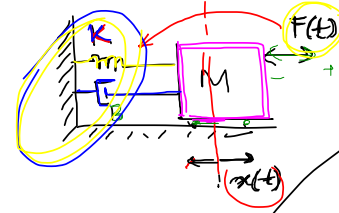




REALITA FISIKA

Model Fisis Dinamik
SPRING-MASS-DAMPER

Model Matematis
Dinamik



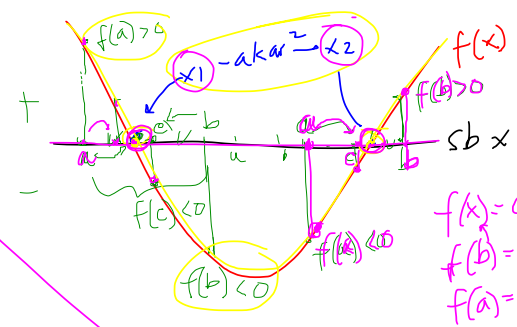
Hukum Newton:

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

percepatan seragam kecepatan seragam posisi seragam

Pers. Diferensial

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

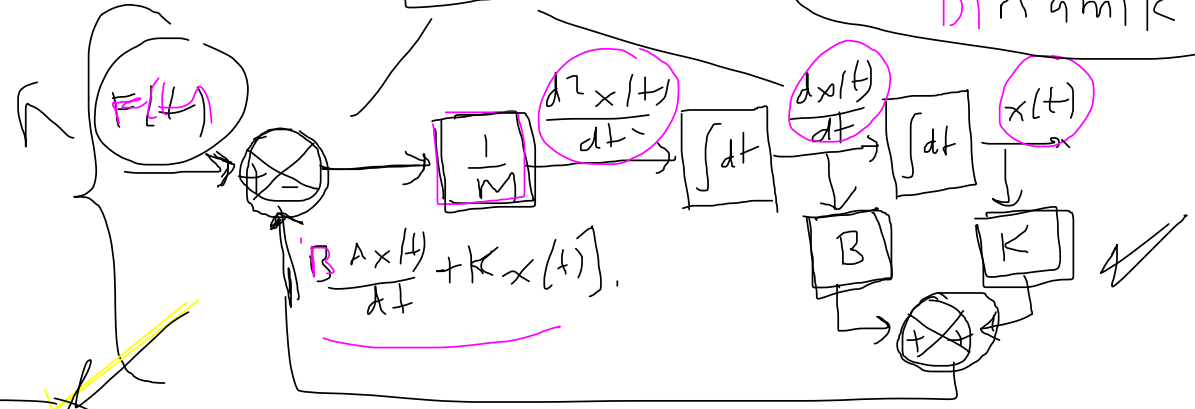


Model Fisis
Dinamik

Rangkaian
Elektronika



Model Matematis
Dinamik



Progr
SIMULASI

Metode
Numerik