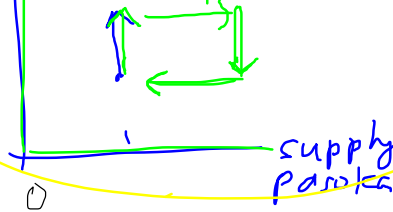


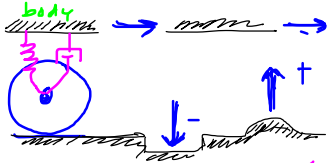
Model Matematika stok

demand (kebutuhan)



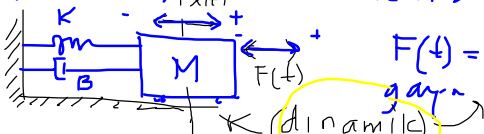
Realita Fisik

Sistem SUSPensi kendaraan bermotor



Model Fisik

Spring-Mass-Damper



Model MATEMATIK

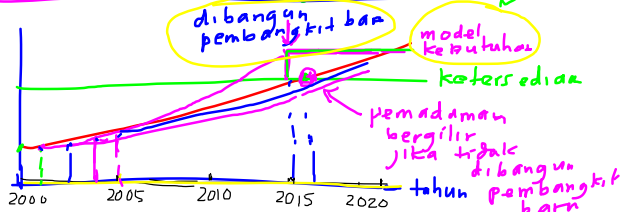
Pert. Differensial

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

$t = t_{int}$

Contoh

Membuat model konsumsi energi listrik



Setiap tahun model kebutuhan bisa diperbaiki berdasarkan pengamatan pada tahun trb [VALIDASI]

Deterministik dan Stokastik

I	$V = IR$
Misalnya $R = 1 K\Omega$	
(input) I	V (output)
1 mA	1 Volt
2 mA	2 Volt

$R = 1 K\Omega \pm 10\%$	
$0,9 K\Omega \leq R \leq 1,1 K\Omega$	
I	V (Volt)
1 mA	0,9 - 1,1
2 mA	1,8 - 2,2
3 mA	2,7 - 3,3

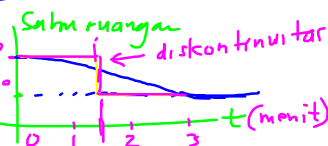
Deterministik

Stokastik

KHAOTIK (chaotic)

* Sistem Kontinu (Malar)

time-continuous



"ANALOG"

* Sistem Diskrit (buatan manusia)

Discrete-time

(sistem digital)

Discrete-event

(pabrik → proses)

Discrete Event

"DIGITAL"

A/D Converter
D/A Converter

