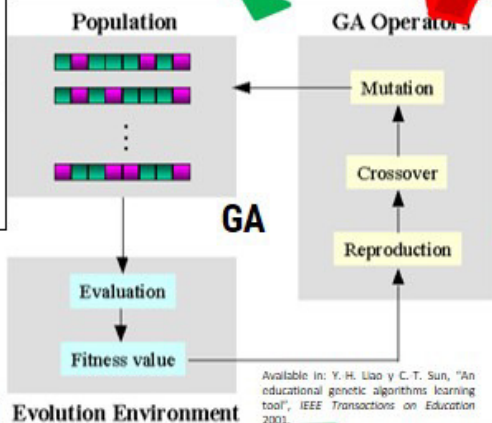
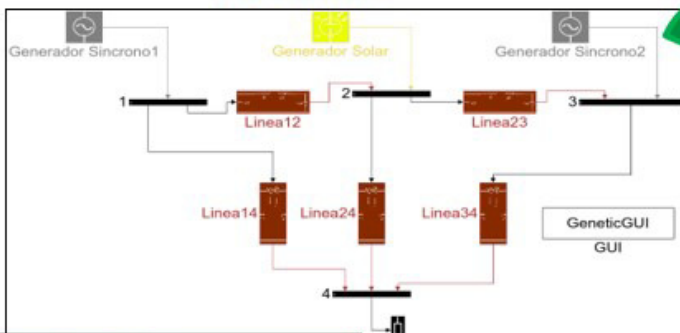


# Basic design of the intelligent controller

## Topologies



## Parameters

Block Parameters: Generador Eolico

Block Parameters: Generador Solar

Block Parameters: Generador Sincrono1

Block Parameters: Linea12

Block Parameters: Carga

Parameters

Generador Solar

Generador o conjunto de generadores solares que generan una potencia

$P = Np_{sol}$

NOCT(°C)

FF

Npan

(Add te

Voc =

Vocstd

Vocstd

Pr(MW)

Ntur

2

Linea de Transmision

Linea de transmision con 3 parametros  $Z = R + jX$

Parameters

Potencia Base(MVA)

R(pu)

X(pu)

Y/2(pu)

Tap

Capacidad(MW)

Carga

Carga con comportamiento constante

Parameters

Potencia Activa (MW)

Potencia Reactiva (MVAR)

## Results

Controlador inteligente para operación óptima de sistemas híbridos de energía renovables.

Generate Dispatch

Select Date

Load Model

Generate Report

Optimized

Unoptimized

Hour

2000

1500

1000

500

0

Hour

0 5 10 15 20 25

Generador1 (Sincrono)

Generador2 (Sincrono)

Generador3 (Solar)

Generador Total

data1

Hour

0 5 10 15 20 25

1.05

1.04

1.03

1.02

1.01

1

Hour

0 5 10 15 20 25

Node1

Node2

Node3

Node4

data1

Hour

0 5 10 15 20 25

Lines Use

Lines 1-2

Lines 3-4

Lines 2-3

Lines 3-4

Hour

0 5 10 15 20 25

Lines 1-2

Hour: 12

Use(percentage): 5.3245e-07

Hour

0 5 10 15 20 25

Losses

Optimized Losses

Unoptimized Losses

data1

Hour: 12

Potencia(MW): 0.2479

Hour

0 5 10 15 20 25

Generation Report

Report

PDF

1.3.4 Wind Speed

Hour

0 5 10 15 20 25

Hour

0 5 10 15 20 25

Hour	Generador1 (Sincrono)	Generador2 (Sincrono)	Generador3 (Solar)	Generador Total
1	728.98	1000	0.022895	1728.1

Hour	Node1	Node2	Node3	Node4
1	1	1	4	4

Hour	Lines 1-2	Lines 3-4	Lines 2-3	Lines 3-4
1	1	1	2	4