Package of Dynamic Systems

This Package is a toolbox for Analyzing Dynamic Systems.

Introduction of .jl files

Plotting : `DynamicSystemPlot.jl` is for visualization of a 2-D dynamic system, based on "Gadfly"

Usage

Plotting

All args of `DynamicSystemPlot` function are:

```
Dyn::DynamicSystem
Npoint=100                # How many points do you want to plot in each path
?
Npath=20                  # How many path do you want to plot in this graph?
resol=0.01                # How "long"(time step) is each point to the next
point.
width=0.05                # How wide is the initial point of each path to th
e next one(along +x direction).
Op="s"                    # Another option is  Op = "PNG", to creat a .PNG f
ile of this graph.
```

Example

The Dynamic system is:

and

The codes are:

```
julia> function f(x)
       return [2*x[1]-x[1]*x[2];2*x[1]*x[1]-x[2]]
       end
f(generic function with 1 method)

julia> include("DynamicSystemPlot.jl")
DynamicSystemPlot(generic function with 1 method)

julia> Dy = DynamicSystem(f,[-2;-2])
DynamicSystem(f,[-2,-2])

julia> DynamicSystemPlot(Dy,180,40,0.01,0.1)
```