Van Der Pol Equation

$$y'' + \epsilon(y^2 - 1)y' + y = 0$$

```
1       function dydt = vanderp(t,y,eps)
2       dydt = [y(2); eps*(1-y(1)^2)*y(2)-y(1)];
```

```
1       tspan = [0, 20];
2       y0 = [2; 0];
3       eps= 1.0;
4       ode = @(t,y) vanderp(t,y,eps);
5       [t,y] = ode45(ode, tspan, y0);
6
7       % Plot of the solution
8       plot(t,y(:,1),'LineWidth',2)
9       xlabel('t')
10      ylabel('solution y')
11      title('van der Pol Equation, \epsilon = 1.0')
```

Van Der Pol Equation

$$y'' + \epsilon(y^2 - 1)y' + y = 0$$
$$\epsilon = 1.0;$$

van der Pol Equation, $\epsilon = 1.0$