# 弹簧与微分方程2

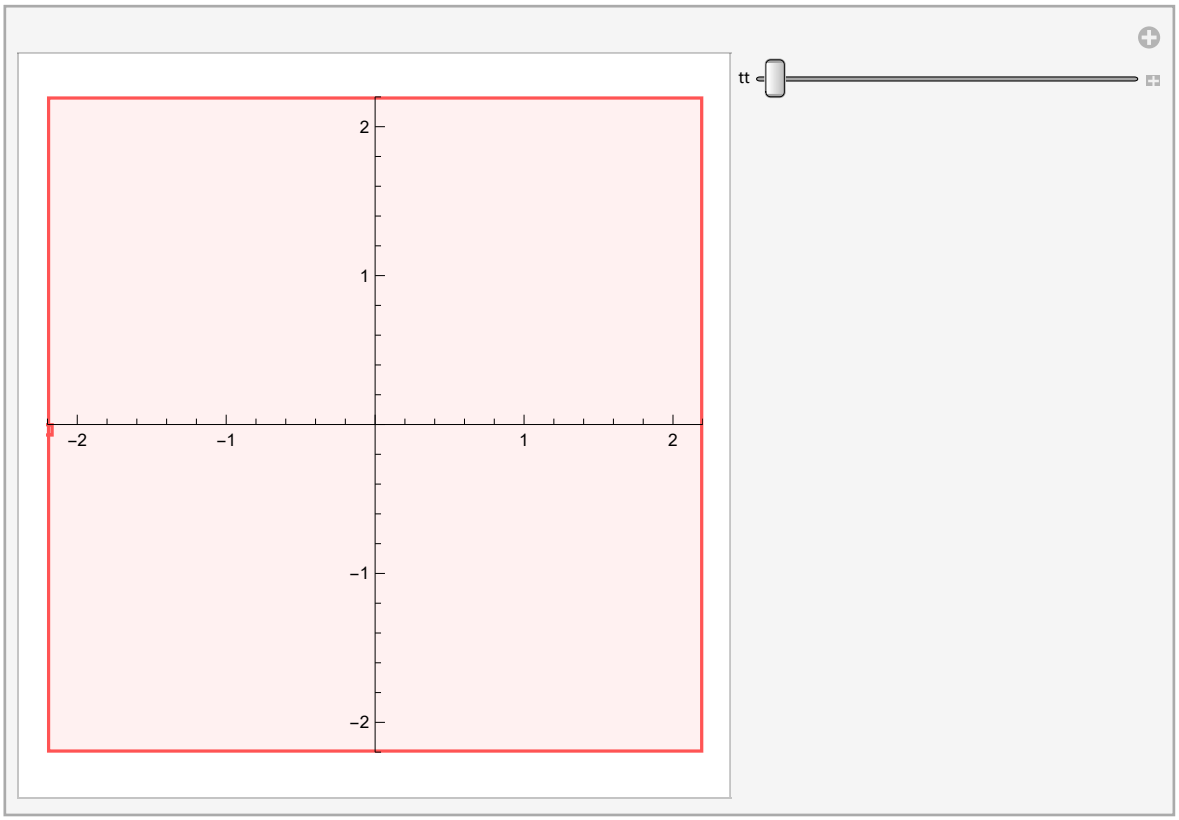
In[ ]:=
```
sol = NDSolveValue[
      数值解的值
  {(x2[t] - x1[t]) k - u m1 g x1'[t] == m1 x1''[t], (x1[t] - x2[t]) k - u m2 g x2'[t] ==
     m2 x2''[t], x1[0] == {-2, 0}, x2[0] == {2, 0}, x1'[0] == {0, 2}, x2'[0] == {0, -1}} /.
   {k → .5, g → 9.8, u → 0.05, m1 → 0.5, m2 → 0.80}, {x1[t], x2[t]}, {t, 0, 20}]
Manipulate[Show[ParametricPlot[sol, {t, 0, 20}, PlotRange → 2.2],
交互式操作  显示  绘制参数图                    绘制范围
  Graphics[{Magenta, PointSize[Large], Point[sol /. t → tt]}]], {tt, 0, 20}]
   图形      品红色   点的大小   大     点
```

Out[ ]=

{InterpolatingFunction[ Domain: {{0., 20.}} Output dimensions: {2} ][t],

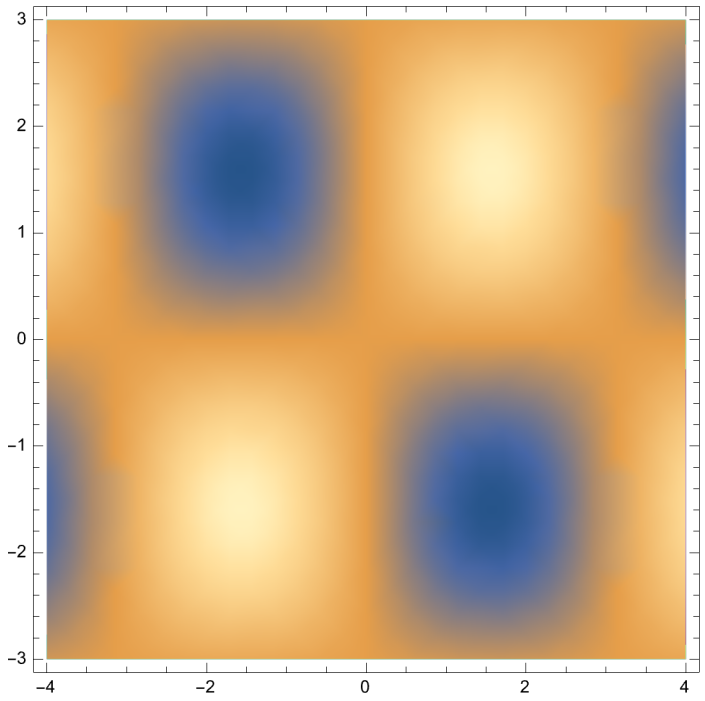
InterpolatingFunction[ Domain: {{0., 20.}} Output dimensions: {2} ][t]}

Out[ ]=



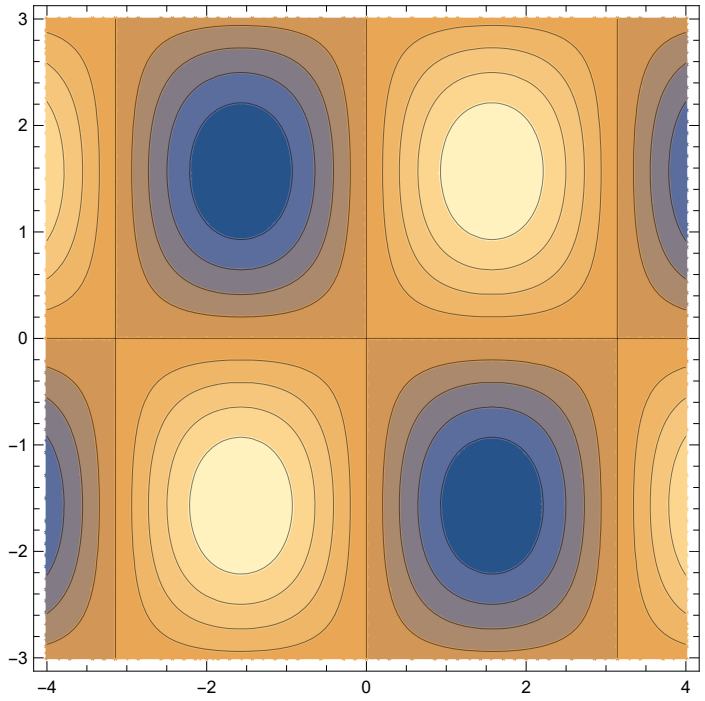
In[ ]:=
```
DensityPlot[Sin[x] Sin[y], {x, -4, 4}, {y, -3, 3}]
```
密度图 正弦 正弦

Out[ ]=




In[ ]:=
```
ContourPlot[Sin[x] Sin[y], {x, -4, 4}, {y, -3, 3}]
```
绘制等高线 正弦 正弦

Out[ ]=



In[ ]:=
```
Plot3D[Sin[x] Sin[y], {x, -4, 4}, {y, -3, 3}]
```
绘制⋯ 正弦 正弦

Out[ ]=