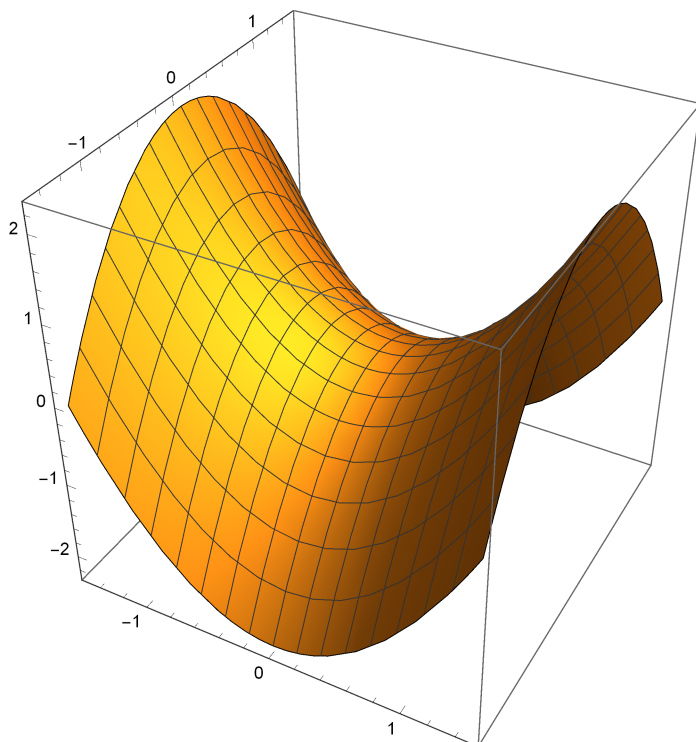


Esempi sui massimi e minimi vincolati

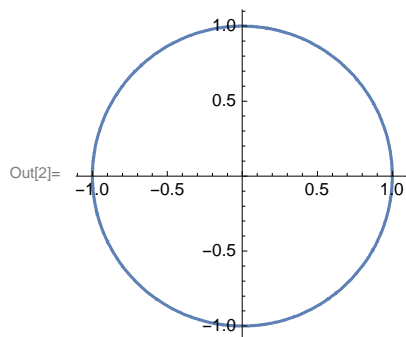
Esempio I. La funzione da ottimizzare :

```
Plot3D[x^2 - y^2, {x, -1.5, 1.5}, {y, -1.5, 1.5}, BoxRatios -> {1, 1, 1}]
```



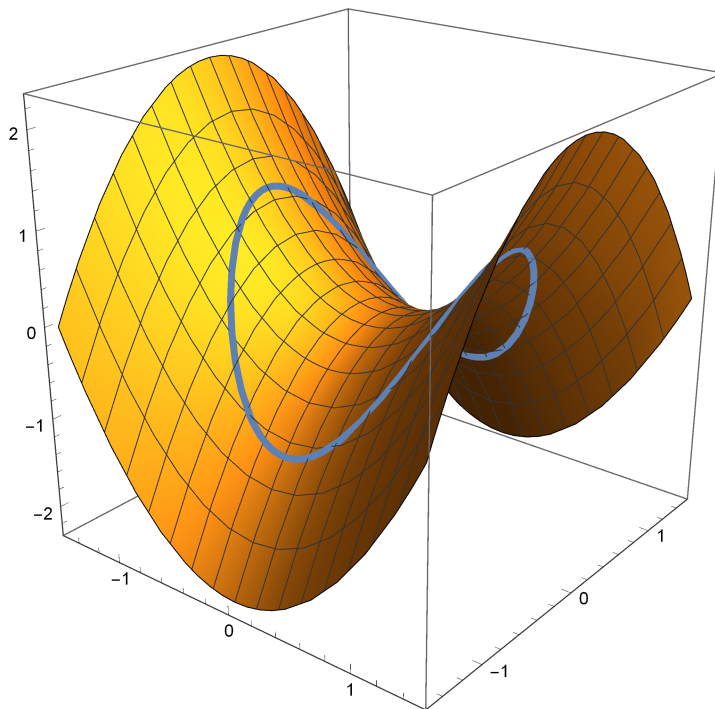
La curva vincolo (nel piano):

```
In[2]:= ParametricPlot[{Cos[t], Sin[t]}, {t, 0, 2 Pi}]
```



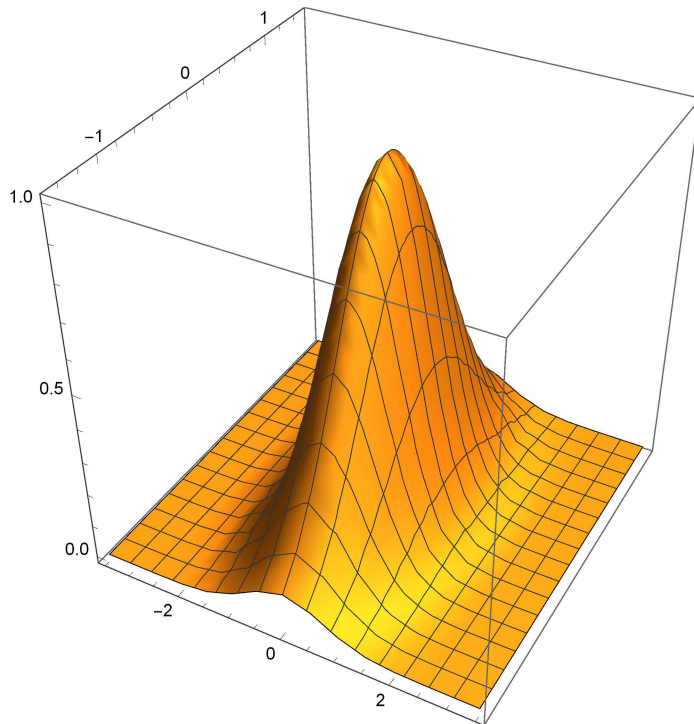
La restrizione della funzione al vincolo:

```
ParametricPlot3D[{Cos[t], Sin[t], Cos[t]^2 - Sin[t]^2}, {t, 0, 2 Pi}, Thickness[2]]  
ParametricPlot3D[{Cos[t], Sin[t], Cos[t]^2 - Sin[t]^2},  
  {t, 0, 2 Pi}, PlotStyle -> {Thickness[0.01]]]  
Show[%8, %6]
```



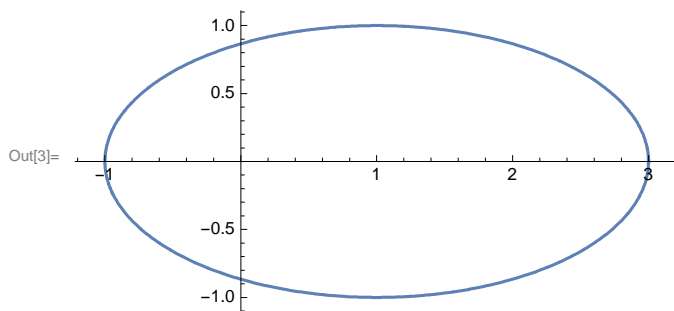
Esempio 2. La funzione da ottimizzare :

```
Plot3D[Exp[-x^2 - y^2], {x, -3.5, 3.5}, {y, -1.5, 1.5}, BoxRatios -> {1, 1, 1}]
```



La curva vincolo (nel piano) :

```
In[3]:= ParametricPlot[{1 + 2 Cos[t], Sin[t]}, {t, 0, 2 π}]
```



La restrizione della funzione al vincolo :

```
ParametricPlot3D[{1 + 2 Cos[t], Sin[t], Exp[-(1 + 2 Cos[t])^2 - Sin[t]^2]},  
{t, 0, 2 π}, PlotStyle -> {Thickness[0.01]}]
```

Show[%14, %11]

