

```
In[1]:= SetDirectory["~/writing/WIP/contact/plots/"]
```

```
Out[1]= /Users/rosebud/writing/WIP/contact/plots
```

```
In[2]:= << CSPlotter.m
```

General::obspkg :

Graphics`Shapes` is now obsolete. The legacy version being loaded may conflict with current Mathematica functionality. See the Compatibility Guide for updating information. >>

ListSurfacePlot3D::shdw :

Symbol ListSurfacePlot3D appears in multiple contexts {Graphics`Graphics3D`, System`}; definitions in context Graphics`Graphics3D` may shadow or be shadowed by other definitions. >>

Histogram3D::shdw :

Symbol Histogram3D appears in multiple contexts {Graphics`Graphics3D`, System`}; definitions in context Graphics`Graphics3D` may shadow or be shadowed by other definitions. >>

BarChart3D::shdw :

Symbol BarChart3D appears in multiple contexts {Graphics`Graphics3D`, System`}; definitions in context Graphics`Graphics3D` may shadow or be shadowed by other definitions. >>

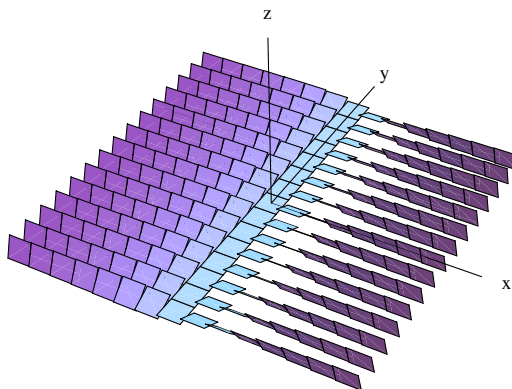
General::newpkg :

Calculus`VectorAnalysis` is now available as the Vector Analysis Package. See the Compatibility Guide for updating information. >>

Standard structures in R^3

```
In[76]:= DD = 3.5;  
xmin = -DD; xmax = DD; dx = (xmax - xmin) / 14;  
ymin = -DD; ymax = DD; dy = (ymax - ymin) / 14;  
scale = dy;  
  
conormalright[x_, y_, z_] = {0, x, -1};  
conormalleft[x_, y_, z_] = {0, -x, -1};  
  
Table[contactelement[{x, y, 0}, conormalleft[x, y, 0], scale],  
  {x, xmin, xmax, dx}, {y, ymin, ymax, dy}];  
outR = Show[%, coords[xmax + 1, ymax + 1, 3.9], Boxed -> False]
```

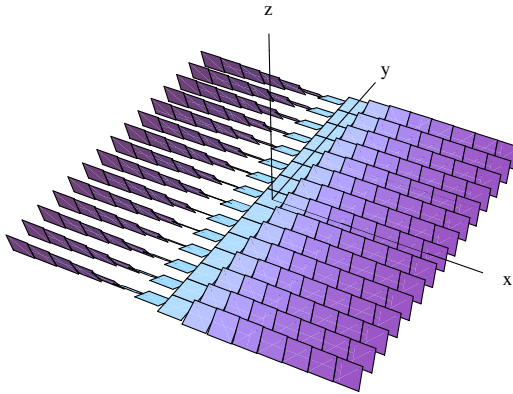
```
Out[83]=
```



```
In[66]:= (* Export["standardleft.pdf",out];*)
```

```
In[84]:= Table[contactelement[{x, y, 0}, conormalright[x, y, 0], scale],
  {x, xmin, xmax, dx}, {y, ymin, ymax, dy}];
outL = Show[%, coords[xmax + 1, ymax + 1, 3.9], Boxed -> False]
```

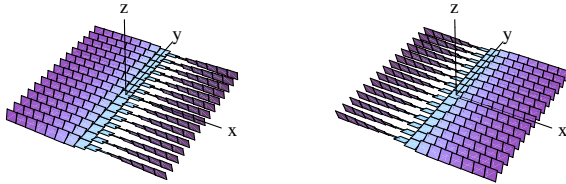
Out[85]=



```
(* Export["standardright.pdf", out];*)
```

```
In[86]:= both = Show[GraphicsArray[{outR, outL}]]
```

Out[86]=



```
In[87]:= Export["standardRL.pdf", both]
```

Out[87]= standardRL.pdf

Rotating contact structures

```

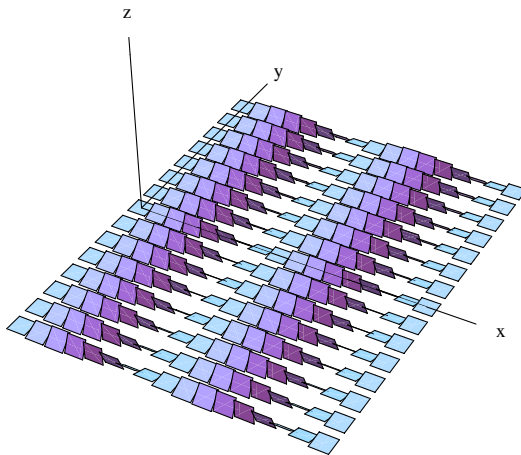
In[102]:= ymin = -4; ymax = 4; dy = (ymax - ymin) / 14;
xmin = 0; xmax = 2 Pi; dx = (xmax - xmin) / 16;
scale = dx;

conormalright[x_, y_, z_] = {0, -Sin[x], Cos[x]};
conormalleft[x_, y_, z_] = {0, Sin[x], Cos[x]};

Table[contactelement[{x, y, 0}, conormalright[x, y, 0], scale],
      {x, xmin, xmax, dx}, {y, ymin, ymax, dy}];
outR1 = Show[%, coords[xmax + 1, ymax + 1, 4], Boxed -> False]

```

Out[108]=

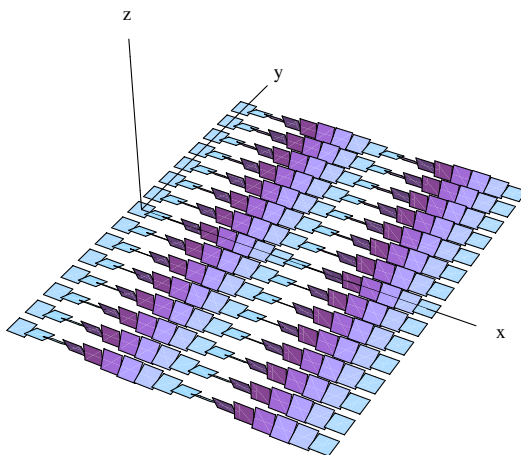


```

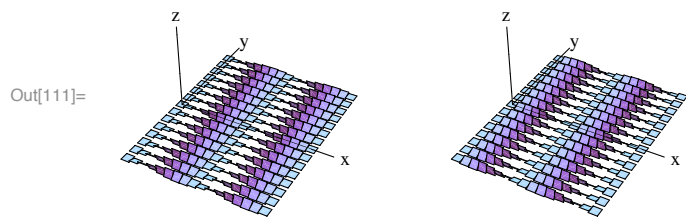
In[109]:= Table[contactelement[{x, y, 0}, conormalleft[x, y, z], scale],
      {x, xmin, xmax, dx}, {y, ymin, ymax, dy}];
outR2 = Show[%, coords[xmax + 1, ymax + 1, 4], Boxed -> False]

```

Out[110]=



```
In[111]:= bothRot = Show[GraphicsArray[{outR2, outR1}]]
```



```
In[112]:= Export["RotatingStructures.pdf", bothRot]
```

Out[112]= RotatingStructures.pdf