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- Computer Algebra



Includes the  
Beamer Package  
for slide  
presentations

**To make a parametric animated plot in cylindrical coordinates**

1. Type an expression of the form  $(r(u, v, t), \theta(u, v, t), z(u, v, t))$
2. With the insertion point in the expression, choose **Plot 3D Animated + Cylindrical**.

The next example shows a cone being generated as the line  $z = r$  is rotated about the  $z$ -axis with Intervals  $0 \leq r \leq 1$ ,  $0 \leq \theta \leq 1$ , and  $0 \leq t \leq 1$ .  
The View Orientation is Turn: 20, Tilt: 40.

**Plot 3D Animated + Cylindrical**

$(-1 + 2r, 2z\cos t, -1 + 2r)$

**Animated plots in spherical coordinates**

**To make an animated plot in spherical coordinates**

1. Type an expression in three variables.
2. With the insertion point in the expression, choose **Plot 3D Animated + Spherical**.

The next example shows a sphere that grows from radius 1 to radius 2.

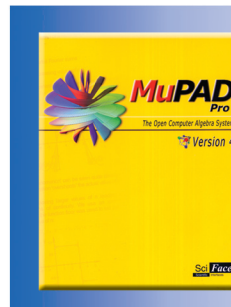
**Plot 3D Animated + Spherical**

**View**

FocusPointX	0
FocusPointY	0
FocusPointZ	0
KeepUpVector	<input type="checkbox"/>
OrthogonalProject	<input type="checkbox"/>
PositionX	1.93137
PositionY	-1.36289
PositionZ	3.88102
UpVectorX	2.80142
UpVectorY	1.08881
UpVectorZ	3.95911
ViewingAngle	0.785398

## The Gold Standard for Mathematical Publishing

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