

Scientific WorkPlace[®] Scientific Word[®]

- Mathematical Word Processing
- L^AT_EX Typesetting
- Computer Algebra



Visit us at the
January, 2009 Joint
Mathematics Meetings
in Washington D.C.

The image shows two windows from the Scientific WorkPlace software. The left window displays a 3D plot of a cone with a pink-to-purple gradient. Below the plot, there is instructional text:

> 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**

The expression $(-1+2r, 2r\cos t, -1+2r)$ is shown above the plot.

The right window shows a 3D plot of a sphere with a similar pink-to-purple gradient. Below the plot, there is instructional text:

> To make an animated plot in spherical coordinates

1. Type an expression in three variables.

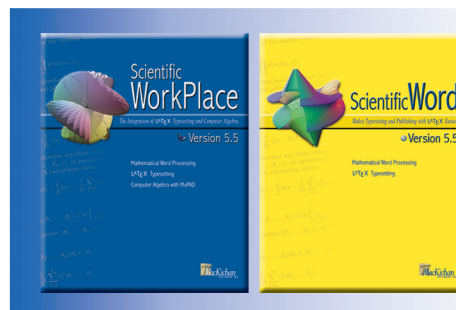
2. With the insertion point in the expression, choose **Plot 3D Animated + Spherical**.

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

▶ **Plot 3D Animated + Spherical**

The Gold Standard for Mathematical Publishing

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