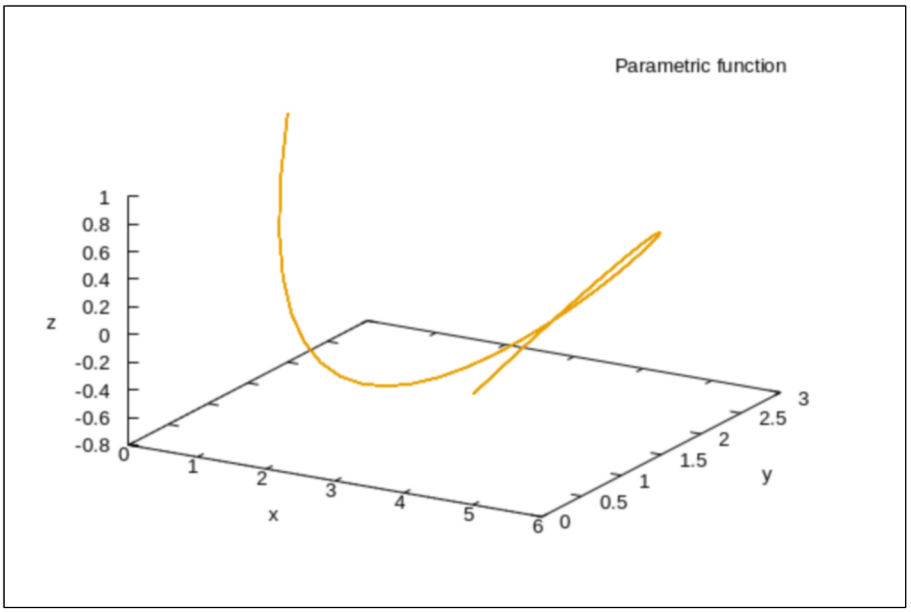
https://github.com/t-o-k/Maxima-bezier/bezier_curve_3d.wxmx


```
(%i1) load("draw")$

(%i2) load("bezier")$

(%i3) weights_x_1a: matrix([ +0, +2, +6, +5 ])$

(%i4) weights_y_1a: matrix([ +2, −1, +6, +0 ])$

(%i5) weights_z_1a: matrix([ +1, −3, +2, +0 ])$

(%i6) define(
        curve_x(s),
        bezier_function_1a(weights_x_1a, s)
      )$

(%i7) expand(curve_x(s));
                        3      2
(%o7)                 −7 s  + 6 s  + 6 s

(%i8) define(
        curve_y(s),
        bezier_function_1a(weights_y_1a, s)
      )$

(%i9) expand(curve_y(s));
                        3      2
(%o9)                −23 s  + 30 s  − 9 s + 2

(%i10) define(
         curve_z(s),
         bezier_function_1a(weights_z_1a, s)
       )$

(%i11) expand(curve_z(s));
                        3      2
(%o11)               −16 s  + 27 s  − 12 s + 1
```

```
(%i12) wxplot3d(
         [
            curve_x(s),
            curve_y(s),
            curve_z(s)
         ],
         [ s, 0, 1 ],
         [ t, 0, 1 ]
       );
```

(%t12)



(%o12)