```
m = 2;
n = 3;

InitFiber[m_, n_] := Block[{ff, u, v, x, y, z, w, gg, curves, tubes},
   ff = u^m - v^n /. {u → x + I y, v → z + w I};
   {milnorf, milnorg} = Factor[
      (ComplexExpand[{Re[ff], Im[ff]}] /. {x -> Sqrt[2] (-2 + x^2 + y^2 + z^2)/(2 + x^2 + y^2 + z^2),
          y -> 4 x/(2 + x^2 + y^2 + z^2),
          z -> 4 y/(2 + x^2 + y^2 + z^2), w -> 4 z/(2 + x^2 + y^2 + z^2)})] *
     (2 + x^2 + y^2 + z^2)^Max[m, n];
   curves = Table[{-Sqrt[2] y/(-Sqrt[2] + x), -Sqrt[2] z/(-Sqrt[2] + x), -Sqrt[2] w/(-Sqrt[2] + x)} /.
      {x -> Cos[n u + 2 Pi k/m], y -> Sin[n u + 2 Pi k/m],
       z -> Cos[m u], w -> Sin[m u]}, {k, 0, GCD[m, n] - 1}];
   tubes = Table[MyTube[curves[[i]], .1], {i, 1, Length[curves]}];
   milnorlink =
    Show[Table[ParametricPlot3D[tubes[[i]], {u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotPoints → 100,
       PlotStyle → RGBColor[1, (i - 1)/Length[tubes], (i - 1)/Length[tubes]],
       Mesh → None], {i, 1, Length[tubes]}], PlotRange → All,
     Background → Black, Boxed → False, Axes → False, ViewPoint → {5, 0, 0}];
  ];

MyTube[r_, rad_] := Module[{dr, dr2, n1, b1, cc, tube},
   dr = D[r, u];
   dr2 = D[dr, u];
   n1 = dr2 - (dr . dr2) dr/(dr . dr);
   b1 = Cross[n1, dr];
   cc = Cos[v] n1 + Sin[v] b1;
   tube = r + rad cc/Sqrt[cc . cc];
   Return[tube];
  ];

DrawFiber[th0_, op1_, op2_] := Block[{f1, g1, c1, c2},
  f1 = Cos[th0] milnorf + Sin[th0] milnorg;
  g1 = Sin[th0] milnorf - Cos[th0] milnorg;
  c1 = Directive[Specularity[White, 30], Opacity[op1], Green];
  c2 = Directive[Specularity[White, 30], Opacity[op2], Orange];
  Show[ ContourPlot3D[{f1 == 0}, {x, -4, 4}, {y, -4, 4},
    {z, -4, 4}, ColorFunction → Function[{x, y, z, f}, If[g1 > 0, c1, c2]],
    ColorFunctionScaling → False, Mesh → None, PlotPoints → 50, BoundaryStyle → None,
    Lighting → Automatic], milnorlink, Boxed → False, Axes → False,
   ViewPoint → {5, 0, 0}, Background → Black, ImageSize → {800, 600}]
 ]

InitFiber[2, 3]

DrawFiber[0, 1, 0]
```

```
tubes = Table[MyTube[curves[[i]], .1], {i, 1, Length[curves]}];
milnorlink =
  Show[Table[ParametricPlot3D[tubes[[i]], {u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotPoints → 100,
     PlotStyle → RGBColor[1, (i - 1) / Length[tubes], (i - 1) / Length[tubes]],
     Mesh → None], {i, 1, Length[tubes]}], PlotRange → All,
   Background → Black, Boxed → False, Axes → False, ViewPoint → {5, 0, 0}];
```

```
curves = Table[{-Sqrt[2] y / (-Sqrt[2] + x), -Sqrt[2] z / (-Sqrt[2] + x), -Sqrt[2] w / (-Sqrt[2] + x)} /.
    {x -> Cos[n u + 2 Pi k / m], y -> Sin[n u + 2 Pi k / m], z -> Cos[m u], w -> Sin[m u]}, {k, 0, GCD[m, n] - 1}]
```

```
ReOrder[{z_, y_, x_}] := {x, y, z}
```

```
Show[Table[ParametricPlot3D[tubes[[i]], {u, 0, 2 Pi}, {v, 0, 2 Pi}, PlotPoints → 100,
   PlotStyle → RGBColor[1, (i - 1) / Length[tubes], (i - 1) / Length[tubes]], Mesh → None],
  {i, 1, Length[tubes]}], PlotRange → All, Background → Black,
 Boxed → False, Axes → False, ViewPoint → {5, 0, 0}]
```

```
ParametricPlot3D[CHANGE[tubes[[1]]],
 {u, 0, 2 Pi}, {v, 0, 2 π}, PlotPoints → 30, MeshStyle → None]
```

```
CHANGE[{x_, y_, z_}] :=
 CoordinateTransformData["Cartesian" → "Cylindrical", "Mapping", {x, y, z}]
```

```
CHANGE[tubes[[1]]] // Simplify
```

```
ParametricPlot3D[ReOrder /@ curves, {u, 0, 2 π}, AxesLabel → {"x", "y", "z"}]
```

```
knot = Flatten@(ReOrder /@ curves)
```

```
CoordinateTransformData["Cartesian" → "Cylindrical", "Mapping", knot]
```

```
ParametricPlot3D[CoordinateTransformData["Cartesian" → "Cylindrical", "Mapping", knot],
 {u, 0, 2 Pi}, Exclusions -> True]
```

```
Manipulate[
 Show[ParametricPlot3D[curves, {u, 0, 2 π}, AxesLabel → {"x", "y", "z"}],
  Graphics3D[{PointSize[0.05], Point[curves /. u → U]}],
  Graphics3D@Text[Theta /@ curves /. u → U]], {U, 0, 2 π}]
```

```
π / 2 // N
```

```
Theta /@ curves
```