

花の 3D-面グラフ

n = 5
 m1 = 1 代入定義
 m2 = 2 m3 = 3
 a1 = 0.4 b2 = 0.35
 p = 0.9 b3 = 0.25
 q = 9 b4 = 0.15

r11(t)=a1+(1-a1)*cos(t) r41(t)=a1+(1-a1)*cos(4*t) r51(t)=a1+(1-a1)*cos(5*t) r71(t)=a1+(1-a1)*cos(7*t)
 r12(t)=b2*cos(2*t) r42(t)=b2*cos(2*4*t) r52(t)=b2*cos(2*5*t) r72(t)=b2*cos(2*7*t)
 r13(t)=b3*cos(3*t) r43(t)=b3*cos(3*4*t) r53(t)=b3*cos(3*5*t) r73(t)=b3*cos(3*7*t)
 r14(t)=b4*cos(4*t) r44(t)=b4*cos(4*4*t) r54(t)=b4*cos(4*5*t) r74(t)=b4*cos(4*7*t)
 r21(t)=a1+(1-a1)*cos(2*t) r31(t)=a1+(1-a1)*cos(3*t) r61(t)=a1+(1-a1)*cos(6*t)
 r22(t)=b2*cos(2*2*t) r32(t)=b2*cos(2*3*t) r62(t)=b2*cos(2*6*t)
 r23(t)=b3*cos(3*2*t) r33(t)=b3*cos(3*3*t) r63(t)=b3*cos(3*6*t)
 r24(t)=b4*cos(4*2*t) r34(t)=b4*cos(4*4*t) r64(t)=b4*cos(4*6*t)

c(u)=1+u*cos(p-u/q) 関数定義
 s(u)=u*sin(p-u/q)

面グラフで登場した関数で使われる変数 p, q の値を大きくしてみました。
 絵柄としては、シャープな感じになってくれます。

前のファイルの上部をはぎ取った形状です。後のファイルでは、逆継ぎ足しています。

- 0 x(t,u) = c(u) * cos(m1*t)
 y(t,u) = c(u) * sin(m1*t)
 z(t,u) = 1.2*s(u)
- 1 x(t,u) = c(u) * r11(t) * cos(m1*t)
 y(t,u) = c(u) * r11(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r11(t)
- 2 x(t,u) = c(u) * r11(t) * cos(m2*t)
 y(t,u) = c(u) * r11(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r11(t)
- 3 x(t,u) = c(u) * r11(t) * cos(m3*t)
 y(t,u) = c(u) * r11(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r11(t)
- 4 x(t,u) = c(u) * r21(t) * cos(m1*t)
 y(t,u) = c(u) * r21(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r21(t)
- 5 x(t,u) = c(u) * r21(t) * cos(m2*t)
 y(t,u) = c(u) * r21(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r21(t)
- 6 x(t,u) = c(u) * r21(t) * cos(m3*t)
 y(t,u) = c(u) * r21(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r21(t)
- 7 x(t,u) = c(u) * r31(t) * cos(m1*t)
 y(t,u) = c(u) * r31(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r31(t)
- 8 x(t,u) = c(u) * r31(t) * cos(m2*t)
 y(t,u) = c(u) * r31(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r31(t)
- 9 x(t,u) = c(u) * r31(t) * cos(m3*t)
 y(t,u) = c(u) * r31(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r31(t)
- 10 x(t,u) = c(u) * r41(t) * cos(m1*t)
 y(t,u) = c(u) * r41(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r41(t)
- 11 x(t,u) = c(u) * r41(t) * cos(m2*t)
 y(t,u) = c(u) * r41(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r41(t)
- 12 x(t,u) = c(u) * r41(t) * cos(m3*t)
 y(t,u) = c(u) * r41(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r41(t)
- 13 x(t,u) = c(u) * r51(t) * cos(m1*t)
 y(t,u) = c(u) * r51(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r51(t)
- 14 x(t,u) = c(u) * r51(t) * cos(m2*t)
 y(t,u) = c(u) * r51(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r51(t)
- 15 x(t,u) = c(u) * r51(t) * cos(m3*t)
 y(t,u) = c(u) * r51(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r51(t)
- 16 x(t,u) = c(u) * r61(t) * cos(m1*t)
 y(t,u) = c(u) * r61(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r61(t)
- 17 x(t,u) = c(u) * r61(t) * cos(m2*t)
 y(t,u) = c(u) * r61(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r61(t)
- 18 x(t,u) = c(u) * r61(t) * cos(m3*t)
 y(t,u) = c(u) * r61(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r61(t)
- 19 x(t,u) = c(u) * r71(t) * cos(m1*t)
 y(t,u) = c(u) * r71(t) * sin(m1*t)
 z(t,u) = 1.2*s(u) * r71(t)
- 20 x(t,u) = c(u) * r71(t) * cos(m2*t)
 y(t,u) = c(u) * r71(t) * sin(m2*t)
 z(t,u) = 1.2*s(u) * r71(t)
- 21 x(t,u) = c(u) * r71(t) * cos(m3*t)
 y(t,u) = c(u) * r71(t) * sin(m3*t)
 z(t,u) = 1.2*s(u) * r71(t)

