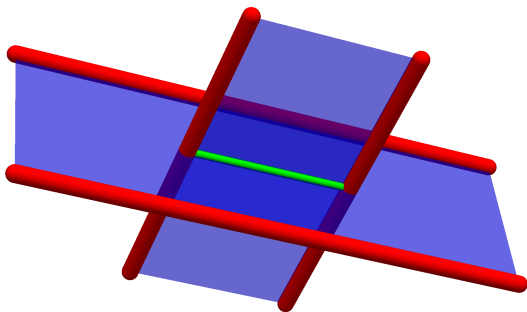


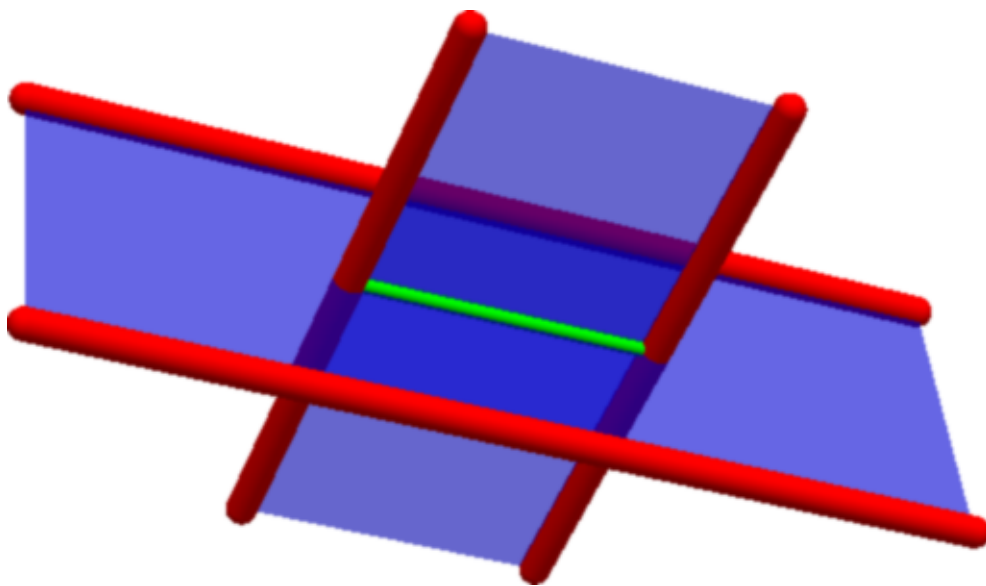
Pensieve header: Making the ribbon and clasp singularities pictures. See also pensieve://Projects/Kil-lam-2017/.

```
SetDirectory["C:\\drorbn\\AcademicPensieve\\2015-07\\PolyPoly"]
C:\\drorbn\\AcademicPensieve\\2015-07\\PolyPoly

ribbon = Graphics3D[
  {
    Green, Tube[{{-1, 0, 0}, {1, 0, 0}}, 0.05],
    Red,
    Tube[{{-3, 1, 0}, {3, 1, 0}}, 0.1], Tube[{{3, -1, 0}, {-3, -1, 0}}, 0.1],
    Tube[{{-1, 0, -2}, {-1, 0, 2}}, 0.1], Tube[{{1, 0, 2}, {1, 0, -2}}, 0.1],
    Opacity[0.6], Blue, EdgeForm[None],
    Polygon[{{-3, 1, 0}, {3, 1, 0}, {3, -1, 0}, {-3, -1, 0}}],
    Polygon[{{-1, 0, -2}, {-1, 0, 2}, {1, 0, 2}, {1, 0, -2}}]
  },
  Boxed -> False, ViewPoint -> {-1.05544, -2.48236, 2.04302},
  ViewVertical -> {-0.355079, 0.320399, 1.36975}
]
```



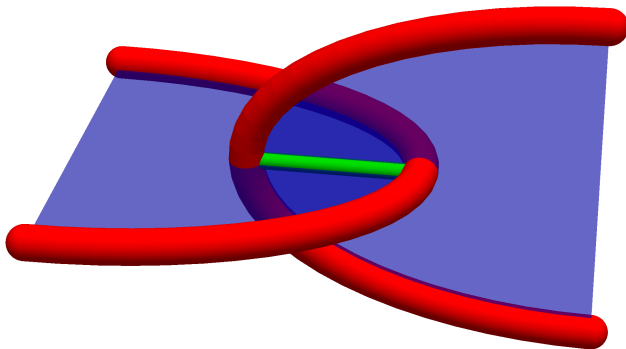
```
MakeImage["RibbonSingularity", ribbon, ImageSize -> 720]
```



```

dt =  $\pi/32$ ;
 $\gamma_1[t_]:= \{2 \text{Cos}[t] - 3/2, \text{Sin}[t], 0\}$ ;
 $\gamma_2[t_]:= \{3/2 - 2 \text{Cos}[t], 0, \text{Sin}[t]\}$ ;
clasp = Graphics3D[
{
  Green, Tube[{{{-1/2, 0, 0}, {1/2, 0, 0}}, 0.05],
  Red,
  Tube[Table[ $\gamma_1[t]$ , {t, - $\pi/2$ ,  $\pi/2$ , dt}], 0.1],
  Tube[Table[ $\gamma_2[t]$ , {t, - $\pi/2$ ,  $\pi/2$ , dt}], 0.1],
  Opacity[0.6], Blue, EdgeForm[None],
  Table[Polygon[{{{-3/2, 0, 0},  $\gamma_1[t]$ ,  $\gamma_1[t+dt]$ }}, {t, - $\pi/2$ ,  $\pi/2 - dt$ , dt}],
  Table[Polygon[{{{3/2, 0, 0},  $\gamma_2[t]$ ,  $\gamma_2[t+dt]$ }}, {t, - $\pi/2$ ,  $\pi/2 - dt$ , dt}]
},
Boxed  $\rightarrow$  False, ViewPoint  $\rightarrow$  {0.530012, -2.81796, 1.79672},
ViewVertical  $\rightarrow$  {0.0301724, -0.099258, 1.45049}
]

```



```
MakeImage["ClaspSingularity", clasp, ImageSize -> 720]
```

